Undergraduate Catalog
2020–2021

Wichita State University, 1845 Fairmount, Wichita, Kansas 67260

This catalog is a guide for information only and is not a contract. This catalog becomes effective fall semester 2019 and extends through the summer session 2020. The general university telephone number is 316-978-3456. For admission information, call toll-free 800-362-2594. The university's World Wide Web address is: https://wichita.edu

The university reserves the right to change any of the rules and regulations of the university at any time, including those relating to admission, instruction and graduation. The right to withdraw curricula and specific courses, alter course content, change the calendar, and impose or increase fees similarly is reserved. All such changes are effective at such times as the proper authorities determine and may apply not only to prospective students but also to those who are already enrolled in the university.

Produced by the Office of the Registrar, March 2020.

About This Catalog

Catalog Highlights

This catalog is a useful tool for students, advisors and university employees needing quick access to the resources, people, policies and procedures that make Wichita State a great place to learn, work, live and play.

General Information

Use this catalog to get to know WSU, including its leaders, vision and mission. It contains a brief history of WSU and an overview of the university.

Getting Admitted

This catalog has all of the information needed to get the ball rolling on becoming an official Shocker and connecting with the right major.

Admission applications are available on the WSU website (https://wichita.edu/apply/)[1]. Students can also visit the Office of Undergraduate Admissions in the Marcus Welcome Center.

Once admitted, if already decided on a major, a student will be assigned an advisor within that major's academic college to help develop an overall plan of study and assist in putting together a class schedule. Students enrolling directly after completing high school will be assigned a first year advisor who will create a class schedule for the first semester and enroll the student.

Not sure what to study or do after college? The Liberal Arts and Sciences (LAS) Advising Center will help students explore academic and career options. Also, check out the list of WSU's degrees and programs found in this catalog.

Getting Started as a Shocker

After meeting with an advisor, students are ready to sign up for classes through online registration. This catalog includes registration policies and an academic calendar with important dates.

WSU's orientation programs introduce new students to academic and campus life — and equip them with resources for success during college and beyond.

Want to get better grades, make hundreds of new friends and have more fun? Campus living puts all of WSU right at a student's doorstep. Check out the Housing and Residence life section for more information on how to reserve a spot.

Interested in funding a WSU education through financial aid and scholarships? Find all of that information here, plus a comprehensive fee schedule to help take the guesswork out of figuring costs.

Academics at WSU

Because of its commitment to provide the very best education possible, WSU offers countless opportunities for students to bolster their knowledge and build bright futures — both in and out of the classroom.

As Shockers, students will be able to tap into education in ways they won't find anywhere else — from experience-based learning for every major and study abroad opportunities across the globe to being able to work and research with faculty and industry experts on WSU's Innovation Campus.

WSU's academic support system includes math, language and writing labs. Need a tutor? Students have access to supplemental instruction and tutoring at little to no cost. There are 24-hour study rooms, computer labs and the media and research resources of University Libraries where students can check out books, DVDs, laptops, digital cameras and more.

WSU also has learning options to fit just about any schedule. Students can attend classes day or night at WSU's main campus, satellite locations and online.

Applied Learning at WSU

WSU uniquely combines a traditional college atmosphere with the unparalleled resources, experiences and real-world learning opportunities only found in Kansas' largest city.

Through WSU's Applied Learning offerings, including cooperative education and internship experiences, Shockers in every major can build a resume, earn a paycheck, make professional connections — and get a foot in the door of their dream job — all while still in school.

WSU makes learning convenient and accessible to the entire community through its multiple locations. In addition to its main campus at 21st and Hillside, WSU offers a wide range of general education classes at WSU West, located near 37th Street and Maize Road (3801 N. Walker Ave.); WSU South, located on East Harry Street near St. Joseph hospital; and WSU Haysville, located at 106 Stewart Avenue.

WSU is also home to the state's most diverse college campus, which is reflected in the programs and services it offers — from counseling and testing to top-notch child care and offices for veterans' support, disability services and international education, just to name a few.

Campus Life

WSU packs each semester with hundreds of activities, events and ways to get involved and have fun outside of class. From time-honored traditions and action-packed athletics to clubs, student organizations and Greek life, campus offers something for everyone.

Campus Recreation has all of the indoor and outdoor fitness facilities and programs needed to stay healthy — from a climbing wall and 200-meter indoor track to personal training, intramural sports and annual events like the Pumpkin Run.

The Rhatigan Student Center (RSC) is at the heart of campus and is a great place to meet friends, eat, grab a coffee, buy textbooks, study or relax. Students can also head to the basement for bowling and billiards at Shocker Sports Grill and Lanes.

Rules and Regulations

This catalog describes WSU's seven colleges, their policies, programs, course offerings and graduation requirements. Find university-wide policies and procedures — from residency requirements to a student code of conduct here, too.

Life After WSU

For students nearing graduation, this catalog can connect them to resources that will help turn a diploma into a dream job. Through WSU's Career Development Center, students can access practice interviews, career advising, help with building the perfect resume and more.

WSU's Alumni Association and the WSU Foundation offer opportunities to stay involved and contribute to the university while adding even more fellow Shockers to personal and professional networks.

[1] Link opens new window.

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Academic Calendar

Fall Semester 2020

April–August	Fall semester registration
August 17	Weekday and evening classes begin
September 7	Labor Day holiday
October 7	Midterm point
October 10–13	Fall recess (begins at 2 p.m.)
October 27	Final date for withdrawal with nonpenalty grades
November 9	Web registration for spring semester begins (tentative)
November 25–29	Thanksgiving recess
December 3	Last day of classes
December 4	Study day
December 5–10	Final examinations
December 10	Fall semester ends
TBA	Commencement

Spring Semester 2021

November–January	Spring semester registration
January 18	Martin Luther King, Jr. Day holiday
January 19	Classes begin
March 10	Midterm point
March 15-21	Spring recess
April 2	Final date for withdrawal with nonpenalty grades
April 5	Web registration for fall semester begins (tentative)
May 6	Last day of classes
May 7	Study day
May 8–13	Final examinations
May 13	Spring semester ends
TBA	Commencement

Summer Session 2021

April–June	Summer session registration
May 17–28	Pre-session and workshops
May 31	Memorial Day holiday
June 1	Classes begin, first four-week term and eight-week term
June 25	Last day of first four-week term
June 28	Classes begin, second four-week term
July 5	Independence Day holiday
July 23	Summer session ends

Note: These dates are subject to change.

General Information

Wichita State University Profile

Wichita State is distinctive for opening pathways to applied learning, applied research and career opportunities, alongside unsurpassed classroom, laboratory and online education. The university's beautiful 330-acre main campus is a supportive, rapidly expanding learn-work-live-play environment, where students gain knowledge and credentials to prepare for fulfilling lives and careers.

Students enjoy a wide selection of day, evening and summer courses in more than 200 areas of study at the main campus and other locations throughout the metro area and online. WSU's approximately 16,000 students come from every state in the U.S. and more than 115 other countries. About eight in 10 students are from Kansas, representing virtually every county in the state.

Nearly 72 percent of the students attend full time, while the remainder attend part time and take advantage of gaining professional experience at leading local employers including Airbus, Bombardier Aerospace, Spirit AeroSystems, Textron Aviation (including Beechcraft and Cessna), Koch Industries, Wichita Public Schools, Ascension Via Christi, Wesley Medical Center, AGH CPAs and Advisors, BKD CPAs and Advisors, Cargill, Evergy, Johnson Controls, and Cox Communications. Students in every field of study find opportunities in Wichita as varied as financial accounting, performing in the Wichita Symphony Orchestra, and creating social media content for Division I athletic teams. Many students take advantage of WSU's work-based learning program, which has partnerships with more than 500 employers throughout the United States.

Wichita State, which is classified by the Carnegie Foundation as a doctoral granting, high research institution, offers undergraduate and graduate degree programs culminating in 61 bachelor's degree programs, an associate's degree, 13 doctoral degrees, 48 master's degrees, a Specialist in Education degree and 81 credit bearing certificates in seven colleges and one institute: Dorothy and Bill Cohen Honors College, W. Frank Barton School of Business, College of Applied Studies, College of Engineering, College of Fine Arts, College of Health Professions, Fairmount College of Liberal Arts and Sciences, and the Institute for Interdisciplinary Innovation.

The Higher Learning Commission and 21 program-specific accrediting agencies accredit WSU. A listing of WSU programs and degrees is located in both the graduate and undergraduate catalogs.

Wichita State has more than 550 full-time faculty, with more than 85 percent of the faculty having earned the highest degree in their field. Academic programs also draw on the professional expertise of adjuncts from Wichita-based businesses and organizations. Instructors and guest lecturers include those actively practicing their professions in venues from boardrooms to technology startups to courtrooms to operating rooms to the world's great opera stages.

In the past five years, WSU's main campus in northeast Wichita has been expanded by 120 acres with the conversion of a golf course to a new, interconnected community of academic and partnership buildings, laboratories and mixed-use areas known as Innovation Campus.

Buildings housing advanced manufacturing engineering laboratories; academic, corporate and government researchers; the city-county law enforcement training center; and a community makerspace are open on the expanded east side of campus. Students work in state-of-the-art laboratories and learn from outstanding faculty and professionals.

High-quality student housing opened in the past three years. A food truck plaza, late-night restaurant, outdoor walking-running paths and a freestanding Starbucks are open. A YMCA/Student Wellness Center, Hyatt Place Hotel, and Advanced Virtual Engineering and Testing Laboratories and other new testing laboratories are opening in 2020.

WSU has relationships with more than 4,000 students and associated instructional staff and facilities through the Wichita State Campus of Applied Sciences and Technology, known as WSU Tech. The Higher Learning Commission-accredited affiliate is already the state's largest technical college. It offers more than 100 programs of study in areas including aviation, health care, manufacturing, design and business.

WSU and WSU Tech share recent or renovated facilities housing the National Center for Aviation Training, health care education programs and media production facilities.

WSU is enhancing curriculum, programs and facilities to meet student, community and industry needs. Four recent examples:

- The Bachelor of Applied Arts degree in four areas of media arts – animation, audio production, filmmaking and game design. Some of the courses in the program are offered at Shocker Studios, a 35,000-square foot, state-of-the-art production facility.
- The Physician Assistant (PA) and Physical Therapy (PT) programs are housed alongside WSU Tech health professions programs in a renovated building in the vibrant Old Town section of downtown Wichita. The state-of-the-art facility features large classrooms, modern work spaces, a simulation hospital with a general emergency room, labor and delivery and exam rooms, a surgical lab with cutting-edge simulators, a SynDaver (synthetic human) lab, and a student lounge.
- The Institute for Interdisciplinary Innovation (III) encourages interdisciplinary collaboration and is home to the Master in Innovation Design (MID) degree that merges arts, science and technology curricula, creating opportunities for students and faculty to collaborate across WSU's colleges. The MID program is individualized for each student and focuses on developing students' *design thinking skills*. These include the capabilities to develop creative solutions, effectively communicate, practice entrepreneurship and develop prototypes.

WSU's badge program makes workforce training and continuing education accessible and affordable. Each badge is designed with the practicing professional in mind so coursework can be completed online and at the student's own pace. A badge is worth 0.5 credit hours and equates to about 22.5 hours of combined online instruction and study time. This makes workloads more manageable for someone who is already busy with a full-time job and/or family.

All of these efforts are in service of Wichita State University's vision to be a world leader in applied learning and its mission as an essential educational, cultural and economic driver for Kansas and the greater public good.

WSU's first commitment is to excellence in instruction, but it also has strong commitments to excellence in research and public service as integral parts of its educational mission.

For example, the National Institute for Aviation Research consistently receives funding from such agencies as the FAA and NASA to continue important research in such areas as composites and aging aircraft. According to the National Science Foundation, WSU is one of the top

research universities for aerospace research in the country. It is the top industry funded aviation research university in the nation.

Another example: WSU's Regional Community Policing Training Institute is helping train law enforcement and other officials in the region on such relevant topics as counterterrorism. The Attorney General of the United State visited WSU's Law Enforcement Training Center in 2019 to learn about the university's cooperation with law enforcement on ballistics testing.

Businesses, local government, industry and nonprofits benefit from such WSU resources as the Mid-America Manufacturing Technology Center, Small Business Development Center, Center for Management Development, Center for Entrepreneurship, Community Engagement Institute and Hugo Wall School of Public Affairs.

WSU offers numerous recreational and cultural opportunities through the many concerts, recitals, theatre, dance and other productions performed in its fine arts facilities. The Ulrich Museum of Art specializes in contemporary art. More than 75 pieces of sculpture by internationally known artists adorn the campus as part of the Martin H. Bush Outdoor Sculpture Collection. The university's premier cultural collection of Asmat art, one of the largest such collections in the United States, is on display in its Lowell D. Holmes Museum of Anthropology.

As an NCAA Division I institution, WSU fields teams in tennis, cross country, basketball, track, golf, baseball, volleyball and softball. The men's basketball team reached the NCAA tournament for six years in a row, including the Final Four in 2013. In 2017, the university accepted the invitation to join the American Athletic Conference.

In club and competitive sports, Wichita State men's and women's bowling teams have won 20 national championships. Men's and women's rowing teams compete in state, regional and national championships. The rowing teams occupy a new boathouse on the Arkansas River, at a prime location in downtown Wichita. Esports is an up and coming feature of student life. The ESports Varsity Team and the esports club both have a home in the Heskett Recreation Center on campus.

More than 200 social and special interest clubs provide opportunities for students to meet and work with others who share their interests. Twenty-two national sororities and fraternities are active on campus.

The 330-acre traditional campus is modern and accessible and at the same time retains the flavor of the university's heritage, combining distinctive Georgian-style architecture with more modern buildings of stone and brick that are accentuated by attractive landscaping. Internationally, the most-recognized building on the WSU campus is the Corbin Education Center. It was one of the last buildings designed by one of America's best-known architects, Frank Lloyd Wright.

To find out more about WSU, go to the WSU website (http://wichita.edu)[1].

[1] Link opens new window.

Mission

The mission of Wichita State University is to be an essential educational, cultural and economic driver for Kansas and the greater public good.

Vision

Wichita State University is internationally recognized as the model for applied learning and research.

2020 – 2021 University and Academic Officers

Jay Golden, *president*
Richard Muma, *provost and professor*
Sheree Utash, *president of WSU Tech and vice president of Workforce Development for WSU*
John Tomblin, *senior vice president and executive director of the National Institute for Aviation Research*
Werner Golling, *vice president for finance and administration*
Marche Fleming-Randle, *vice president for diversity and community engagement*
Teri Hall, *vice president for student affairs*
Lou Heldman, *vice president for strategic communications*
Stacia Boden, *general counsel*
Andrew Schlapp, *executive director, Office of Government Relations and Strategy, executive director to the Board of Trustees*
Darron Boatright, *director of athletics*
Coleen Pugh, *dean of the Graduate School and associate vice president for research*
Jeremy Patterson, *dean of the Institute for Interdisciplinary Innovation and interim executive director for innovation and new ventures*
Kimberly Engber, *dean of the Dorothy and Bill Cohen Honors College*
Larisa Genin, *dean of the W. Frank Barton School of Business*
Shirley Lefever, *dean of the College of Applied Studies*
Dennis Livesay, *dean of the College of Engineering*
Rodney E. Miller, *dean of the College of Fine Arts*
Stephen Arnold, *interim dean of the College of Health Professions*
Andrew Hippisley, *dean of Fairmount College of Liberal Arts and Sciences*
Kathy Downes, *dean of university libraries*

Kansas Board of Regents [1]

Blake Flanders, *president and CEO*

Board Members

Shane Bangerter, *Dodge City*, chair
Ann Brandau-Murguia, *Kansas City*
Bill Feuerborn, *Garnett*, vice chair
Cheryl Harrison-Lee, *Gardner*
Mark Hutton, *Andover*
Shellaine Kiblinger, *Cherryvale*
Jon Rolph, *Wichita*
Allen Schmidt, *Hays*
Helen Van Etten, *Topeka*

[1] As of January 13, 2020

WSU Tech

The Higher Learning Commission approved an official affiliation between Wichita State and Wichita Area Technical College (WATC), effective January 1, 2018. WATC became the WSU Campus of Applied Sciences and Technology, known as WSU Tech, enhancing the already strong partnership between the two institutions. The affiliation allows both institutions to better fulfill their missions by increasing the availability and quality of opportunities for students, while directly meeting the core workforce needs of the state. Coursework taken at one institution will continue to be reflected as transfer work on the record of the other institution.

WSU History

Wichita State University began as Fairmount College, a Congregational institution, in 1895. In 1926, by a vote of the citizens of Wichita, the college became the Municipal University of Wichita, the first municipal university west of the Mississippi River. After 38 years as a municipal university, WSU again changed its status July 1, 1964, when it entered the state system of higher education. The citizens of Wichita had voted

to move the university into the state system and when the measure passed the Kansas Legislature, Wichita endowed WSU with a 1.5 mill levy, a tax that was later adopted by Sedgwick County. The WSU Board of Trustees administers these funds and other local assets of the university.

During its history, the university has had 14 presidents[1]:

Nathan J. Morrison, 1895–1907;
Henry E. Thayer, 1907–1914;
Walter H. Rollins, 1914–1921;
John Duncan Finlayson, 1922–1927;
Harold W. Foght, 1927–1933;
William M. Jardine, 1934–1949;
Harry F. Corbin, 1949–1963;
Emory Lindquist, 1963–1968;
Clark D. Ahlberg, 1968–1983;
Warren B. Armstrong, 1983–1993;
Eugene M. Hughes, 1993–1998;
Donald L. Beggs, 1999–2012;
John W. Bardo, 2012–2019; and
Jay Golden, 2019–present.

[1] Andy Tompkins, interim president, April 8, 2019 – December 17, 2019.

University and Specialty Accreditation

Wichita State University has held regional accreditation since 1927 from the Higher Learning Commission. The university will undergo its next comprehensive evaluation during the 2026-2027 academic year. Additionally, several WSU programs hold specialty accreditation. The accreditation status of those programs can be found on the Academic Affairs: Assessment webpage (http://wichita.edu/assessment/)[1] or in information published by the accredited programs. In some cases, regional and specialty accreditation status is required by some programs for its graduates to sit for certification examinations and/or to obtain a license and/or a registration. Regional accreditation by The Higher Learning Commission does not constitute specialty accreditation for individual programs.

[1] Link opens new window.

Academic Programs at Wichita State University Are Accredited by or Hold Membership in the Following Associations

- ABET (http://www.abet.org)[1]
- Accreditation Review Commission on Education for the Physician Assistant
- American Association of State Colleges and Universities
- American Chemical Society
- American Dental Educators' Association
- American Psychological Association
- Association of Public and Land-Grant Universities
- Association to Advance Collegiate Schools of Business — Business and Accounting
- Commission on Accreditation in Physical Therapy Education
- Commission on Accreditation of Athletic Training Education
- Commission on Collegiate Nursing Education
- Commission on Dental Accreditation of the American Dental Association
- Commission on Sport Management Accreditation
- Council for the Accreditation of Educator Preparation
- Council on Academic Accreditation in Audiology and Speech-Language Pathology: American Speech-Language Hearing Association
- Council on Social Work Education
- Human Factors and Ergonomics Society
- Kansas State Board of Nursing
- Kansas State Department of Education
- National Accrediting Agency for Clinical Laboratory Sciences
- National Association of Schools of Art and Design
- National Association of School Psychologists
- National Association of Schools of Dance
- National Association of Schools of Music
- National Association of Schools of Public Affairs and Administration
- The Higher Learning Commission (http://ncahlc.org)[1, 2]

[1] Link opens new window.

[2] The Higher Learning Commission
230 South LaSalle Street, Suite 7–500
Chicago, Illinois 60604;
1-800-621-7440

Admission to Wichita State

Interested in becoming a Shocker? The admission section of the catalog is the place to find detailed information about:

- Undergraduate Admission (p. 10)
- International Student Admission (p. 12)
- Former Students in Inactive Status (p. 12)
- Admission to Accelerated Programs; Graduate School (p. 13)
- Transfer Credit (p. 13)

Undergraduate Admission

WSU admits students at the undergraduate level as freshmen and transfer students. Depending on their academic goals, students may choose to be degree-bound or nondegree-bound.

Admission to a specific professional program can be achieved only after admission to the university. Students must meet the requirements of the professional program. Admission to some professional programs is very competitive.

The admission procedures, outlined below, are for degree-bound domestic students. Information for nondegree-bound students is under the Admissions Categories tab. Information for international students is found at the international admissions requirements webpage (http://wichita.edu/InternationalAdmissionRequirements/)[1].

Admission Procedures – Undergraduate; Domestic

To apply for admission, students should submit a WSU application in paper or electronic format. The application and full instructions are available from the Office of Admissions website (http://wichita.edu/admissions/)[1].

High school students or college transfers with 1–23 hours of completed college credit[2]

- Submit a completed and signed application;
- Have an official high school transcript (minimum of six semesters) and college transcript(s), if applicable, sent to the WSU Office of Admissions from the issuing institution;
- Have ACT, SAT or GED scores sent directly from the testing agency to the WSU Office of Admissions; and
- Submit a nonrefundable $40 application fee.

College transfers with 24 or more hours of completed college credit

- Submit a completed and signed application;
- Have official college transcript(s) sent to the WSU Office of Admissions from all the issuing institutions. Official high school transcripts are required only if seeking federal financial aid assistance; and
- Submit a nonrefundable $40 application fee.

WSU's transcript and test policy are online at the admissions transcript webpage (https://wichita.edu/transcriptsprocedures/)[1].

Paper submissions should be sent to:

Office of Undergraduate Admissions
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0124

[1] Link opens new window.

[2] High school guest students have additional paperwork to submit. See *Guest Students — High School* section for more information.

Residency Requirements

See Residency Defined (p. 54).

Admission Categories

Students may be admitted as degree-bound or nondegree-bound students.

Degree-Bound

Degree-bound students who have declared an academic interest will be admitted to the college of their choice. They must meet the necessary requirements for admission to the university as well as the requirements of the colleges and departments of their choice. Students who are still deciding on an academic major will be admitted to Fairmount College of Liberal Arts and Sciences for academic advising and career counseling.

Nondegree-Bound

Nondegree-bound undergraduate is a category of admission for students who wish to pursue their education with no immediate degree plans. Students in this category are not eligible for financial aid. Nondegree students can be admitted as either open admission or guest students.

Open Admission

An open admission student is one who:

- Has graduated from high school, or has a GED; *or*
- Has not graduated from high school or completed a GED, and is at least 21 years of age; *or*
- Is on active military duty; *or*
- Holds a bachelor's or higher degree.

Students not meeting the requirements above may be considered for nondegree admission at the discretion of the Office of Admissions.

Students admitted as open admission students will be considered nondegree for their first 30 credit hours. Beyond the 30 credit hour limit, students must apply for degree-bound admission and meet the requirements for the intended program. To transition to degree-bound, students must submit an application for admission, the $40 application fee, and all transcripts when applying for degree-bound admission.

Guest Students – College

Students attending another college or university who wish to attend Wichita State temporarily, should submit a nondegree college guest application and application fee to the Office of Admissions.

Please note: while transcripts from previous colleges are not required for guest admission, transcripts may be required to verify completion of prerequisite courses.

Guest admission is limited to 30 credit hours. Beyond the 30 credit hour limit, students must apply for degree-bound admission and meet the requirements for the intended program. To transition to degree-bound, students must submit an application for admission, the $40 application fee, and all transcripts when applying for degree-bound admission.

Guest Students – High School

Students who attend Wichita State before graduation from high school are considered to be high school guest students.

1. The deadline to enroll as a high school guest student is approximately one week prior to the first day of classes each semester.
2. High school guests may not take more than 6 credit hours each semester without permission by the Office of Admissions or by an advisor in the Liberal Arts and Sciences Advising Center.
3. Admission to WSU does not constitute permission by academic departments to take courses. All prerequisites for a course must be met before the student enrolls.
4. Admission as a guest student does not guarantee admission as a degree-bound student after high school graduation.
5. High school guest students are admitted as nondegree seeking students and are not eligible for federal aid.

To be admitted as a high school guest for the first time, students must:

1. Complete their sophomore year of high school. Younger students are considered on an individual basis;
2. Submit a High School Guest Application form, including a nonrefundable $25 application fee; and
3. Submit an official high school transcript. The high school transcript must show at least a 3.000 overall GPA. Admission for students with a lower GPA can be requested from admissions by the high school counselor. Cases in which students do not meet the 3.000 GPA requirement will be considered on an individual basis.

To renew admission as a high school guest:

1. High school guest admission must be renewed each semester;
2. Submit a new WSU High School Guest Application form;
3. Submit an updated high school transcript;
4. The high school transcript must show at least a 3.000 overall GPA; and
5. WSU transcript must show a 2.000 overall GPA.

Academic advising is available to all high school guests by contacting the Liberal Arts and Sciences Advising Center, 115 Grace Wilkie Hall. Call 316-978-3700 to schedule an appointment or visit the LAS Advising Center website (http://wichita.edu/lasadvising/)[1].

The WSU High School Guest Application form can be completed online (http://wichita.edu/apply/)[1] by selecting the Undergraduate Nondegree option, high school guest application, or a paper version can be found on the high school guest program webpage (http://wichita.edu/hsguest/)[1].

[1] Link opens new window.

Admission Requirements – Undergraduate; Domestic

Freshmen

Kansas residents attending accredited high schools must:

- Complete the precollege curriculum[1] with at least a 2.000 grade point average (GPA) on a 4.000 scale; *and*
- Achieve a 2.000 GPA or higher on any college credit taken in high school; *and*
- Achieve *one* of the following:
  - A minimum ACT composite of 21 or a minimum combined SAT-I of 1080 (math and evidence-based reading and writing scores); *or*
  - Rank in the top one-third of their high school's graduating class;

Note: These standards apply to those under the age of 21 with less than 24 completed college credit hours.

Nonresidents[2] attending accredited high schools must:

- Complete the precollege curriculum[1] with at least a 2.500 grade point average (GPA) on a 4.000 scale; *and*
- Achieve a 2.000 GPA or higher on any college credit taken in high school; *and*
- Achieve *one* of the following:
  - A minimum ACT composite of 21 or a minimum combined SAT-I of 1080 (math and evidence-based reading and writing scores); *or*
  - Rank in the top one-third of their high school's graduating class;

Note: These standards apply to those under the age of 21.

Kansas residents attending nonaccredited high schools (including those with international high school work), ***or home-schooled students*** must:

- Complete coursework equivalent to the precollege curriculum[1] with at least a 2.000 grade point average (GPA) on a 4.000 scale;
- Have at least a 21 on the ACT (SAT-I of 1080); and
- Achieve a 2.000 GPA or higher on any college credit taken.

Nonresidents[2] from nonaccredited high schools (including those with international high school work), ***or home-schooled students*** must:

- Complete coursework equivalent to the precollege curriculum[1] with at least a 2.500 grade point average (GPA) on a 4.000 scale;
- Have at least a 21 on the ACT (SAT-I of 1080); and
- Achieve a 2.000 GPA or higher on any college credit taken.

GED students must have a minimum score of 150 on each sub-test and an overall score of 680 to be admitted. If GED was taken before 2014, please call the Office of Admissions for score requirements.

***Please note at the time of this publication, proposals to amend the Qualified Admissions standards are progressing through the legislative process for students under the age of 21. It is anticipated that these changes will likely take effect during the 2021-2022 admission cycle. If approved, admission standards for both Kansas residents and nonresidents will be amended to the following:**

- A minimum ACT composite of 21 or a minimum combined SAT-I of 1080 (math and evidence-based reading and writing scores); ***or***
- *Cumulative GPA of 2.250*
- ***And*** Achieve a 2.000 GPA or higher on any college credit taken.

Transfer students

- With 24 or more transfer hours, must have a minimum overall GPA of 2.000 (on a 4.000 scale) on all previous college work.
- With 23 or fewer transfer hours, must have a minimum overall GPA of 2.000, *and* meet the freshman qualified admissions requirements.

Some academic colleges at Wichita State have an additional higher transfer GPA requirement for admission. For more information contact the WSU Office of Admissions.

Admission remains open to Kansas residents over the age of 21 who have graduated from high school or have completed a GED with the minimum required scores.

Transfer students are encouraged to bring copies of their academic transcript and meet with an academic advisor prior to enrolling. The advisor can provide information about degree requirements and the eligibility of the student's prior coursework towards their degree of choice. Contact an academic advisor through the dean's office. See academic advising (p. 14).

Students transferring from a two-year college must complete at least 60 credit hours of four-year college work including 45 credit hours of upper-division work in order to qualify for graduation. In no case will work done in a two-year college be credited as junior- or senior-level work at WSU. See course numbering system (p. 29) and requirements for graduation (p. 34).

To view admission requirements, visit the WSU admission requirements webpage ***(***http://wichita.edu/requirements/***)[3].***

[1] The Kansas Regents' Qualified Admissions Precollege Curriculum requirements can be found online at the WSU admission requirements webpage (http://wichita.edu/requirements/). (Link opens new window.)

[2] See residency requirements (p. 54).

[3] Link opens new window.

International Student Admission

Wichita State University demonstrates its commitment to international education through the Office of International Education. The office assists international students with cultural acclimation, immigration counseling, English language instruction and admission to the university.

The university welcomes students of every national, racial, religious, ethnic and cultural background. Admission decisions are based solely on the academic qualifications of applicants.

English Proficiency Requirements

All international undergraduate students at Wichita State University are required to demonstrate proficiency in English before beginning full-time academic study. Students, however, are not required to submit proof of English proficiency, such as TOEFL results, with their application for admission. The university will consider all undergraduate applicants for admission without proof of English proficiency.

English proficiency may be demonstrated in the following ways:

1. Obtain a TOEFL score of 530 or higher on the paper-based test;
2. Obtain a TOEFL score of 72 or higher on the internet-based test;
3. Obtain an IELTS score of 6.0 or higher;
4. Obtain a PTE Academic score of 49 or higher;
5. Obtain an SAT-I verbal score of 410 or higher;
6. Obtain an ACT English section score of 20 or higher;
7. Obtain a score of 80 or higher on the WSU English Proficiency Examination;
8. Successfully complete the highest level of the WSU Intensive English Language Center;
9. Have 24 or more transferable semester credit hours from another U.S. college or university;
10. Successfully complete Level 112 at the ELS Language Center; or
11. Complete four years of English with grades of *C* or higher at a U.S. high school.

All test scores must be sent to Wichita State University directly from the testing company.

Application Information

In order to apply, all international undergraduate students must submit the following:

1. A completed International Undergraduate Application form;
2. U.S. $75, $150 or $250 nonrefundable application fee depending on the student's desired service level;
3. Official copies — in English — of *all* transcripts from all secondary schools, colleges or universities attended; and
4. Certification of Financial Support and evidence of financial resources (e.g. bank statement, scholarship letter, etc.).

Nondegree Status

Some students wish to study for one or more semesters without earning a degree. Nondegree applicants must submit all of the required application materials and will receive the same consideration as degree candidates.

Other Requirements – Health Insurance

All international students are required to have medical insurance that meets university requirements, including support for repatriation and medical evacuation. Students are automatically charged for the Wichita State University insurance plan when they register for classes. They may apply for an insurance waiver if they provide proof of adequate insurance before they register for classes.

All new students are required to be tested for tuberculosis after arriving in Wichita and before registering for classes.

For more information about international student admission, write:

Office of International Education
Wichita State University
Wichita, Kansas 67260-0122 USA
Telephone: 316-978-3232
Fax: 316-978-3777
Email: international@wichita.edu
Website: Office of International Education (http://wichita.edu/international/)[1]

Graduate Students

For more information, graduate students should consult the Graduate Catalog; the Graduate School website (http://wichita.edu/gradschool/)[1]; or email the Graduate School (gradinqu@wichita.edu).

Admission Exceptions

The university has an exceptions committee to review petitions from people seeking admission to the university as domestic undergraduates who otherwise do not qualify. There is a separate appeals process for international undergraduate admission through the international education office.

[1] Link opens new window.

Former Students in Inactive Status

Students who have completed coursework at Wichita State University, but have not enrolled in the past 24 months, are placed in inactive status. Students are also inactivated due to graduation upon completion of a bachelor's degree.

To enroll again, inactive students must complete an online reactivation form available at the registrar's reactivation webpage (http://

wichita.edu/reactivation/)[1]. This should be done at least one month before any planned enrollment.

Former students who have enrolled only as nondegree students must apply for admission to enroll as degree-bound students.

[1] Link opens new window.

Admission to Accelerated Programs; Graduate School

Admission to Dual/Accelerated Bachelor's to Master's Degree Programs

The dual/accelerated bachelor's to master's degree programs offer outstanding students opportunities to advance their careers in significant ways by pursuing the bachelor's and master's degrees in a parallel and coordinated program. In addition, it may be possible for students to complete the requirements for both degrees (in the same field) in an accelerated time frame. The goal of this program is to provide students with a high level of academic advising culminating in the preparation of the graduate program of study while students are still in their sophomore or junior years. Dual/accelerated degree programs are available in:

- BA to MEd in exercise science
- BA to MA in economics
- BBA to MHRM (human resource management)
- BS to MS in biomedical engineering
- BS to MS in computer networking
- BS to MS in computer science
- BS to MS in electrical and computer engineering
- BS (in industrial or manufacturing engineering) to MS in industrial engineering
- BS to MEM (master of engineering management)
- BS to MS in mechanical engineering
- BA to MA in aging studies
- BS to MHA (health administration)
- BSN to MSN in nursing
- BA to MA in English
- BS to MS in mathematics
- BA to MA in Spanish

Each dual/accelerated program has specific admission requirements. Students should consult with the department's graduate coordinator if they are interested in this type of program.

Students who are receiving federal financial aid should consult with a financial aid advisor to determine if taking graduate level coursework while an undergraduate student will impact their financial aid award.

Graduate Student Admission

Specific requirements for either degree or nondegree admission for all graduate programs are listed in the Wichita State University Graduate Catalog.

For further information about graduate admission requirements, graduate programs, or to obtain graduate application materials, contact:

Graduate School
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0004 USA
Telephone: 316-978-3095
Website: Graduate School (https://wichita.edu/gradschool/)[1]
Email: wsugradschool@wichita.edu

[1] Link opens new window.

Transfer Credit

Official transcripts of all work done at other postsecondary institutions must be submitted to WSU, usually during the admission process. For transcripts to be official, they must be mailed from the college or university directly to WSU. Faxed transcripts will not be used to evaluate transfer credit.

Acceptance

Courses will be accepted as transfer credit if they were not remedial and were taken at colleges and universities that are accredited by a regional accrediting body, such as the Higher Learning Commission. International colleges and universities must be officially recognized by the Ministry of Education in their countries for students to receive transfer credit. Transfer courses are applied toward graduation requirements in accordance with the policies of the WSU college and program. Some programs do not accept transfer courses with a grade of D. Vocational or technical courses only transfer as *free electives*, and often do not count toward completion of a specific program at WSU. An official evaluation of how courses transfer is made after the student is admitted.

Transfer Credit from Nonaccredited Institutions

WSU does not accept and post transfer credit for students who have completed postsecondary coursework at institutions that are not accredited by one of the major regional accrediting bodies.

Military Credit

WSU will award credit for military course completions from the Army, Marine Corps, Navy or Coast Guard based on ACE credit recommendations on the Joint Services Transcript. Credit for coursework from the Air Force will be awarded from the Community College of the Air Force Transcript.

Records

Accepted transfer courses are recorded on the student's academic record at Wichita State and appear in detail on the WSU transcript. Where necessary, transfer course titles are changed to agree with WSU course titles.

Getting Started at Wichita State

For the vast majority of students at WSU, the goal of attending college is to earn a degree. As a student takes the first steps on their educational journey, it pays to keep that long-term goal in mind. WSU's Office of Student Success: First-Year Programs offers a set of programs, resources and activities designed to help students reach their goals, and maximize their success and satisfaction as they pursue their degree. The three main components to the first-year experience are orientation and transition programs, first-year advising and First-Year Seminar courses. Each of these is a valuable tool for navigating the transition to Wichita State University and should be considered an integral part of the student experience. Students who take full advantage of these programs and opportunities are more likely to be successful, and are more likely to finish their degrees in a timely manner.

Orientation and Registration

Orientation

Whether starting a college career at WSU fresh out of high school, transferring from another institution, or returning to school after a long absence, WSU offers orientation experiences tailored to student needs. Orientation provides opportunities to get to know faculty members and fellow students, resources and offices on campus, academic expectations, keys to college success, the history and traditions of WSU and much more. Parents and guests are invited to parallel programs during freshman orientation so they can learn more about how to help their students succeed in college.

Orientation is required for all students new to WSU regardless of previously earned credit. Each semester, Student Success: First-Year Programs notifies new students of the various ways they can complete their orientation requirement.

For the latest information, phone 316-978-5420 or visit the orientation website (http://wichita.edu/orientation/)[1].

[1] Link opens new window.

Registration

Specific information regarding registration can be found at the Office of the Registrar's website (http://wichita.edu/registrar/)[1]. Students register through web registration in the *my*WSU portal.

Prior to registering for classes, all students should contact their academic advisor to assure they are taking the appropriate classes. Early registration for one semester normally begins about midway through the preceding semester. ***Registration for a course or courses represents a financial commitment that the student is obligated to pay.***

Newly admitted, currently enrolled and former students not academically dismissed, are eligible for online registration. Some academic restrictions have been built into the system. College or program specific restrictions may be considered for removal by contacting the appropriate college or department and requesting an electronic override.

Registration and classes begin and end at varying times so it is important to consult the semester calendar for details. For more information, check the schedule of courses webpage (http://wichita.edu/schedule/)[1].

Once a student has enrolled, registration may be changed online for a certain period of time that varies according to the start date and length of the course. After the online period has passed, students must process in-person drop and/or add forms with the appropriate approvals. Changes of sections also require such action. A grade of *F* could be recorded for failure to attend the classes shown on the original enrollment records.

Late enrollments or adds normally will not be approved after the 20th class day. Drops of classes with a grade of *W* (withdrawal) are subject to a time limit established by the registrar.

Cutoff deadlines for dropping with a refund also vary according to the start date and length of the course.

Students who find it necessary to completely withdraw from the university must drop each class.

[1] Link opens new window.

Academic Advising

Advising at WSU is an ongoing educational partnership between the student and professional/faculty advisors and advising staff. Academic advising promotes student success with the goal of helping students graduate in a timely manner. Academic advising is much more than just schedule building; it is a personalized way to explore options, get information and make good decisions. New, incoming, traditional freshmen students go through the first-year advising process at OneStop. All other new students are required to see a college academic advisor prior to enrollment. Certain colleges and departments have additional advising requirements as well.

Academic advisors form partnerships with students in the following ways:

- Academic advisors assist students to set goals — both short term and longer term — that help them in determining and achieving their degree objectives.
- Academic advisors provide, and can also show students how to access accurate information about the graduation requirements of degree programs, and can work with students to plan the strategic progression of coursework that will allow graduation in the most timely manner consistent with the student's life circumstances. Advisors can provide career information regarding the degree fields of interest and will also refer students to appropriate career research resources in printed, electronic or in-person format.
- Academic advisors are well informed about official university policies and procedures for enrollment, dropping or adding courses, changing colleges, changing majors, and other such policies and procedures important to a student's ability to progress. Advisors are also able to instruct students in the execution of those procedures. Advisors can show students how to access reliable and accurate sources for university policies and procedures in both print and electronic formats.
- Students are given access to various means of initiating contact with an academic advisor, including email, phone and personal contact. Academic advisors are available to meet with the student within a reasonable time frame after the student's request and appointment time(s) will be allotted to carry out the activities needed.
- Academic advisors have comprehensive knowledge of campus resources, including electronic resources, which are important to student success at the university, and can show students how to access that information. Advisors assist students in referral and access to such services as counseling, career and employment services, assisted instruction, success courses, math and writing labs and other help available for the student's academic skill development.

Where to Go for Academic Advising

- Incoming, traditional freshmen students meet with a first-year advisor at OneStop for the first two semesters of enrollment.
- Degree-bound students who have chosen a major within a specific college should meet with an advisor in that college.
- Degree-bound students who are still deciding on a major should meet with an advisor in the LAS Advising Center.
- Nondegree-bound students who are enrolled in classes for purposes other than completing a degree should meet with an advisor in the LAS Advising Center.
- Graduate students should contact the Graduate School or their graduate program for advising assistance.

Academic advising is available through the individual offices listed below:

One Stop
OneStop
112 Jardine Hall
316-978-3909
Website: First-Year Advising (https://wichita.edu/firstyearadvising/)[1]

Honors
Dorothy and Bill Cohen Honors College
Shocker Hall, Room A1180
316-978-3375
Website: Dorothy and Bill Cohen Honors College (https://wichita.edu/honors/)[1]

Business
W. Frank Barton School of Business
008 Clinton Hall
316-978-3203
Website: Business Advising Center (https://wichita.edu/businessadvising/)[1]

Applied Studies (Education)
College of Applied Studies
107 Corbin Education Center
316-978-3300
Website: College of Applied Studies Advising (https://www.wichita.edu/casadvising/)[1]

Engineering
College of Engineering
300 Wallace Hall
316-978-3420
Website: Engineering Academic Advising (https://wichita.edu/engadvising/)[1]

Fine Arts
College of Fine Arts
319 McKnight
316-978-6634
Website: College of Fine Arts Advising (https://wichita.edu/cfaadvising/)[1]

Health Professions
College of Health Professions
402 Ahlberg Hall
316-978-3304
Website: College of Health Professions Advising Center (https://wichita.edu/chpadvising/)[1]

Liberal Arts and Sciences
LAS Advising Center
115 Grace Wilkie Hall
316-978-3700
Website: Liberal Arts and Sciences Advising Center (https://wichita.edu/lasadvising/)[1]

Graduate School
Graduate School
107 Jardine Hall
316-978-3095
Website: Graduate School (https://wichita.edu/gradschool/)[1]

[1] Link opens new window.

Student Success

Students define success differently. Student Success helps students maximize their academic potential and reach their personal goals through a range of programs and services, regardless of personal background. Its goal is to help students develop skills and plans to graduate in a timely manner while engaging with its community of learners.

The work of Student Success is focused in four areas: First-Year Programs, Academic Success Programs, student money management, and success coaching. Full-time Success Coaches are available to help students in all majors stay on track to graduate and set and reach their academic and personal goals.

Its goals include helping students:

- transition successfully to WSU,
- improve academic performance and achieve academic excellence,
- set and achieve personal goals,
- build confidence and resilience in the face of challenge,
- develop financial literacy skills, and
- participate in campus programs that improve student satisfaction.

Information about specific programs such as Orientation, Supplemental Instruction, tutoring, the Shocker Learning Center and Success Coaches as well as a number of study skills resources can be found on the Student Success website (http://wichita.edu/success/)[1].

Student Success will continue to partner with faculty to offer general education courses called First-Year Seminars. These 3-credit-hour courses are unique classes designed specifically for new, traditional freshmen and are taught by faculty. The seminars cover a broad range of topics from current events to cultural competency to the arts, and include elements that engage students in learning communities and teach successful student and life skills. More information including a list of seminars offered can be found on the First-Year Seminar website (http://wichita.edu/fyseminar/)[1].

[1] Link opens new window.

First-Generation Coordinating Council

A first-generation college student is defined at Wichita State as a student whose parents/guardians have not completed a four-year college degree. Named a First-Forward Institution (https://firstgen.naspa.org/first-forward/)[1] by NASPA (https://www.naspa.org/home/)[1] for its 50+ year history of transformative work increasing both access and success for first-generation students, Wichita State is committed to removing barriers by providing services and assistance, including academic support, professional guidance and mentoring, and financial stability.

The First-Generation Coordinating Council (FGCC), consisting of faculty and staff, was created to improve college persistence and

graduation for first-generation students. FGCC activities are grouped into four distinct areas:

1. Improving awareness of the needs and successes of this special student population while creating a sense of welcome;
2. Creating opportunities for and encouraging the involvement of faculty and staff in activities that support first-generation student success;
3. Reviewing university data and outcomes in order to make recommendations for systemic change that leads to better experiences and results for first-generation students; and
4. Ensuring support for university precollegiate outreach and college readiness efforts to strengthen the transition process for first-generation students to both postsecondary and graduate education.

Students who identify as first-generation should visit the F1RST GEN SHOCKERS website (http://www.wichita.edu/first/)[1] to learn more about ways to engage with other first-generation students and connect with support initiatives.

[1] Link opens new window.

Housing and Residence Life

On-campus housing is available for 1,450 students within Shocker Hall, The Suites at WSU, and The Flats at WSU. Housing options include living-learning communities, suite-style residence hall rooms, and a variety of room and/or apartment configurations.

Research nationwide has repeatedly shown that freshmen who live on campus are more successful academically than freshmen who do not live on campus; and because Wichita State University is committed to students and student success, *all incoming freshmen are required to live on campus in designated university housing.* Freshmen must live their first two semesters within university housing facilities, unless they are exempted from this housing policy. All other students may choose their own accommodations; however, university housing is highly recommended.

Exceptions to the freshmen residency requirement are made for freshmen who are:

1. *Residents of the greater Sedgwick County area* (see Housing and Residence Life website for approved counties/cities).
2. *At least 21 years of age, or will turn 21 during the academic year;*
3. *Married, or will be prior to the first day of classes;*
4. *Living in official Greek housing;*
5. *Taking less than 12 credit hours per semester;*
6. *Transfer in 24 or more completed credit hours;*
7. *Living with an approved relative (grandparent, aunt or uncle) in the greater Sedgwick County area (see Housing and Residence Life website for approved counties/cities).*

All freshmen who would like to be exempted from the residency requirement — including those who fall into one of the above categories (with the exception of number one) — are required to complete and submit a Housing Exemption Form. Exemptions may require documentation and will be reviewed by the department of Housing and Residence Life. A written reply will be sent to those who request an exemption.

Admission to Wichita State University does not mean an automatic room reservation. Each student admitted will receive information concerning housing from the department of Housing and Residence Life. Students must complete a housing application, including a $75.00 application fee, and sign a housing contract that includes a $200.00 prepayment in order to receive a timeslot to select a room through the room self-selection process. Students are encouraged to apply early, as space is limited.

For more information about living on campus, room and meal plan options, or application/contract questions, please contact the department of Housing and Residence Life by phone at 316-978-3693, by email at Housing.WSU@wichita.edu, or visit the Housing and Residence Life website (https://wichita.edu/housing/)[1]. Wichita State University reserves the right to make policy adjustments where the situation demands, change the residence of any student, or deny or cancel the residence accommodations of any student in cases where such action is deemed necessary.

[1] Link opens new window.

Student Identification

Each student is identified in the university's computer system by a unique set of eight numbers and letters, called *my*WSU ID. This ID is assigned and communicated to students at the time of application. A social security number is also required for everyone who has federal financial aid or is employed by the university, as they must also be identified in the system by their social security number.

All WSU students are required to have a WSU photo identification card called the Shocker Card. The card does not expire and is used to determine a student's current enrollment status. The initial card is free. Lost, stolen or discarded cards may be replaced for a fee.

The Shocker Card contains a unique 16 digit ISO number encoded on it and is the only means by which students can use the following services: Ablah Library, Heskett Center, athletic ticket office, student government, student health services, WSU police department.

Financial Information

The cost of an education at Wichita State is paid from appropriations made by the state of Kansas, donations made to the WSU Foundation, and the tuition and fees of students. This section of the catalog provides information related to costs, payments and financial aid at WSU.

The requirements for Kansas residency for tuition purposes are defined on the Residency Defined (p. 54) page of this catalog.

Financial Assistance

Wichita State offers financial assistance through scholarships, federal and state supported programs, and employment. Students interested in any type of financial assistance should contact the Office of Financial Aid, 203 Jardine Hall, or visit the Office of Financial Aid website (http://wichita.edu/financialaid/)[1] to review the types of opportunities for which they might qualify.

Scholarships

Wichita State has been fortunate to receive donations from past graduates, faculty, friends and administrators of the university who wish to assist future graduates in financing their years at Wichita State. Scholarships are funded through the proceeds of the gifts from these individuals and play a vital role in the university's attempt to meet the needs of students requiring financial assistance.

Endowed scholarships are funded from earnings on donor endowment funds through the Wichita State University Foundation. The principal of these funds is never expended, therefore scholarship funding is available in perpetuity.

Current scholarship dollars are contributed annually by donors. Funds to support these scholarships come from annual gifts.

Institutional scholarships also come from other sources including academic colleges, departments, organizations and county mill levy funds.

For information on requirements and deadlines for WSU scholarships, visit WSU's scholarships webpage (http://wichita.edu/scholarships/)[1].

Federal Grants and Loans

Students may receive assistance through several federal programs: Supplemental Educational Opportunity Grants, Pell Grants, TEACH Grants, subsidized and unsubsidized Stafford Loans, and parental loans for dependent undergraduate students. Federal financial aid is awarded based on the results of the Free Application for Federal Student Aid (FAFSA (http://fafsa.ed.gov/)[1]).

State Scholarships and Grants

The following scholarships are available through the Kansas Board of Regents: Kansas Ethnic Minority Scholarship, Kansas Military Service Scholarship, Kansas National Guard Educational Assistance, Kansas Nursing Service Scholarship, Kansas State Scholarship, or the Kansas Teacher Service Scholarship. Students can learn details about the programs and application process at the Kansas Board of Regents website under Student Financial Aid (http://kansasregents.org/students/)[1].

A Kansas Comprehensive Grant is awarded to full-time undergraduate students with exceptional financial need. Priority for the limited funding is given to residents of Kansas who meet the state of Kansas priority date for filing the Free Application for Federal Student Aid (FAFSA). Funds are awarded to eligible applicants in date order until available annual funding is fully committed.

Employment

Students enrolled in at least 6 credit hours may be eligible for part-time employment at the university. Federal work-study employment is based on demonstrated financial need. For information about student employment visit the Career Development Center's website (http://wichita.edu/career/)[1].

Withdrawal and Financial Aid

A student's eligibility for financial aid is based on enrollment. The Higher Education Act outlines rules which govern the return of Title IV federal financial aid funds disbursed to a student who does not complete all of the days in a payment period or a period of enrollment they were scheduled to complete.

These rules assume that a student *earns* his or her aid based on the time the student remains enrolled in academically related activities; *unearned* aid, other than federal work-study, must be returned. Unearned aid is the amount of financial aid received that exceeds the amount the student has earned.

During the first 60 percent of the enrollment period, a student earns aid in direct proportion to the length of time he or she remains enrolled and participating in academically related activity.

Financial Aid Repayments

A reduction in hours may require repayment of financial aid received. Students should discuss possible reductions in class hours with the WSU Office of Financial Aid prior to finalizing a drop in hours. Students will be advised about how the drop may impact their current and future financial aid.

Additional information about financial aid policies is available at WSU's Financial Aid Terms and Conditions website (http://wichita.edu/finaidpolicy/)[1].

[1] Link opens new window.

Tuition and Fees

The tuition and fees listed are subject to change by the Kansas Board of Regents. For complete list of course and services fees, see the comprehensive fee schedule *(*https://www.wichita.edu/services/finance/ComprehensiveFeeSchedule.php*)*[1] .

Basic Fees

Basic fees for resident and nonresident students are listed here. For tuition and fees for Shocker City Partnership, Shocker Select, Midwest Student Exchange and Global Select, visit the tuition and fees webpage (http://wichita.edu/tuition/)[1].

Note: Tuition and fees are for the fall and spring semesters and the summer session. **Tuition and fees for 2020–2021 had not been established at the time of publication, but an increase is anticipated.** Published fees reflect the 2019–2020 rates.

	Resident	Nonresident
Undergraduate Tuition	$ 223.62 per credit hour	$ 529.68 per credit hour
Graduate Tuition	$ 301.94 per credit hour	$ 741.55 per credit hour
Online Tuition[2]	$ 223.62 per credit hour	$ 529.68 per credit hour
Online Fee	$ 97.25 per credit hour	$ 97.25 per credit hour

Campus Infrastructure & Support Fee — all students[3]	$ 6.00 per credit hour	$ 6.00 per credit hour
Technology Fee — all students[4]	$ 1.00 per credit hour	$ 1.00 per credit hour
Transportation Fee — all students[5]	$ 0.75 per credit hour	$ 0.75 per credit hour
`		
Student Activity Fee	**Fall/Spring**	**Summer**
Undergraduate[6]		
9.00 or more credit hours	$ 679.18	$ 339.60
6.00 to 8.75 credit hours	$ 452.78	$ 226.40
up to 5.75 credit hours	$ 226.40	$ 113.21
Graduate[6]		
7.00 or more credit hours	$ 679.18	$ 339.60
4.00 to 6.75 credit hours	$ 452.78	$ 226.40
up to 3.75 credit hours	$ 226.40	$ 113.21

[1] Link opens new window.

[2] The tuition for online majors is set at the resident rate (undergraduate and graduate).

[3] The Campus Infrastructure and Support Fee supports registration costs and the OneStop service center which provides 24/7 support for students in the areas of admissions, financial aid, registration, advising and student accounts. All students have access to such services virtually or at the physical OneStop service center.

[4] The Technology Fee is assessed to all students for technology upgrades and replacement.

[5] The Transportation Fee is assessed to all students to help offset the cost of the campus shuttle bus service.

[6] Students enrolled in online majors are exempt from the semester fee.

Midwest Student Exchange Program (MSEP)

Residents of specified states who enroll in selected majors at WSU are eligible to pay just 150 percent of in-state tuition instead of paying out-of-state tuition rates. This is a tuition discounting program, not a scholarship.

At WSU, the eligibility criteria for undergraduate student participation in the Midwest Student Exchange Program are:

Students coming directly from high school:

1. Must complete the precollege curriculum prescribed by the Kansas Board of Regents, with a minimum grade point average of 2.500 on a 4.000 scale, which includes four units of English and math and three units of social sciences and natural sciences; and
2. Must earn a composite American College Testing program (ACT) score of no less than 21 points or a SAT score of no less than 1080 points; and
3. Must enroll as a full-time student in a degree-bound eligible major, and make acceptable progress toward the degree; and
4. Must be a resident of Illinois, Indiana, Minnesota, Missouri, Nebraska, North Dakota, Ohio or Wisconsin.

Transfer students:

1. Must have a minimum transfer grade point average of 2.500 on a 4.000 scale; and
2. Must meet the requirements for high school students if transferring with fewer than 24 credit hours; and
3. Must enroll as a full-time student in a degree-bound eligible major, and make acceptable progress toward the degree; and
4. Must be a resident of Illinois, Indiana, Minnesota, Missouri, Nebraska, North Dakota, Ohio or Wisconsin.

If a student satisfies these criteria, as verified by an eight-semester high school transcript submitted to WSU, they will be sent an MSEP agreement. Fee bills will reflect MSEP tuition rates only after the agreement is signed and returned. MSEP participation must begin at the time of first admission and enrollment at WSU.

See the MSEP program website (http://wichita.edu/msep/)[1] for contact information and the most up-to-date list of eligible majors.

[1] Link opens new window.

Workshops, Off-Campus, Online, Auditing Course Fees

Credit and Noncredit Courses for Nondegree-Seeking Students

Courses

Concurrent High School Enrollment Tuition	$ 100/course
Badges (undergraduate and graduate)	based on costs/badge
Market-Based Tuition Course	based on market/credit hour

Workshops

Workshops That Award Credit	based on tuition and fees/credit hour
Noncredit Workshops	based on costs/workshop

CATIA Workshops (regardless of location)

The laboratory fees for CATIA workshops are as follows:

1.5 Credit-Hour Workshops Tuition and Fees	$ 800/workshop
0.75 Credit-Hour Workshops Tuition and Fees	$ 400/workshop
Media Course/Telecourse Fee	$ 20/credit hour

Auditing Course Fees

Tuition and fees per credit hour for courses and workshops audited are the same as for courses taken for credit.

Student Parking Permits

Students and frequent visitors desiring to park on campus can visit Parking at Wichita State (https://wichita.edu/parking/)[1] to purchase an e-permit.

Students and Frequent Visitors: Car/SUV/Truck/Motorcycle	$75/semester (fall, spring)

[1] Link opens new window.

Payment

Tuition and fees, including any departmental or college fees, are required to be paid in full for any course in which a student is still enrolled after the deadline for dropping that course with a 100 percent refund.

An installment payment plan is available at the time of enrollment to assist students in making tuition payments. Any student who does not have financial aid from other sources sufficient to pay tuition and fees is eligible if the student has paid all previous obligations to the university. The installment plan requires a $130 nonrefundable down payment which includes a $30 setup fee making the installment plan interest-free. Installment plans must be repaid in two or three equal installments according to the deadlines for a given semester.

Assessment and Collection

The senior associate vice president for financial services is responsible for the assessment and collection of fees. All semester fees, including laboratory fees, are due and payable in full at registration.

Late Fees

All accounts with a balance greater than $150 from tuition, enrollment related fees or housing charges assessed in the current term will incur a $100 late fee on the first business day after the published payment due date. The payment due date for tuition and enrollment related fees will coincide with the financial aid office's recalculation date, the registrar's office late enrollment date, and the financial operations office 100 percent refund date. The payment due date for housing charges is stated in the housing contract.

All delinquent accounts with a balance due greater than $150 from tuition, enrollment related fees or housing charges will incur a late payment fee of $100 ninety (90) calendar days into the current term.

Unpaid Fees

Students who leave Wichita State University without meeting their financial obligations to the university will have their records impounded by the registrar and their accounts may be sent to a collection agency resulting in additional fees. Their transcripts or diplomas will not be issued unless their accounts are cleared, and they may not enroll for a new term unless all fees are paid.

Students who are eligible to graduate but still have unpaid tuition balances will not receive their diplomas until those fees are paid.

Board of Appeals – Residency Status

Two faculty members, a department director, a representative of the office of financial operations and business technology, and a representative of the general counsel's office constitute the board of appeals for students who believe their residency status has been incorrectly assessed or is eligible for change. The decision of this committee is final. Forms to initiate this process may be obtained in the registrar's office, 102 Jardine Hall. Residency forms can also be downloaded online (https://wichita.edu/residency/)[1]. Also see the Residency Defined section in this catalog.

[1] Link opens new window.

Special Fees and Refund Policies

Drop/Add Fee Policy

Students who drop credits in the same term and do not add credits will be charged the proportional percentage based on the week they drop the credits.

Students who drop and add credits in the same term will not be required to pay additional tuition/fees if the following conditions are met:

1. The drop and add occurs in one transaction; and
2. There are an equal number of credit hours added as are being dropped, and the credit hours have an equivalent charge.

A course that has been added in accordance with parts 1 and 2, and is subsequently dropped, will retain the same refund percentage as the original course dropped. Students who drop the added course that met the above conditions will have an adjustment made to their account. (Example: A student drops course A and adds course B. Course A would have had a 0 percent refund; however, because conditions have been met, student receives a 100 percent refund for course A. Student then decides to drop course B. An adjustment is made to the account reversing the 100 percent refund received for course A.)

Complete and Partial Withdrawal

Complete withdrawal from the university is accomplished when a student officially drops all classes in which they are enrolled.

Students are eligible for refunds as published online in the fee calendar each semester. In short-term classes, students will have the first class period to determine if the class is suited for them. Students who register late or fail to attend the first class period in short-term classes will not be eligible for 100 percent refunds according to the policy.

The *first class day* refers to the first day of the part-of-term as defined by the department and registrar's office; thereafter, the *day* refers to the business day. The length of the *part-of-term* determines the refund, rather than the start and end date of the course. When a course's part-of-term length falls between two of the above categories, then the shorter one is used. (Example: If course A part-of-term begins Monday and the actual course meets on Thursday, the refund business day begins with Monday, not Thursday.)

If a short-term class begins on Friday night, Saturday or Sunday, students will have until the end of the first business day to drop the course. In order to receive a 100 percent refund for the class, the student must provide documentation that he or she did not attend more than four hours of the class.

No one other than the Office of Financial Operations and Business Technology in 201 Jardine Hall, or the Tuition Refund Board of Appeals is authorized to determine the amount of tuition refund a student will receive.

Military Refund Policy

Students serving in the National Guard or Reserves who are called to active duty during an academic term are entitled to receive a full refund of tuition and fees. Students who are drafted and must report for active duty during an academic term are entitled to receive a full refund of tuition and fees. All refunds are subject to presentation of official documentation. Students who are classified as civilians, but choose to assist in nonmandatory U.S. military related efforts, are not covered by this exception and will be subject to the university's nonmilitary refund policy. Room and board charges will be prorated to the extent that services have been provided.

The university will return any unearned tuition assistance (TA) funds by using the standard formula for determining the amount of TA earned by the institution. This is calculated on a percentage basis by dividing the number of days a student completes, based on the last date of attendance, by the total number of days in the course. This calculation, if less than the 60 percent completion rate, determines how much TA the student has earned and for how much the military branch may

be invoiced. Should there be any remaining TA funds prior to the 60 percent period of a course, these funds will be reimbursed directly to the military branch from which the funds were provided, not to the student.

Exceptions to the Refund Policy

Students who, because of extenuating circumstances, seek a higher refund than is available by policy, must petition the Tuition Refund Board of Appeals. Petition forms are available at myWSU myFinances (https://myWSU.wichita.edu)[1], or the Office of Financial Operations and Business Technology, 201 Jardine Hall. The petition must be filed with the appropriate documentation. A Petition for Tuition Refund beyond the policy must be filed at the Financial Operations and Business Technology Office within the semester in which the course was taken.

Students who may have received approval from the University Exceptions Committee for a late withdrawal from a previous semester are not eligible by policy for a tuition refund. These are separate issues and decisions. Medical or military approvals will receive a 100% tuition refund.

[1] Link opens new window.

Tuition and Fee Waivers

Student Fee Waivers

Student fees shall be waived for all Wichita State University benefits-eligible employees, adjunct faculty members and lecturers. These university employees must have an appointment for the semester in which the student fee is applicable.

Student fees shall be waived for enrolled students who are working in their cooperative education or applied learning job, or who are performing a required clinical rotation or internship off the WSU campus (defined as the City of Wichita, its contiguous industrial sites and the WSU South and West locations) for the entire semester.

Student employees and graduate assistants are not eligible for student fee waivers.

Tuition Waiver for Kansas Teacher of the Year

Kansas Teacher of the Year recipients are allowed to enroll tuition free in up to 9 credit hours annually provided the individual is actively pursuing a teaching career in Kansas.

To be eligible, a person must be:

1. A past or present recipient of the Kansas Teacher of the Year award under the program administered by the Kansas Department of Education, and
2. Employed as a teacher in an educational institution accredited by the Kansas Department of Education.

A list of persons eligible for this tuition waiver is on file in the Board of Education Office.

Senior Citizen Fee Waiver

In accordance with Kansas Board of Regents policy, students who are at least 60 years of age may audit (no credit) regular lecture or certain group activity courses — when there is space available and for which they meet the prerequisites — without payment of tuition and student fees, campus infrastructure and support fees, and technology and transportation fees. However, senior auditors must pay any *applicable* workshop fees and lab/special course fees.

Prerequisites include admission to the graduate school for graduate courses, and program admission for courses in which program admission is required of all students.

Senior citizens must present a Medicare card or driver's license to validate age. A special senior citizen registration is held after the first day of classes — see the Schedule of Courses, semester calendar at the registrar's website (http://wichita.edu/registrar/)[1].

Senior citizens desiring college credit or the assurance of space in specific courses may enroll and pay full fees during regular registration.

Senior citizens who have not enrolled at WSU before must complete an application for admission and pay the application fee before registering at the undergraduate or graduate admissions office, $40 for undergraduate or $50 for graduate.

Senior citizens who want to participate in at least one of the Human Performance Studies (HPS) 152 sections have three options:

1. Purchase a membership in the Center for Physical Activity and Aging (CPAA), $50 for membership purchased at the HPS department. Enrollment through the registrar's office is not necessary.
2. Those who want more complete access to the Heskett Center and Ablah Library privileges, may join CPAA and enroll through the registrar's office with audit status in a 0 credit hour section. Costs include a $50 membership fee, $21 + tax Heskett Center fee paid at the Heskett Center, and any *applicable* workshop fees and lab/special course fees.
3. Senior citizens may enroll in one class for full credit at a total cost of the current tuition and student fees, campus infrastructure and support fees, and technology and transportation fees.

Members of the CPAA are eligible each semester for functional assessment testing of their ability to perform daily living activities and an annual bone density evaluation. Membership also provides education concerning the concepts of active aging to the older adult population through newsletters, workshops, lectures and exercise demonstrations.

Tuition Waiver for Graduate Teaching Assistants

Graduate teaching assistants (GTAs) are eligible for full or partial waiver of in-state tuition up to 12 credit hours per semester (where they hold qualified assistantships) for courses numbered 500 and above.

[1] Link opens new window.

Academics

The Academics section is where to find details about:

- Degree Evaluation (p. 21)
- Certificate, Residency and Badge Programs (p. 21)
- Cooperative Education and Internships (p. 22)
- Exchange and Study Abroad Programs (p. 23)
- Field Studies, Workshops and High School Guests (p. 23)
- Global Learning (p. 24)
- Wichita State Online (p. 24)
- Academic Resources (p. 26)
- Academic Definitions, Grading Policy (p. 29)
- Academic Progress, Recognition and Honors (p. 32)
- Graduation (p. 34)
- Exceptions (p. 35)
- Student Responsibility (p. 37)

Degree Evaluation

WSU uses online degree evaluation, a web-based advising tool used by students and advisors, to track progress toward graduation. The degree evaluation sorts a student's courses into different categories based on their chosen major(s)/minor(s) and indicates which degree requirements have been met and which remain to be completed before graduation.

Students who are *undecided* and students who are considering changing their majors can run a *What-if Analysis* to see how their courses would be applied toward possible degrees. While the degree evaluation does not replace advisors, it allows students and advisors more time to discuss their total development, including career and life planning. Advising includes helping students meet their full potential, technically, professionally and personally.

Degree evaluation tips:

- Degree evaluations are not considered official university documents and do not replace the official university transcript;
- Verification of degree requirements must go through a faculty or academic advisor;
- Students should contact their advisor if they have any questions regarding their degree evaluation.

Certificate, Residency and Badge Programs

Programs are available at the undergraduate, graduate and residency levels. Each program consists of a group of related courses that addresses a special topic. Completion of these courses indicates achievement in a specialized area. Programs vary in terms of length, and some courses in the program may have prerequisites. While these programs do not end with an academic degree, many of the courses are found within degree programs. Programs are reviewed by the faculty on a three-year rotation. Many of these programs exist for limited time periods depending on their demand. Programs are further described in the various departmental sections and in the list below.

An overall grade point average of at least 2.000 for all courses comprising the certificate program, and no grade below *C*, is required to earn a certificate. Interested students should consult the catalog and the certificate coordinator for detailed information on requirements and guidelines.

Certificate programs are not eligible for Title IV (federal financial aid) funding unless the certificate is a requirement of the degree program. The exceptions are approved programs of at least one academic year in duration that lead to a certificate and prepare students for gainful employment in a recognized occupation. Approved programs will be designated with disclosure information on the program web page in the applicable academic college.

Additional information is available on the Certificate Programs website (http://wichita.edu/certificates/)[1].

[1] Link opens new window.

Undergraduate Certificates Offered

Institute for Interdisciplinary Creativity:

- Leadership

College of Applied Studies:

- Physical Education Coaching
- Physical Education Fitness
- Physical Education Weight Training

W. Frank Barton School of Business:

- Business Analytics

College of Engineering:

- Applied Data Analysis
- Assistive Technology and Accessible Design
- Cybersecurity Essentials
- Cyber Physical Systems
- Data and Web Security
- Fundamentals of Information Technology
- Human Factors in Security and Technology
- Sustainable Energy Technology
- Sustainable Materials and Design
- Sustainable Water Technology

College of Fine Arts:

- Animation
- Audio Production
- Commercial Dance
- Directing
- Filmmaking
- Game Design
- Physical Performance Studies
- Stage Management

College of Health Professions:

- Aging Studies
- Health Management
- Health Science
- Public Health Science

Fairmount College of Liberal Arts and Sciences:

- Asian Studies
- Community Psychology
- Environment and Sustainability
- Film Studies
- Global Competency
- Graphic Narrative Coding and Accessibility
- Great Plains Studies
- Human Factors Psychology

- Medieval and Renaissance Studies
- Social Work and Addiction
- Social Work and Child Welfare
- Spanish for the Professions
- Tilford Diversity Studies

Graduate Certificates Offered

W. Frank Barton School of Business:

- Advanced Business Fundamentals
- Business Analytics
- Business Fundamentals
- Entrepreneurship and Innovation
- Human Resource Management Decision Making
- Human Resource Management Skills
- Supply Chain Management (with the College of Engineering)

College of Applied Studies:

- Applied Behavior Analysis (ABA)
- Building-Level Leadership/Principal
- Child/Play Therapy
- Clinical Mental Health Counselor to School Counselor
- Educational Technology
- Engineering Education (with the College of Engineering)
- Functional Aging
- Higher Education Leadership
- Interdisciplinary STEM Education
- Literacy
- School Counselor to Mental Health Counselor
- Superintendency/District Leadership

College of Engineering:

- Additive Manufacturing
- Advanced Composite Materials
- Engineering Education (with the College of Applied Studies)
- Foundations of Six Sigma and Quality Improvement
- Information Assurance and Cybersecurity
- Lean Systems
- Nano Engineering
- Supply Chain Management (with the Barton School of Business)
- System Engineering and Management

College of Health Professions:

- Aging Studies
- Health Administration
- Public Health

College of Fine Arts:

- Kodaly Method
- Professional Studies in Music Performance
- Special Music Education - Adaptive Music

Fairmount College of Liberal Arts and Sciences:

- City and County Management
- Economic Development
- English Literature and Composition Pedagogy
- Great Plains Studies
- Mathematical Foundations of Data Analytics
- Museum Studies
- Nonprofit Management
- Public Finance
- Space Science

Postgraduate Residency Program
College of Health Professions:

- Advanced Education General Dentistry

Badge Program

Wichita State University's badge program is designed with the working professional in mind so coursework is developed around professional development content and structured in smaller units. In most cases, information is organized into 0.5 credit hour classes (one 0.5 credit hour class equates to one badge) which also makes the workload manageable for someone who works a full-time job. While some badges may be offered in a classroom setting, most are offered online. Enrollment in some badge courses is restricted to nondegree seeking students. Degree-bound students can enroll in certain badge courses that will provide them with additional workplace skills that are in demand by employers. In some cases, badges may be applied towards elective requirements for a degree should the student enter a WSU degree program.

Badges are credit courses that comply with the definition and assignment of credit hour policy and appear on a transcript indicating that academic work has been successfully completed. Students receive a grade of either *Bg* (badge earned) or *NBg* (no badge earned) when the class ends.

Important note for graduate students: Depending on a graduate program's structure, it is possible that graduate badge credit may not be used in the future for a degree or certificate program. If a badge student later applies for and is admitted to a degree seeking program that does allow badge coursework, all graduate rules with respect to coursework will apply to the badges (e.g. time limits; nonletter graded coursework limits).

For more information visit the Office for Workforce, Professional and Community Education website (http://wichita.edu/badges/)[1].

[1] Link opens new window.

Cooperative Education and Internships

Cooperative Education

Cooperative education is an academic program for undergraduate and graduate students who wish to combine classroom studies with academically related paid employment. Cooperative education provides students work-based learning opportunities both locally and nationally.

By using off-campus resources and expertise, cooperative education provides opportunities for students in business, government, industry and social agencies. Programs are designed to enable students to work directly with professionals in their field while expanding upon knowledge learned in the classroom.

Students hired in cooperative education positions must enroll in specially designated co-op courses and work with a faculty advisor from within the appropriate department. Each position is assessed by the career development specialist and/or faculty advisor for its potential to provide learning experiences relevant to the student's professional and educational goals.

Cooperative education offers both alternating and parallel positions. Students who select the alternating option must complete a semester of full-time enrollment in coursework before entering a second alternating position. Alternating positions carry the status of full-time students.

Students selecting the parallel option are required to carry a minimum of 6 credit hours of coursework in addition to their co-op course. Students may enroll in parallel co-op positions during consecutive semesters.

Requirements for co-op participation vary within the different colleges and departments. Requirements for admission to the co-op program generally include completion of 24 credit hours, with 9 of these credit hours completed in the student's major, and satisfactory academic standing. Interested students should come to the Career Development Center, located in Brennan Hall III, at the corner of 17th Street and Yale Avenue. The telephone number is 316-978-3688. Students may attend a cooperative education and internship workshop in person or online (http://wichita.edu/coopworkshop/)[1], prepare a resume, and meet with the career development specialist for their college.

Internships

Wichita State University's location in Wichita has allowed it to form strong relationships with public, private and nonprofit organizations that offer a variety of internship opportunities. These positions are an invaluable way for WSU students to gain professional experience to complement the strong academic fundamentals they learn in the classroom. Through the Career Development Center, students have an opportunity to earn academic credit for an internship, or enroll in zero credit and have an internship recognized on their academic transcript.

Students who choose academic credit, enroll in designated internship courses and work with a faculty advisor from an appropriate department. Academic credit is earned after completing all project requirements assigned by the advisor. Students who enroll in zero credit internships have their internship recognized on their official academic transcript through a transcript notation (no tuition is paid). A transcript notation is earned after completing the zero credit program requirements. Additional information may be found on the Cooperative Education and Internship webpage (http://wichita.edu/coop/).[1] Not all departments participate in zero credit internships and not all students are eligible to enroll in zero credit, please view program requirements online (http://wichita.edu/coop/).[1]

Requirements for internships vary within different colleges and departments and for various employers. The requirements for participation in an academic or zero credit internship include completion of 24 credit hours, with 9 of these credit hours completed in the student's major, and satisfactory academic standing. Students enrolled in academic or zero credit internships in fall and spring are required to carry a minimum of 6 credit hours of coursework in addition to their internship course.

Interested students should come to the Career Development Center, Brennan Hall III, or call 316-978-3688, or take an online workshop (http://wichita.edu/coopworkshop/).[1] After the workshop students will meet with a career specialist.

[1] Link opens new window.

Exchange and Study Abroad Programs

National Student Exchange

The National Student Exchange (NSE) is an exciting opportunity to attend one of nearly 200 colleges and universities across the country while paying regular WSU tuition. Costs of room, board and books are paid at the host campus. Students continue to have financial aid information sent to WSU. Most financial aid and scholarships will still be applicable; student aid must first be applied to WSU tuition, and the balance can be taken to pay costs at the host campus.

The program is open to undergraduate, domestic students who are:

1. Enrolled in at least 9 credit hours at WSU at the time of application to NSE as well as in the semester prior to exchange; and
2. Have a 2.500 overall grade point average at the time of application and at completion of the semester prior to exchange.

Students should apply for the program during the fall before the year they want to exchange.

Prior to the exchange, students and their academic advisors complete an advising agreement. Students receive full credit for work satisfactorily completed on exchange.

For more information, call the NSE coordinator at 316-978-6697, or visit the Dorothy and Bill Cohen Honors College in Shocker Hall, Building A.

Study Abroad Programs

Wichita State University provides a range of options for students interested in studying overseas, from its own programs taught by WSU faculty, to consortia with which WSU participates, to exchange programs.

WSU students who wish to study abroad can find a variety of study abroad programs in the Study Abroad office on the second floor of the James Sutherland Garvey International Center.

The university offers exchange programs in about 10 countries. Several WSU departments occasionally offer courses in other countries and publicize them appropriately. The university is a member of the MAUI Consortium. Students may also use the National Student Exchange program to participate in overseas study programs sponsored by those American universities.

The department of modern and classical languages and literatures offers organized study abroad programs in Mexico and France, described as follows:

Exchange Program with the University of Orléans

Wichita State University has a special exchange program with Wichita's French sister city, Orléans. Through this exchange program, students pay their tuition and fees at WSU and do academic work in their chosen field at the Université d'Orléans. Orléans also offers a four-week summer program in which students may earn up to 6 credit hours transferable to WSU. Students pay their fees directly to Orléans when enrolled in the summer program. For more information, contact the department of modern and classical languages and literatures, 305 Jardine Hall.

Spanish Program in Puebla, Mexico

The department of modern and classical languages and literatures offers a faculty-led program designed to broaden students' comprehension of the language, customs, history and culture of Mexico.

Students who complete the six-week course may earn 6 hours of undergraduate or graduate credit. For more information, contact the department of modern and classical languages and literatures, 305 Jardine Hall.

Field Studies, Workshops and High School Guests

Geology Field School

Wichita State offers a summer field course in geology (GEOL 640). The camp is based in the Bighorn Basin of northern Wyoming and

southern Montana. The summer course consists of five weeks in the field, for which students receive 6 credit hours.

Applicants should have completed coursework in physical and historical geology and at least 12 credit hours of advanced geology, preferably including a field methods mapping course. Inquiries should be directed to the Department of Geology, 114 Geology Building.

Workshops

Workshops devoted to current topics are offered throughout the year. Typical courses include workshops for teachers in the areas of business, education and fine arts; courses in current health issues; an entrepreneurship workshop for people considering creating a small business; and field study in topics such as the floral ecology of the Rocky Mountains, the Osage culture in Oklahoma, or a wilderness experience in a national park. Special fees (p. 18) are charged for workshops.

High School Students

High school students who have completed their sophomore year may enroll in WSU classes as guest students and earn college credit for those courses until they graduate from high school (see Guest Students — High School (p. 10)). Other summer opportunities for high school students at Wichita State include sports camps in basketball, baseball and volleyball, and enrichment courses for career exploration.

Global Learning

Courses so identified incorporate global learning, which means WSU students have the opportunity to learn collaboratively with students, professors and experts at overseas universities, institutions and businesses via internet resources such as videoconferencing, threaded discussions, blogs and chat sessions. The focus of such activities is on the development of intercultural communication and collaboration competence. Third Place Learning may be practiced during some of the global learning courses. These courses help prepare students to live in an increasingly interconnected, diverse and interdependent world. For more information about global learning, visit the Global Learning website (http://global-learning.net/)[1], or contact Glyn Rimmington by calling 316-978-6140 or email: glyn.rimmington@wichita.edu.

[1] Link opens new window.

Wichita State Online

Wichita State Online brings WSU's campus to students everywhere, making it possible to earn a degree from Wichita State University completely online.

Offering online Associate, Bachelor's, Master's and Doctoral level degree programs, Wichita State Online provides a path to help students achieve their goals

Getting Started as an Online Student

New online students apply for admission and select their online-only program option in the Academic Interest section of the application (http://wichita.edu/apply/)[1]. Returning undergraduate students can reactivate their student record online (http://wichita.edu/reactivation/)[1]. Students with questions before they apply or reactivate can call 844-978-6656 or email online@wichita.edu for assistance.

Online Student Academic Advising

Fully online program students work with a dedicated online academic advisor who provides support and guidance from application to graduation. It is recommended that all online program students work closely with their advisor before enrolling in courses to ensure the most effective plan of study.

Online Student Support

Online program students have access to a robust student support system, including a dedicated student success specialist who provides focused support, academic resources and access to services like tutoring, counseling and more. Learn more at the Online Student Support webpage (http://wichita.edu/onlinestudents/)[1].

Online Program Tuition and Fees

Fully online program students pay in-state tuition (regardless of where they live), an online course fee, plus any applicable college fees. Students in fully online programs do not pay the on-campus student fee and are not issued a ShockerID card. Online program students do not receive benefits such as access to the Heskett Center, campus services, campus events and Shocker athletics.

Fully Online Degree Programs

Undergraduate Online Programs

- Associates Degree (AA)
- Criminal Justice (BS)
- Dental Hygiene (RDH to BSDH)
- Early Childhood Unified/Elementary Education Apprentice (BAED)
- Engineering Technology — Management (BSET) *(Hybrid)*[2]
- Field Major - multiple concentrations available (BA)
- General Business (BBA)
- General Studies - multiple concentrations available (BGS)
- Homeland Security (BS)
- Human Resource Management (BBA)
- Management (BBA)
- Nursing (RN to BSN)
- Workforce Leadership and Applied Learning (BAS)

Graduate Online Programs

- Aging Studies (MA)
- Arts Leadership and Management (MA)
- Business Administration (MBA)
- Criminal Justice (MA)
- Early Childhood Unified - Residency Track (MAT)
- Health Administration (MHA)
- Learning and Instructional Design (MEd)
- Human Resource Management (MHRM)
- Nursing Education (MSN)
- Nursing - Individual/Family Focus (MSN to DNP)
- Public Administration (MPA)
- Special Education — Gifted (MEd)
- Special Education — High Incidence (MEd)
- Special Education — High Incidence, Alternative Certification (MEd)
- Special Education — Low Incidence (MEd)

Online Certificate Programs

- Aging Studies, Graduate Certificate
- City and County Management, Graduate Certificate
- Economic Development, Graduate Certificate
- Educational Technology, Graduate Certificate
- English Literature and Composition Pedagogy, Graduate Certificate

- Health Administration, Graduate Certificate
- Health Science, Undergraduate Certificate
- Human Resource Management Decision Making, Graduate Certificate
- Human Resource Management Skills, Graduate Certificate
- Leadership, Undergraduate Certificate
- Nonprofit Management, Graduate Certificate
- Public Finance, Graduate Certificate
- Public Health, Graduate Certificate
- Public Health Science, Undergraduate Certificate
- Space Science, Graduate Certificate
- Superintendency/District Leadership, Graduate Certificate
- Tilford Diversity Studies, Undergraduate Certificate

Learn More About Wichita State Online

- Student support and information (http://wichita.edu/online/)[1]
- Search for online courses (http://wichita.edu/onlinecourses/)[1]
- Request information by email: online@wichita.edu

[1] Link opens new window.

[2] Hybrid online programs are not 100 percent online and require some on-campus coursework.

Academic Resources

Academic Resources is where to find information about services for returning adult students, setting up a WSU email or blackboard account, and math and language labs. Learn about the WSU TV and radio stations, tutoring and supplemental instruction, or the WSU library system. Find out more on these pages:

- Adult Learning and Shocker Pathway (p. 26)
- Information Technology Services (p. 26)
- Language and Math Labs; Writing Center (p. 26)
- Media Resources (p. 27)
- Student Early Alert System (SEAS) (p. 27)
- Supplemental Instruction and Tutoring (p. 27)
- Testing Services (p. 28)
- University Libraries (p. 28)

Adult Learning and Shocker Pathway

Adult Learning

Whether finishing a degree, changing course to another option or beginning a new path, the Office of Adult Learning is here to help every step of the way. With services for adult learners, transfer, active duty military, veterans and returning students, and offering classes at a variety of days and times, WSU has the tools to help adults succeed.

Wichita State recognizes that returning adults face a different set of challenges than traditional students when it comes to completing a degree. WSU is here to ensure that returning adults no longer need to sacrifice their other commitments in order to fulfill their academic goals.

The Office of Adult Learning is located on the main campus in the Grace Wilkie Annex for convenient access for both current and future adult students. Contact the Office of Adult Learning at 316-978-8325, or on the adult learning website (https://wichita.edu/adultlearning/)[1].

Shocker Pathway

Since fall 2018, students can take advantage of the affiliation between Wichita State University and WSU Tech — formerly known as Wichita Area Technical College.

Shocker Pathway is a partnership between WSU Tech and Wichita State University to provide a convenient and flexible way to earn an Associate of Arts (AA) from WSU. Shocker Pathway students begin their general education coursework at WSU Tech by earning up to 50 credit hours, then transitioning to WSU to earn an additional 15 credit hours for completion of the AA degree.

While the two remain separate degree-granting institutions, the formalized affiliation now allows for more collaborative possibilities, as well as increased availability and quality of opportunities for students, while directly meeting the core workforce needs of the state.

[1] Link opens new window.

Information Technology Services

The Information Technology Services (ITS) organization provides the network and computational backbones for campus communications and computing. In addition to this hardware infrastructure, ITS supports the software systems for the administration of the university. Responsibilities include IT security and compliance (FERPA, PCI, HIPPA, etc.), administrative application support (Banner ERP, etc.) and training, interface programming, desktop diagnosis and repair, network administration and connectivity support (wired, Wi-Fi, 4G), voice telephony support, electronic door lock and security camera support, and general technology consulting relative to both academic and administrative software/systems. More details about these and other services are on the ITS website (http://wichita.edu/its/)[1].

[1] Link opens new window.

Technology Help Desk

Technology Help Desk is housed in 120 Jabara Hall. Technology Help Desk provides technical support to all students, faculty and staff of Wichita State University. More details about the help desk and its services are available online at the help desk website (http://wichita.edu/helpdesk/)[1]. The phone number for the help desk is 316-978-HELP (4357).

	Help Desk Hours
Monday – Thursday	8 a.m. – 7 p.m.
Friday	8 a.m – 5 p.m
Saturday	10 a.m. – 1 p.m.
Sunday	1 p.m. – 4 p.m

[1] Link opens new window.

Campus Network Access

All residence hall students are provided a direct, high-speed connection to the campus network and the internet. Wireless access to the campus network (and internet) is also available from all campus buildings.

Email (@shockers.wichita.edu)

Every WSU student is automatically assigned an email account with the "@shockers.wichita.edu" suffix. This email account provides students with a convenient way to communicate with other students, faculty and university offices in their academic pursuits. Students are expected to use this email address for official communication with faculty and university offices. Applications, instructions and other information about email accounts are available at the online WSU email center (http://wichita.edu/email/)[1].

[1] Link opens new window.

*my*WSU

The *my*WSU portal is a website that allows students to view and update their own WSU information. Examples are: add/drop courses, check academic status, check on status of financial assistance and get academic history (grades). For more information about this service, go to the myWSU website (https://mywsu.wichita.edu)[1] and click on the *New to myWSU* link.

[1] Link opens new window.

Language and Math Labs; Writing Center

Language Lab

The Savaiano-Cress Language Laboratories offer a variety of media services to foreign-language students. Audio, video and computer equipment are available to students and faculty alike, with the goal of enhancing and expanding the learning experience through the use of instructional media. Hours are flexible to accommodate all students' needs.

Math Lab

The Math Lab, 371 Jabara Hall, offers free, drop-in mathematics tutoring for WSU students enrolled in the following courses:

Course	Title	Hours
MATH 007	Arithmetic	
MATH 011	Beginning Algebra	
MATH 012	Intermediate Algebra	
MATH 111	College Algebra	
MATH 112	Precalculus Mathematics	
MATH 123	College Trigonometry	
MATH 144	Business Calculus	
MATH 242	Calculus I	
MATH 243	Calculus II	
STAT 370	Elementary Statistics	

Students may work independently knowing that help is available when needed. The Math Lab is staffed by graduate and undergraduate students who are studying mathematics and/or mathematics-related disciplines. No appointment is necessary; students are encouraged to visit the lab during its hours of operation. To determine the hours for the current semester, refer to the schedule posted outside the lab or check the math department's website (https://wichita.edu/mathlab/)[1].

[1] Link opens new window.

Writing Center

The WSU Writing Center, 601 Lindquist Hall, is free and open to all WSU students. In the Writing Center, all students can meet with a tutor who is either an undergraduate or graduate teaching assistant. While tutors do not proofread or edit, they offer assistance with all aspects of writing, including brainstorming, organization, style and revision, as well as specific writing concerns voiced by the student. A tutoring session lasts about 30 minutes. No appointment is necessary, but appointments may be scheduled by contacting the center at 316-978-3173.

In addition to tutoring, the center is equipped with five computers with internet access, Windows and Microsoft Word (printing services are not available). Students may also do online writing exercises to help improve basic grammar skills. Reading comprehension exercises are also available in the center.

The Writing Center is open 11 a.m.–7 p.m. Monday through Thursday and 11 a.m.–4 p.m. on Friday. It opens the second week of classes and closes at the end of the last day of classes each semester. It is not open on study day, during finals or on holidays.

Additionally, the Online Writing Center (OWL) is available for tutoring assistance. Their access link is available through the Writing Center's website. Students should allow their submissions **two business days** for completion. The OWL's semester availability and closure is the same as the onsite Writing Center's.

Media Resources

Media Resources Center

The Media Resources Center (MRC) serves the instructional, research and service missions of the university for media, video and design. The MRC operates the university's streaming television station, WSUTV (https://wichitastate.tv)[1], provides cable TV service to campus, and programs two other channels on the campus network: Channel 95, MTV; and Channel 97: WSUTV Digital Signage.

The MRC provides high quality video production services with a team of videographers, editors and designers, and with an on-site professional television production studio.

The MRC designs, installs, supports and maintains audio-visual equipment in classrooms and meeting spaces across campus, and provides training and access keys to instructional staff.

The MRC provides instructional design, educational technology and accessibility support for all university classes and instructional staff, especially online and hybrid classes taking advantage of the university's licensed learning management system, Blackboard.

The MRC also provides web development and training services for the campus community, with a focus on providing training, development and support to campus departments and offices building web content in the university's content management system.

Facilities and resources at the MRC include a flexible learning space classroom, a multimedia lab, and recording/web conferencing spaces. A wide array of media equipment is available for use by students and faculty. This includes video recording systems and projection equipment.

WSUTV

Wichita State University operates WSUTV, which is available streaming online (https://wichitastate.tv)[1]. Programming includes a variety of content produced by the MRC Video services team, live coverage of convocation and commencement, and some athletics events.

[1] Link opens new window.

KMUW

KMUW 89.1 is a listener-supported public radio station named Radio Station of the Year by the Kansas Association of Broadcasters, which includes commercial and noncommercial stations. KMUW is licensed to Wichita State University and operates at 100,000 watts with a schedule of local, national and international news, and a unique blend of music and entertainment. In addition to its traditional broadcast service, KMUW maintains a full-service website with local news, online streaming of its signal and archive access to its local music programs. KMUW supports local arts and culture in the community through partnerships, promotion and sponsorships. KMUW also produces seven music programs: Crossroads, Global Village, New Settlers, Straight No Chaser, Strange Currency, Night Train and Soulsations. KMUW is affiliated with NPR, PRI, AP and PRX national networks.

Student Early Alert System (SEAS)

WSU cares about student success. For this reason, WSU has implemented an academic early alert system. Under this system, called SEAS, instructors provide feedback to students who appear to be struggling and offer any assistance that may be needed to help get them back on track academically. Students who are contacted by their instructors through SEAS are encouraged to take full advantage of the help offered.

Supplemental Instruction and Tutoring

Supplemental Instruction

SI is a proven program that helps students better understand course content and therefore improve their grades. Selected traditionally difficult courses are assigned a peer leader who leads weekly, free, drop-in study sessions. SI works. Students who attend SI typically earn higher grades than those who do not. The online schedule of courses identifies which sections have SI attached to them.

Tutoring

Many departments on campus offer tutoring services that can help students master course material and earn better grades. The Office of Student Success hosts a tutoring clearinghouse (http://wichita.edu/tutoring/)[1], where students can find a list of available academic helping resources. When no such resources already exist, students can request a tutor by logging into myWSU (http://myWSU.wichita.edu)[1] and going to their Home tab. They will then click the 'Request a Tutor' link under student tools. Students interested in being paid to be tutors can also apply online (http://wichita.edu/BeATutor/).[1]

[1] Link opens a new window.

Testing Services

Testing Services is an all-in-one testing resource on campus. The exams provided by Testing Services include make-up exams, accommodations exams for students registered with Disability Services, placement exams for English and math, as well as certification tests for community professionals, and more.

Contact Testing Services in 320 Grace Wilkie Hall, at 316-978-TEST (8378), or on the Testing Services website (http://www.wichita.edu/testing/)[1].

[1] Link opens new window.

University Libraries

University Libraries includes the main Ablah Library, the McKinley Chemistry Library and the Thurlow Lieurance Memorial Music Library, located in the Music and Languages Innovation Center (MALIC). These libraries connect students and faculty to the information, technology and other resources essential to learning and research at WSU.

The University Libraries offers a wealth of electronic, print and non-print resources that can be located through the Libraries' website. Onsite library collections include more than two million books and research journals, federal and state documents, music recordings and scores, DVDs, microforms and other materials. The digital collections provide access to a variety of information resources with 365 databases offering full-text access to over 500,000 e-books and over 86,000 e-journal titles, company information, statistics, historical documents, as well as streaming audio and video. Ablah Library has been a Federal Documents Depository Library for over 100 years and is an official United States Patent and Trademark Resource Center, the only such depository in Kansas. In addition to its own collections, University Libraries is able to borrow materials from a worldwide network of other libraries.

University Libraries is dedicated to offering students a variety of services, study environments and convenient hours. Facilities include both quiet and collaborative study spaces with SmartTVs, whiteboards, print stations, scanners, color printers, photocopiers, seating for more than 850 people, 22 group study rooms and a 24-hour study room. Over 200 computers provide access to library resources, the internet and a variety of software. Laptops, tablets, digital cameras and other technologies are available for checkout. C-Space provides individuals or student groups the opportunity to collaborate, create and receive assistance in using technologies such as virtual reality, 3D printing, app development, the one-button studio and media production facilities. Librarians offer instruction through in-class or online collaboration with university departments, workshops, online tutorials and research guides. Reference and technical help desk personnel are available to assist library users with their research and technical needs, including discussing assignments, specific databases and answering other research inquiries. Reference assistance is available by phone, email, instant message, text message and in person. Appointments may be scheduled in advance.

University Libraries Special Collections and University Archives includes rare books, historical Kansas maps, photographs, records of the history of the university and a growing manuscript collection of more than 700,000 documents. Featured collections include papers of the abolitionist William Lloyd Garrison, the Gordon Parks Papers, the Baughman Collection of Early Kansas Maps, the Aitchison Rare Books Collection, and congressional papers including those of Kansas Congressman Dan Glickman. Over 150 digital collections presented by Special Collections and University Archives feature rare books, historical papers and photographs, as well as university and local history, including the Wichita Photo Archives.

More information about resources and services is located on the University Libraries website (http://libraries.wichita.edu)[1].

[1] Link opens new window.

Academic Definitions; Grading Policy

Find information about how many hours it takes to become a senior, how to test out of a course or whether it's possible to get credit for life experience in this section.

Learn how an Incomplete grade affects GPA, how an undergraduate student can earn graduate credit or how to audit a course. Find more information under the following headings:

- Classification of Students (p. 29)
- Credit Hour Defined (p. 29)
- Course Numbering System (p. 29)
- Audit Credit and Credit/No Credit Courses (p. 29)
- Credit by Examination (p. 30)
- Credit for Prior Learning (CPL) (p. 30)
- Examinations (p. 30)
- Grading System (p. 30)
- Graduate Credit for Undergraduates (Senior Rule) (p. 32)

Classification of Students

Students are classified according to the following scheme:

- Freshmen: less than 30 credit hours earned;
- Sophomores: 30 to 59 credit hours earned;
- Juniors: 60 to 89 credit hours earned, and;
- Seniors: 90 credit hours or more earned.

Full-time Status

As a general rule, a student taking 12 credit hours is considered a full-time student. For graduate students, 9 graduate credit hours are considered a full load. (Graduate students who hold a 20 hour per week graduate assistantship position are considered full-time if they are enrolled in 6 or more credit hours. Graduate students taking all or a majority of courses which carry undergraduate credit must meet the 12-credit-hour requirement to be certified as full-time students.)

During the summer session, 6 credit hours of enrollment are considered full-time for international undergraduate students and for graduate students.

Students receiving federal financial aid may need to enroll in more hours to be considered full-time.

Credit Hour Defined

A *credit hour* is a measure of graduate or undergraduate academic work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for each week of instructional time for approximately 15 weeks for one semester, or an equivalent amount of work over a different amount of time. A class hour at Wichita State University is typically 50 minutes.

Course Numbering System

Courses numbered 99 or below do not count toward any degree program.

Courses numbered 100 to 299 are designed primarily for freshmen and sophomores, but students from other classes may be admitted *for lower-division credit*. Graduate students may not take these courses for graduate credit.

Courses numbered 300 to 499 are taught primarily for juniors and seniors. Freshmen and sophomores also may be admitted *for upper-division credit* if they satisfy the course prerequisites given in the Wichita State University Undergraduate Catalog. Graduate students may not take these courses for graduate credit.

Courses numbered 500 to 699 are aimed primarily at juniors and seniors, but graduate students may receive graduate credit for these courses.

Courses numbered 700 to 799 are structured primarily for graduate students, but upper-division undergraduate students may be admitted if they meet course prerequisites. All students in these courses are expected to perform at the level of graduate students (Graduate I students — students who ordinarily have not accumulated more than 30 hours in a graduate program). Students receive graduate credit if the student was admitted to the Graduate School prior to enrollment; undergraduate students receive undergraduate credit unless the student was preapproved to earn graduate credit for that specific course under the senior rule policy, or was preapproved for graduate credit for that specific course following the student's admission to a dual/accelerated bachelor's to master's program. (See the section called Graduate Credit for Seniors *(*p. 32*)* for special conditions under which seniors may be admitted to graduate courses.)

Courses numbered 800 to 999 are designed for graduate students only and no students may be admitted to these courses unless they have been admitted to the Graduate School.

Audit Credit and Credit/No Credit Courses

Audit Credit

Students are permitted to attend credit courses on a noncredit basis, with appropriate approval, under an auditor classification. To be enrolled as auditors, students must enroll in the same manner and pay the same fees as for-credit courses at the university. Auditors may participate fully in the class and expect instructor evaluation of their work. Auditors are expected to attend class regularly. The audited course will appear on the transcript with the grade notation of *Au*. Courses taken on an audit basis may be repeated for credit and, if repeated, may be used to fulfill degree requirements if the repeated grade is acceptable. Use of the audit basis for a course must be declared at the time of enrollment. Audited courses are *not* eligible for financial aid.

Credit/No Credit Courses

Courses numbered below 100 do not carry credit toward a Wichita State degree and are graded Credit/No Credit (*Cr/NCr*). All credit hours in such courses are excluded from credit toward graduation. Such courses are also excluded from the calculation of the grade point average.

In addition, certain credit courses are graded only *Cr/NCr*. Any department in the university may offer courses on a *Cr/NCr* basis.

If students withdraw from a *Cr/NCr* course before the end of the 10th week of the semester (or the fifth week of the eight-week summer session), a grade of *W* is recorded. If they withdraw from such a course after the 10th week of a semester (fifth week of the eight-week summer session), they receive a grade of *NCr*, subject to the right of petition to the university's exceptions committee.

Cr/NCr may also be granted to a freshman for the first semester of work during the transition semester, as discussed in the Transition Semester (p. 36) policy.

Credit by Examination

Undergraduate course credit may be obtained by examination. The credit by exam program at Wichita State University is designed to enable those who have achieved college-level education through independent study, correspondence, television instruction, past experience, advanced high school classes, or other traditional or nontraditional means to demonstrate their level of achievement.

No graduate course credit is available by examination. Credit by examination will not be awarded for duplication of credit or to replace course grades. More information on tests available and scores accepted for credit is posted on the Testing Services website (https://www.wichita.edu/services/counseling/testing/)[1]. Students should check with their academic advisors before attempting any test. There are several means by which such credit may be earned:

1. Credit may be earned through Advanced Placement (AP) or International Baccalaureate (IB) exams administered through a student's high school. AP and IB exam credit is awarded for specific courses in many areas at Wichita State. The titles of the specific courses for which credit is granted and the AP or IB scores necessary for such credit are available at WSU Testing Services or on the website listed above.
2. Credit may be earned through the College Board's College Level Examination Program (CLEP) or DSST exams. Both kinds of exams are administered by Testing Services. General CLEP exams are intended for entering freshmen; a student with divisional credit will not receive additional hours by taking general CLEP exams. Information about the dates and times CLEP and DSST exams are administered is available at WSU Testing Services, 316-978-3440.
3. High scores on the English and math sections of the ACT or SAT will earn credit in English and math classes at WSU. Math credit may also be earned with a high score on the GED math section. Scores submitted to WSU will be reviewed, and earned credit posted to the student's record.
4. Individuals admitted to Wichita State may earn credit by departmental examination. In general, students may earn credit by examination for many undergraduate courses not covered by the tests listed. Students should apply directly to the chairperson of the department offering the course and consult with Testing Services before taking the exam. The chairperson will be responsible for ensuring that students are informed of the scope of the course, the text used, and other information relevant to taking the department exam.

The grade recorded for credit earned by examination is *TCrE* and it is recorded on a student's transcript after enrollment in the university. It is recorded as transfer work because it is credit for learning that did not occur through enrollment in a WSU course.

Students may not take a credit by examination test for credit in a course in which they have previously enrolled unless they received a *W* for the course. They may not retake any such examination.

Students may not request an examination for course credit in a course for which they do not have the stated prerequisite credit.

Fees are assessed to cover the costs of administering examinations and must be paid before the examinations are taken. A schedule of fees for the various examinations is available from Testing Services.

All credit by examination is subject to university policies and will be reviewed by the Office of the Registrar before being placed on the transcript.

Credit awarded by examination is determined by the department offering the course, which has sole jurisdiction.

Credit by examination from all accredited institutions of higher education is evaluated in the same manner as regularly graded coursework from these institutions. The credit awarded is adjusted to the credit by examination policies of Wichita State. Every attempt is made to ensure that credit by examination applies to both a student's degree program and university requirements for graduation. However, in no case may a transfer student receive more credit than the credit available to students at Wichita State.

[1] Link opens new window.

Credit for Prior Learning (CPL)

Wichita State University encourages students to seek credit for knowledge they may have acquired in a variety of ways through the Credit for Prior Learning program (CPL). Students who have had college-level education through traditional or nontraditional means, and can demonstrate achievement, may be eligible to earn credit by following WSU's Credit for Prior Learning process. Departments have varying policies as to any CPL that will be deemed equivalent to their courses. Once the equivalency is determined and posted to the student's record, it is acceptable in any department/program in which that course meets a degree requirement. CPL credits are posted as transfer work and not counted as hours earned at Wichita State. For more information, visit the Credit for Prior Learning webpage (https://wichita.edu/priorlearning/)[1].

[1] Link opens new window.

Examinations

The examination policy in each course is established by the department and the faculty of record and will be outlined with the course requirements. Re-examinations shall be permitted only with the consent of the faculty when re-examination is deemed to contribute to the academic objectives of the course.

Special examinations, when requested, will be given only with the consent of the dean of the college involved. Students with disabilities who need testing accommodations must register with the Office of Disability Services (ODS) (http://www.wichita.edu/ds/)[1].

Students who miss an assigned examination should arrange with their instructor to take a make-up examination. The dean of their college will serve as arbitrator only when deemed necessary.

Students cannot be required to take more than two final examinations per day. Arrangements for rescheduling the examination must be made by the student prior to the scheduled examination.

[1] Link opens new window.

Grading System

Wichita State grades include *A* (excellent), *B* (good), *C* (satisfactory), *D* (unsatisfactory), *F* (failure), *W* (withdrawal), *Cr* (credit), *NCr* (no credit), *Bg* (badge), *NBg* (no badge), *S* (satisfactory), *U* (unsatisfactory), *I* (incomplete), *IP* (in progress), *NGS* (no grade submitted), *CrE* (credit by examination), and *Au* (audit). Passing grades include *A, B, C, D, Cr, CrE, Bg* and *S*. The grades *F, NCr, NBg* and *U* indicate that the quality of work was such that, to obtain credit, the student must repeat regular coursework. A plus/minus grading system was adopted beginning fall 2009. It applies to grades of *A, B, C* and *D*.

Credit Points

For each hour of work the student takes, credit points are assigned, as follows, to permit averaging of grades:

A	4.000
A-	3.700
B+	3.300
B	3.000
B-	2.700
C+	2.300
C	2.000
C-	1.700
D+	1.300
D	1.000
D-	0.700
F	0

Related details:

- *B* or better grade required: *B-* will fulfill this requirement unless otherwise indicated.
- *C* or better grade required: *C-* will fulfill this requirement unless otherwise indicated.

Incomplete

An incomplete is a temporary grade assigned when the faculty member grants a student an extension of time to complete the coursework. This extension of time may not exceed one calendar year from the end of the original semester. It is used in exceptional cases where a student is unable to complete coursework due to circumstances beyond his or her control. The student must have successfully completed a majority of the work. Credit is postponed and the course is not included in the student's grade point average until a permanent letter grade is assigned.

The following conditions govern incompletes:

1. When an incomplete grade is assigned, the faculty member may assign a default grade, other than the *I* grade. If the coursework is not satisfactorily completed by the extension date, the *I* will revert to the default grade submitted by the faculty member; if the faculty member does not assign a default grade, the *I* will revert to an *F*. When the student completes the work by the extension date, the faculty member must submit an online change of grade request to assign an appropriate grade.
2. Subsequent enrollment in the course will be governed by the university repeat policy.
3. When students receive a grade of incomplete, they are automatically informed of the university policies and procedures governing incompletes by the registrar's office.

Credit/No Credit

Used in the transition semester and for certain courses graded as *Cr/NCr*.

Credit by Examination

Credit by examination or by credentials in lieu of formal enrollment in college coursework. The symbol *TCrE* is used for Advanced Placement (AP) or International Baccalaureate (IB) credit, for College Level Examination Program (CLEP) credit, for DSST exams, for course credit awarded on the basis of the ACT or SAT exams, for credit by departmental examination and for credit by credentials (military and similar background). Credit given; no credit points. See Credit by Examination (p. 30).

Other special terms are used in reference to grading, as described below.

Grading Status

Courses may not be changed from one status to another — for example, graded to audit — after the enrollment period (through the drop/add week), except through petition to the university's exceptions committee.

Grade Point Average (GPA)

The grade point average (also called grade point index) is computed by dividing the total number of credit points by the total number of credit hours completed for which regular letter grades (*A, B, C, D* and *F*) are assigned. The grades *Au, W, I, IP, Cr, NCr, S, U, Bg, NBg* and *CrE* are always excluded from grade point average computations. Four GPAs, if applicable, appear on a transcript: Semester GPA, Total WSU GPA, Transfer GPA and Overall GPA. GPAs are calculated and applied to three decimal places (truncated), although only two decimal places print on the official transcript. A degree grade point average is frozen at the time of graduation.

Z Hours

Any hours where the grade is preceded by a Z are excluded from GPA calculations, from attempted hours and from earned hours. Z hours denote remedial courses, transfer courses that WSU does not accept, or are the result of WSU's academic forgiveness or repeat policy.

Course Attempted

An attempted course indicates that the student has enrolled officially in the course and that the student may have completed the course or been granted an incomplete. Attempts include courses receiving the grades *A, B, C, D, F, I, IP, Cr, NCr, S, U, Bg* and *NBg* but exclude *Au, CrE* and *W*.

Course Completed

A completed course is a course in which a letter grade of *A, B, C, D, F, Cr, NCr, S, U, Bg* or *NBg* has been assigned.

Course Pending Completion

An *IP* (in progress) grade is temporarily recorded when a course cannot be completed by the end of the semester of enrollment. At the undergraduate level, only certain approved clinical or similar courses may extend past the end of the semester. If applicable, including at the graduate level, the grade submitted when the course has been completed replaces all *IP* grades for that course.

Credit Hours Earned

Credit hours earned means that credit is given (*A, B, C, D, Cr, S, Bg* or *CrE*). No student may earn hours of credit for any one course more than once, unless the description in the Wichita State University Catalog specifically states that the course is repeatable for credit.

Repeat Policy

The following provisions concern repeats:

1. Any course may be repeated. No course may be attempted more than three times. For this policy, an audit does not count as an attempt.
2. Any grade received at completion of a repeated class at WSU will automatically replace up to two previous grade(s) received for that course in computation of the student's overall grade point average.
3. Grades received in courses taken at another institution may not be used to replace grades in courses taken at WSU. If a student repeats

a course at another institution, the WSU grade will be averaged into the GPA. Repeats between transfer institutions are also averaged.

4. The department offering a course can approve an exception to the limit of three attempts. If such an exception is given, only the first two grades for the course will be excluded from the GPA. All other grades received for that course will be averaged into the GPA.
5. Courses repeated prior to fall 2013 are subject to the repeat policy in effect during that catalog year.
6. Students may not use a repeat taken after graduation to amend their GPA or honors as determined at the time of graduation.

Repeated courses are identified on the transcript by an extra letter after the grade as follows:

- *I* included in GPA;
- *E* excluded from GPA; and
- *A* averaged in GPA but not counted in earned hours.

Graduate Credit for Undergraduates (Senior Rule)

Senior Rule Admission

Seniors at Wichita State or neighboring bachelor's-degree-granting institutions may qualify to take work for graduate credit under the senior rule option. Students who wish to earn graduate credit under the senior rule option must apply to the Graduate School for graduate admission, be admitted, and also complete an Application for Senior Rule. The link for the online Graduate School application, as well as the senior rule form itself, are available on the Graduate School's website. Both the application for admission and the senior rule form are due in the Graduate School no later than two weeks before the semester in which the student intends to enroll under the senior rule option. Students planning to earn senior rule credit for more than one semester must submit a new Application for Senior Rule form each semester. Courses taken at the 500–700 level that are not identified on the Application for Senior Rule form as being intended for graduate credit will be awarded as undergraduate credit.

Approval is needed from the student's major advisor, the chairperson or graduate coordinator in the program in which the work is to be taken, and the dean of the Graduate School. In addition, students from other institutions must be admitted as undergraduates (possibly as guest students) through the WSU undergraduate admissions office. Tuition for graduate courses will be assessed at the graduate rate.

Students should meet with their advisor to create a plan for completing the undergraduate degree while taking additional graduate credit. Courses taken for graduate credit cannot be used to complete undergraduate degree requirements. Students must maintain a 3.000 GPA in all courses approved for Graduate credit under the senior rule policy. Students who fail to maintain a 3.000 will be placed on academic probation when they begin their graduate program. Students placed on academic probation may not be eligible for federally-funded financial aid. If a student does not complete their bachelor's degree, the graduate credit may revert back to undergraduate credit.

Students who are receiving federal financial aid should consult with a financial aid advisor to determine if taking graduate level coursework while an undergraduate student will impact their financial aid award.

Academic Progress, Recognition and Honors

Academic Recognition

In all colleges, honors criteria are established for Wichita State students by the university and apply equally to all students, whether or not they are in the Dorothy and Bill Cohen Honors College.

The *Dean's Honor Roll* is determined each semester and is composed of students enrolled in 12 or more credit hours of graded work who achieve a grade point average of 3.500 or higher for the semester.

Students enrolled in 6–11 credit hours of graded work per semester who achieve a grade point average of 3.500 or higher for the semester will receive *Academic Commendation*.

See Academic Distinction (p. 35) for information about degrees conferred with academic distinction.

Academic honors are not awarded to students with a grade of *I, IP* or *NGS* on a course within the designated term. Earned honors will be added to the student record when a grade change is submitted by the instructor of record.

Departmental/University Honors

Some departments at WSU offer students the opportunity to receive departmental honors through their major. Departmental honors tracks are currently offered in the following: aerospace engineering, communication, communication sciences and disorders, mechanical engineering, modern and classical languages and literatures, mathematics, political science, psychology, and public health science.

To enroll as a candidate for departmental honors, a student must have junior standing and an overall grade point average of 3.250 (higher if department requirements so specify).

Departmental honors tracks consist of at least 12 credit hours of upper-division coursework, including a senior thesis, senior project, senior recital or equivalent capstone experience. Each department or college specifies requirements for satisfactory completion of the honors track, but a minimum grade point average of 3.500 for work in the honors track is required.

Students who complete all requirements for departmental honors receive a diploma designation. Up to 3 honors credit hours counted toward the student's major may be counted toward the minor in university honors. For current information about departmental honors requirements, check individual department information in the Undergraduate Catalog.

Dorothy and Bill Cohen Honors College

High-achieving high school students and current WSU students may apply to join the Dorothy and Bill Cohen Honors College and work toward an honors transcript or diploma distinction.

Most honors students start with the *Emory Lindquist Honors Scholar track* and take one honors general education course, a research seminar and any 6 additional honors credit hours to earn an honors transcript distinction; continuing and transfer students may choose to pursue a 12-credit hour *interdisciplinary track* such as leadership or law; students earn the *University Honors Minor* diploma distinction by completing the requirements for Emory Lindquist Honors Scholars *and* requirements for an interdisciplinary track; or, a student may design a course of study and work closely with faculty mentors to earn the interdisciplinary *Honors Baccalaureate* degree.

Additional information about admission and curriculum is available in the Dorothy and Bill Cohen Honors College section (p. 201) of the Undergraduate Catalog or online (http://wichita.edu/honors/)[1].

[1] Link opens new window.

Academic Progress

Midterm Grade Reports

Instructors are asked to provide midterm grades for students in full-semester courses. Submitted grades are available electronically to students and their academic advisors the 8th week of the semester. When grades reflect below average work, students should meet with their instructors and/or college advisors to discuss problems.

Final Grade Reports

At the end of each semester, students may access their final grades through the myWSU portal (https://www.mywsu.wichita.edu)[1] on the university website.

[1] Link opens new window.

Intra-University Transfers, Probation, Dismissal, Withdrawal

Transfers Within the University

Students may transfer from any undergraduate degree-granting college to another provided they meet, at a minimum, the admission requirements of the second college. Students on academic probation who seek to change major to another academic college must seek the assistance of an advisor in that college.

For specific information about probation standards and admission requirements of individual degree-granting colleges, refer to the individual college sections of the catalog.

Academic Probation and Dismissal Standards

Specific regulations governing probation and dismissal standards, in addition to the below, may be established by each college at Wichita State and are given in the introductory statements in the individual college sections of the catalog. Students should consult the appropriate section of the WSU Undergraduate Catalog for these standards.

Probation

Because 2.000 (a grade of *C*) is the minimum grade point average required for graduation from Wichita State, students are formally placed (or continued) on probation at the conclusion of every semester in which their institutional or overall grade point average falls below 2.000, except as noted below. If the college in which students are enrolled has a higher graduation requirement, students may be placed on probation whenever their institutional or overall grade point average falls below the college's specified level.

Students admitted in good standing will be placed on probation when they have attempted 6 credit hours and their institutional or overall grade point average falls below 2.000. Attempted hours are defined as all hours appearing on the transcript with a grade of *A, B, C, D, F, Cr, NCr, I, IP, S, U, Bg* or *NBg*.

Transfer students admitted on probation must complete at least 12 credit hours at Wichita State with a minimum 2.000 institutional and overall average before probation may be removed.

A student on academic probation is limited to a maximum enrollment of 14 credit hours in the fall and spring semesters.

Probation is removed when both the institutional and overall grade point averages reach the 2.000 level.

Dismissal

Dismissal standards are set by the various colleges of Wichita State in conformance with the following policy:

Students will not be dismissed if their semester grade point average equals the minimum graduation level of their college. They will remain on probation as long as their institutional or overall grade point average is below the minimum university or college graduation standard and their semester grade point average meets the minimum college standard.

Students will be dismissed at the end of a semester on probation if they fail to earn a semester grade point average at or above the minimum required, and have an institutional or overall grade point average below the minimum required. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Dismissal from a college because of poor academic performance constitutes dismissal from the university. Nonetheless, a dismissed student whose grade point average qualifies him or her for admission to another college at WSU may apply to the exceptions committee of that college.

Withdrawal

Voluntary Withdrawal

Students encountering special problems during a semester may voluntarily withdraw from their classes during the first 10 weeks of a regular semester or the first five weeks of an eight-week summer session and have a *W* recorded for the course(s). After the official withdrawal deadline (which is posted in the semester calendar each semester), students may withdraw from one or more courses with a *W* only if they petition the deans of their colleges and if their petitions are approved. Any approved late withdrawal results in a *W* on the academic record/transcript. Without that approval, a late withdrawal is considered an *F*. Course expungement (removal from transcript) is not allowed.

Students are advised to consult with their course instructors and academic advisor before initiating withdrawal procedures. Partial or complete withdrawals require the student to drop each course via the online system at myWSU (https://mywsu.wichita.edu)[1]. The Office of the Registrar in Jardine Hall is the office designated to process withdrawals submitted via the online registration system. The office of the dean of each academic college is the office designated to process late withdrawals.

[1] Link opens new window.

Administrative Withdrawal

Administrative withdrawal from courses may be initiated by the dean's office of the college or school in which a student is enrolled, the provost's office, or other appropriate university offices when a student is unable to complete courses because of extenuating circumstances. A grade of *W* will be officially recorded on the student's permanent record for a course or courses from which the student is administratively withdrawn.

Transcripts

A transcript is a certified copy of a student's permanent academic record. It contains confidential information and cannot be furnished/released without the student's signed, specific request.

Transcripts may be ordered online, in person at the registrar's office, or by submitting a request form via mail. Request forms and more detailed

information are available at the registrar's transcript webpage (http://wichita.edu/transcripts/)[1]. A person's undergraduate and graduate transcripts may be ordered separately. Official transcripts are $10 per copy, paid in advance. Normal service is same business day if received by 2 p.m. Additional fees for ordering a transcript online or for mailing it by other than first-class postal rates also apply.

Transcript requests received in person or via mail must be accompanied by a readable copy of government-issued photo identification such as WSU ID, driver's license or passport. Requests will not be processed without this ID.

Mailed transcript requests should be sent to:

Attention: Transcripts
Office of the Registrar
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0058

Reminder: No one, including spouse or parent, can request or pick up another person's transcript without written authorization and proof of identity from that person.

If a person still owes the university money, or has not returned borrowed university property, transcript services are withheld.

[1] Link opens new window.

Graduation

Requirements for Graduation

The university's minimum graduation requirements for baccalaureate degrees are given below. Students should consult their college section of the WSU Undergraduate Catalog for additional graduation requirements imposed by the department and college of their major. Graduate students should consult the WSU Graduate Catalog.

Students are required to file an online Application for Degree (in the *my*WSU portal) at least two semesters before their expected date of graduation.

Students must have credit for a minimum of 120 acceptable credit hours toward their degree. Hours of credit earned toward a degree do not include courses with grades of *F, W, Au, NCr, NBg, IP* or *I*. In order to graduate in a timely manner (four years), a student should enroll in and complete 30 credit hours over the course of each academic year.

Students must have completed the general education program (p. 57) or the equivalent.

Students must maintain an overall grade point average of 2.000 (transfer work included) and a grade point average of 2.000 on all work taken toward a degree at Wichita State. Furthermore, students must maintain a grade point average of 2.000 in the courses in their major field of study.

Students must meet with advisors in each program department before claiming a minor or major in more than one degree program. The same credit hours can be used to meet the requirements of more than one major or minor or combination thereof within the following conditions:

1. At least 12 credit hours of unduplicated coursework must be completed in each major.
2. At least 3 credit hours of unduplicated coursework must be completed in each minor.

These credit hours must be unduplicated across all courses used toward the degree.

This policy does not apply to inter-college double majors as defined in the WSU Undergraduate Catalog. Colleges and/or departments may impose further restrictions on the use of unduplicated credit hours for their programs, majors and/or minors. Such restrictions can be found in the degree requirements catalog section for each program.

Students shall not be allowed credit toward graduation for *D* grade work in excess of one-quarter of their total credit hours.

Students must have a minimum of 45 credit hours in courses numbered 300 or above.

All students, including those transferring from a two-year college, must complete at least 60 credit hours of four-year college work including 45 credit hours of upper-division work in order to qualify for graduation from Wichita State.

At least 30 hours of course credit (*A, B, C, D, Cr* or *Bg*) must be earned at Wichita State. Also, at least 24 of the last 30 credit hours or 50 of the last 60 credit hours must be completed at Wichita State. Course credit earned at another university as an approved part of a WSU exchange or study abroad program (e.g., NSE, ISEP) is counted as WSU credit with respect to this rule. Exceptions to this regulation may be made by the university's exceptions committee.

All students are required to complete an applied learning or research experience. Each academic department and/or college will specify how the applied learning requirement can be met for its degree programs.

All transcripts of other college work must be sent to WSU before a degree will be posted, even if these courses are not needed to meet WSU degree requirements.

Students may transfer credits earned in correspondence or extension courses with the approval of their dean. However, no more than 30 hours of such credit may apply toward a bachelor's degree and no more than 6 hours of such credit may be among the last 30 credit hours.

Students who are eligible to graduate but who still have unpaid tuition balances will not graduate until those fees are paid.

Date of Catalog Requirements

Students who have not been out of college for more than two consecutive calendar years may graduate under the program requirements in effect at Wichita State when they first entered any college or university. They may not, however, be allowed to graduate under the requirements of a Wichita State Catalog in effect earlier than two years preceding their enrollment at Wichita State. They also may graduate under the requirements of any subsequent Wichita State Catalog. Guest students are considered to have entered Wichita State at the time they become guest students and are subject to the preceding provisions.

If students, including nondegree-bound students, have had their college programs interrupted by more than two consecutive years, they will be subject to the program requirements in effect when they re-enter, or, if they elect, the requirements of a later catalog.

The WSU Undergraduate Catalog is in effect from the fall semester of the year it is published through the summer session of that academic year. The catalog is a guide for information only and is not a contract.

Commencement, Degrees Awarded with Distinction

Commencement

WSU holds commencement ceremonies each year in December and in May. All baccalaureate and master's degree candidates for the spring semester are eligible to participate in the May ceremony and all baccalaureate and master's degree candidates for the fall semester are eligible to participate in the December ceremony. Baccalaureate and master's degree candidates for the summer semester are eligible to participate in either the preceding May or following December ceremony.

Doctoral degree candidates are only eligible to participate in a ceremony after all requirements for their degree have been successfully completed (May or December). Summer doctoral graduates are generally not eligible to participate in the preceding May ceremony, but may participate in the following December ceremony. Exceptions may be granted for summer doctoral students if they have successfully defended their dissertation, and the defense paperwork is on file in the Graduate School before the spring ceremony. Contact the degree audit specialist in the Graduate School for details.

More information may be found at the WSU commencement website (https://wichita.edu/commencement/).[1]

Diplomas are available for distribution approximately seven weeks following the close of a given semester. Degree recipients may obtain their diplomas from the registrar's office. Diplomas will be mailed from that office upon a written, signed request that includes the name and student identification number of the degree recipient, the complete address where the diploma is to be mailed, the appropriate mailing fee ($8 inside USA; $40 outside USA), and a readable copy of the degree recipient's driver's license or other government issued photo ID.

[1] Link opens new window.

Academic Distinction

Degrees are conferred with distinction upon students who have shown excellence in scholarship during their academic career, as evidenced by both their overall GPA and their institutional GPA. The minimum standard for graduating *summa cum laude* is an overall and institutional grade point average of 3.900. The minimum standard for graduating *magna cum laude* is an overall and institutional grade point average of 3.550. The minimum standard for graduating *cum laude* is an overall and institutional grade point average of 3.250. These grade point averages are frozen at the time of graduation.

Double or Second Major

Double Major

Students must meet with advisors in each program department before claiming a minor or major in more than one degree program. The same hours can be used to meet the requirements of more than one major or minor or combination thereof within the following conditions:

1. At least 12 credit hours of unduplicated coursework must be completed in each major.
2. At least 3 credit hours of unduplicated coursework must be completed in each minor.

This policy does not apply to inter-college double majors as defined in the WSU Undergraduate Catalog. Colleges and/or departments may impose further restrictions on the use of unduplicated hours for their programs, majors and/or minors. Such restrictions can be found in the degree requirements catalog section for each program.

Inter-College Double Major

An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Applied Studies, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. The following criteria and policies apply:

1. The student's professional college will be their *primary* college and LAS will be their *secondary* college.
2. The established degree requirements for each major must be completed; but for the inter-college double major, individual courses can be used to satisfy the major requirements of both majors.
3. Students must complete all graduation requirements (general education, core courses and college required courses) within their primary college, but are not required to complete all the graduation requirements of their secondary college.
4. The diploma will be awarded by the student's primary college. The academic department within the student's secondary college must verify that the student has satisfied the requirements of their major.
5. The student's academic transcript will indicate both majors.

Second Bachelor's Degree from Wichita State

Students with a bachelor's degree from another institution may receive a second bachelor's degree from Wichita State University upon completion of a minimum of 30 credit hours in residence, provided that none of the 30 WSU credit hours is counted in the first degree and provided that all Wichita State, college and departmental graduation requirements are met.

Students who have received one bachelor's degree from Wichita State University may receive a second upon completion of a minimum of an additional 30 credit hours in residence and upon satisfying the requirements of the department and college from which the second degree is sought. These hours are in addition to those required for the first degree.

Student must comply with the policies regarding duplicate use of coursework outlined in the section on double majors.

Exceptions

Exceptions Committee

The University Admissions and Exceptions Committee reviews petitions from students seeking exceptions to specific academic rules and regulations for which exceptions can be made, including readmission after academic dismissal. This does not include grading matters handled by the Court of Student Academic Appeals.

Exceptions petitions are considered first by the student's college committee, then by a university committee. Exceptions denied at the college level are automatically submitted for consideration at the university level. Decisions made by the university committee are final. University-level decisions can be appealed by repetitioning, but will be considered only if the student presents relevant documented information that was not included in the original petition. The university committee decision concerning appeals is final. The Court of Student Academic Appeals cannot be used to appeal exceptions committee decisions.

Students are advised to begin the petitioning process by consulting with an academic advisor in their college of enrollment and/or the OneStop.

There is a separate exceptions process for international undergraduate admission through the international education office.

Grade Changes, Appeals

Change of Grades

Changes of grade due to errors in grading or reporting may be initiated by an instructor at any time during one calendar year following the assignment of the original grade. A grade change also may be initiated by the chairperson of the department that offered the course if, and only if, the instructor is not in residence.

An instructor who wishes to request a change in a grade assigned more than one year earlier may petition his or her college's committee on exceptions. If this committee approves a change in grade, the instructor and department chairperson must be informed by the committee before its recommendation is transmitted to the registrar's office and the grade change entered on the student's transcript.

This change of grade policy does not affect the right of the student to appeal to the Court of Student Academic Appeals. However, the court will ordinarily not hear cases involving grades assigned more than one semester prior to the time of appeal.

In cases where failing grades have been recorded because a student was unable to withdraw officially, the student may petition the exceptions committee of his or her college for a late withdrawal from all courses in the semester in question. The student must provide verifiable evidence of the causes for failing to withdraw properly. The petition will also be submitted to the University Admission and Exceptions Committee. If the petition is granted, the grades are changed to *W* through the usual withdrawal procedure. The policy applies to all courses in a semester and can be invoked only for Wichita State University courses.

This change of grade policy may not be applied after graduation to courses attempted prior to graduation.

Court of Student Academic Appeals

The faculty at Wichita State has established a procedure to resolve disputes arising out of the classroom through the Court of Student Academic Appeals. The court hears appeals from students who believe they have been treated unfairly in grading. The court is designed to help resolve differences that cannot be settled within the framework of the student-faculty relationship and offers an important safeguard for students.

The student must file an appeal within one semester after the grade is assigned (excluding summer). The court may waive the time limit if documented and verifiable exceptional circumstances cause a delay in submitting the appeal.

Any student may use the appeals procedure. Forms are available in the Office of the Provost and Vice President for Academic Affairs, 109 Morrison Hall. The general procedure is explained to students when they pick up the form.

Appeals for academic misconduct are handled through the Student Academic Integrity process. For more information see section 2.17 of the WSU Policies and Procedures Manual *(*https://wichita.edu/policiesprocedures/*)*[1].

[1] Link opens new window.

Exemptions for Superior Achievement

Students who have completed a minimum of 12 credit hours at Wichita State and have an overall grade point average of at least 3.250 and a grade point average of at least 3.000 the previous semester may be granted several privileges:

1. They may be exempt from regulations governing the maximum number of hours allowed students during a semester;
2. They also may be exempt from college regulations, if any, governing the maximum number of hours students may take during a semester in one department. However, students shall not enroll in more than 21 credit hours without the permission of their college deans; and
3. They may have permission to have course prerequisites waived with the consent of the instructors of the courses and the heads of the departments in which the courses are taken.

Transition Semester, Academic Forgiveness

Transition Semester

To accommodate students in their adjustment to college standards, they may be eligible for a special transition semester. The transition semester is a student's first regular semester at Wichita State regardless of the number of hours attempted (summer session excluded). Students who have enrolled at another institution of higher learning in a regular term (summer session excluded) before enrolling at Wichita State are not eligible for a transition semester at WSU.

The processing of a transition semester results in grades of *A, B* and *C* being changed to Credit (*Cr*), and grades of *D* and *F* being changed to No Credit (*NCr*). These designations have no impact on the student's grade point average. College-level courses (numbered 100 and above) with a grade of *Cr* may count toward graduation.

Students must meet the following requirements to be granted a transition semester:

1. The grade point average for their first regular semester must be below 2.000;
2. Their next semester of enrollment must be at WSU and they must complete at least 6 graded hours with a 2.000 or higher grade point average. *Graded hours* do not include courses taken for Audit (*Au*), Credit (*Cr*), Satisfactory (*S*) or Badge (*Bg*); and
3. By the end of their fourth regular semester (fall or spring), students must complete a form in their college/advising center office requesting a transition semester.

Students who fail to meet these requirements will not be awarded a transition semester and will be subject to the appropriate probation or dismissal standards.

Academic Forgiveness

Students who have accumulated a grade point average of less than 2.000 may petition the dean of his or her college and the college exceptions committee to be admitted to a degree program with all previous college credit and grade point average waived.

To qualify, petitioners must be at least 25 years old, must have been out of a degree program of college studies for at least four years, and must demonstrate ability to progress in college work.

If the petition is approved, all prior college courses and grades are recorded on the transcript, followed by the notation *admitted without credits or grades by committee action.*

The policy may be applied to Wichita State University enrollment as well as to work at other colleges. When implemented, the policy waives

all previous credits and grades except in the case of credits and grades earned in the nondegree-bound status under WSU's open admission policy.

Student Responsibility

Students at Wichita State University have the following responsibilities:

1. To consult their advisors on all matters pertaining to their academic careers, including changes in their programs;
2. To observe all regulations of their colleges and select courses according to the requirements of that college;
3. To attend all meetings of each class in which they are enrolled (instructors will announce at the beginning of the semester if they consider attendance in computing final grades);
4. To fulfill all requirements for graduation;
5. To be personally responsible for fulfilling all requirements and observing all regulations at Wichita State;
6. To answer promptly all written notices from advisors, faculty, deans and other university officers;
7. To file an application for degree in the appropriate college office by the published deadline for the semester in which graduation is intended; and
8. To enroll in only those courses for which the stated prerequisite(s) have been satisfactorily completed. Failure to comply with this procedure may result in administrative withdrawal.

Students also should comply with the principles in the following statement:

> Wichita State University reaffirms the principle of intellectual freedom in scholarly activity for university students, and it recognizes the full citizenship rights of students in inquiry, discussion and such actions as they may choose to take on public issues.
>
> The rights and freedoms of students involve concomitant responsibilities. Incumbent on all students, as on all citizens, is the responsibility to observe the university's rules of orderly procedures and the laws of the larger community of which the university is a part. In the matter of actions on public issues, to speak one's opinion, to petition, to distribute literature, to assemble peacefully and hold meetings, to use the persuasion of ideas, and other actions within the bounds of orderly and lawful procedures are sanctioned by the university. But infringement on the rights of others, acts or threats of violence to persons, destruction of property, disruption, or other interference with the normal functioning of the university and its personnel and other disorderly and unlawful acts will not be countenanced.
>
> Within its sphere of responsibility the university will afford students proper procedural safeguards to resolve matters in dispute. Those who willfully violate university standards must expect to face disciplinary action on the part of the institution, which may include reprimand, administrative withdrawal, and suspension or expulsion, consistent with campus provisions for due process.

Student Code of Conduct

The Student Code of Conduct and Student Code of Conduct Handbook outlines university behavior expectations for students, student groups and student organizations in keeping with institutional values and to meet the university's legal obligations. These expectations cover topics such as academic integrity, drug use, hazing, alcohol, weapons, physical violence and harassment. The conduct procedures (in the Student Code of Conduct Handbook) outline the actions needed to file a complaint and the course followed in the student conduct process. Additionally, information on informal and conflict resolution processes for student-involved conflicts is also provided.

The Student Code of Conduct is located online at the student conduct webpage (https://wichita.edu/studentconduct/)[1]. Individuals wanting to file an incident report about a student, student group or student organization can submit a report online (https://www.wichita.edu/services/student_affairs/report-it.php)[1].

[1] Link opens new window.

Sexual Misconduct, Relationship Violence and Stalking Policies

Wichita State University is committed to the elimination of sexual misconduct, relationship violence and stalking within the university community. These incidents may interfere with or limit an individual's ability to work productively, maintain a safe living environment, or to benefit from or fully participate in the university's educational programs. Additionally, these incidents may cause serious physical and/or psychological harm.

Wichita State University maintains a comprehensive program to prevent these behaviors, provides resources to assist and support those who are involved in such incidents, and will respond promptly and equitably to reports of sexual misconduct, relationship violence and stalking. The university has a responsibility to eliminate the behavior, prevent its recurrence, and address its effects on any individual and/or the community. Retaliatory actions against any individual involved in reporting or participating in the investigation of a complaint will not be tolerated.

Information regarding the university's policies can be found in sections 8.16/Sexual Misconduct, Relationship Violence and Stalking Policy for Students, 3.06/Sexual Misconduct, Sexual Harassment, Relationship Violence and Stalking Policy for Employees and Visitors, and 3.19/Prohibition of Retaliation in the WSU Policies & Procedures Manual *(*https://wichita.edu/policies/*)*[1].

Campus and community resource information can be found at the Care Team's website (http://wichita.edu/care/)[1] or by contacting the Office of Equal Opportunity and Title IX.

[1] Link opens new window.

Student Academic Integrity

A standard of academic integrity, fairly applied to all students, is essential to a learning environment. Students who compromise the integrity of the classroom are subject to disciplinary action by their instructor, their department, their college and/or the university. Violations of classroom standards of academic integrity include, but are not limited to:

1. Plagiarism;
2. Unauthorized use of possession of material or resources;
3. Unauthorized collaboration or consultation;
4. Fabrication, falsification or misrepresentation of information;
5. Academic interference;
6. Unauthorized resubmission;
7. Facilitation of academic misconduct;
8. Bribery;

9. Unauthorized sale, distribution or receipt of academic materials; and
10. Research misconduct.

The Academic Integrity Policy is located online at the student conduct webpage (https://www.wichita.edu/studentconduct/)[1]. Individuals wanting to file an incident report about a student, student group or student organization can submit a report online (https://www.wichita.edu/services/student_affairs/report-it.php)[1].

[1] Link opens new window.

Facilities and Support

Wichita State's main campus is located on a 330-acre site near Hillside and 21st Street in northeast Wichita. This section describes some of the facilities on campus and other facilities to the south and west of campus.

Find out how WSU's Career Development Center, Alumni Association and WSU Foundation serve students and the community under the University and Student Support Areas heading.

Under the Student Involvement heading, find details about child care and counseling and disability services. Services for veterans, international students and more are also described in this section.

- University Facilities (p. 39)
- University and Student Support Areas (p. 41)
- Student Involvement, Services (p. 42)
  - Rhatigan Student Center (p. 46)
  - Sports and Recreation (p. 46)
  - Wellness Programs (p. 46)

University Facilities

Wichita State's main campus is located on a 330-acre site bounded by Hillside, Oliver, 17th and 21st streets in northeast Wichita. The campus is modern and accessible and at the same time retains the flavor of the university's heritage, combining distinctive Georgian-style architecture with more modern buildings of stone and brick that are accentuated by attractive landscaping. Wichita State continues to grow. During the past 25 years, WSU has more than doubled its instructional space, adding major buildings for art, engineering, health sciences, sciences, physical education, music, dance, and liberal arts and sciences. In the past four years, Wichita State's main campus in northeast Wichita has been expanded by 120 acres with the conversion of a golf course to a new Innovation Campus that houses an interconnected community of academic and partnership buildings, laboratories and mixed-use areas.

Eugene M. Hughes Metropolitan Complex

The Eugene M. Hughes Metropolitan Complex, located at 29th Street North and Oliver, is considered part of the main campus. Named for WSU's 11th president, Eugene Hughes, the 27-acre site has many amenities, including an initial building containing the 1,750-seat Roger Lowe Auditorium, the 145-seat Frederick Sudermann Commons, and the Richard Welsbacher Experimental Theater, a black-box theater. This facility offers meeting rooms that are available for rent and can accommodate groups from 10 people to 250 people. In addition, it houses the Office for Workforce, Professional & Community Education which offers community education classes for the public, the Small Business Development Center, the Educational Opportunity Center, and the Evelyn Hendren Cassat Speech-Language-Hearing Clinic offering special services in these respective fields. The complex also has playing fields for intramural sports and the Advanced Education in General Dentistry building, providing advanced education to dental school graduates as well as needed oral health care to the general public.

Fine Arts Facilities

Wiedemann Hall houses the first pipe organ built in North America by the world-renowned firm of Marcussen and Son, Denmark. The 400-seat music venue, dedicated in 1986, is the ideal acoustical setting for the organ. The building is named for music-lover and philanthropist Gladys H.G. Wiedemann.

Duerksen Fine Arts Center, opened in 1956, hosts university, community and professional music and dance performances. Named for alumnus and long-time dean of the college, Walter Duerksen, the fine arts center houses the School of Music, including the 500-seat Miller Concert Hall, classrooms and practice studios.

Wilner Auditorium, built in 1938 with federal funds provided through the Public Works Administration, is named to honor speech and theater professor George Wilner. Although other stages are now available, the 550-seat Wilner Auditorium still serves as the main stage for theater activities.

Grace Memorial Chapel

Harvey D. Grace Memorial Chapel, located in the heart of the campus near Morrison Hall and the Rhatigan Student Center, was built in 1963 and dedicated to serve all creeds and races. The chapel is available to students for group or individual worship and meditation, and is a frequent location for weddings.

National Institute for Aviation Research

The National Institute for Aviation Research (NIAR) at Wichita State University is the largest university-based aviation research and development institution in the United States with more than 600,000 square feet of laboratory space. Established in 1985, NIAR offers research, development, testing, certification and training services in the areas of Additive Manufacturing, Advanced Coatings, Aerodynamics, Aging Aircraft, Ballistic and Impact Dynamics, CAD/CAM, Composites/Advanced Materials, Crash Dynamics, Environmental and Electromagnetic Test, Full-Scale Structural Test, Mechanical Test, Nondestructive Test, Research Manufacturing, Reverse Engineering, Robotics and Automation, Virtual Engineering and Virtual Reality.

NIAR is home to the National Center for Advanced Materials Performance and the FAA's Center of Excellence for Composites and Advanced Materials. It is also a member of the FAA's ASSURE Center of Excellence for UAS Research and NASA's Advanced Composites Consortium.

NIAR headquarters is located on WSU's main campus. Additional NIAR locations include the Environmental Test and EME labs at Air Capital Flight Line, laboratories within the National Center for Aviation Training, and the Aircraft Structural Test and Evaluation Center at the former Kansas Coliseum.

Find out more at the NIAR website (http://niar.wichita.edu)[1], or by calling 316-978-6427, or 800-NIAR-WSU.

[1] Link opens new window.

Plaza of Heroines

Surrounded by Ablah Library, Jabara Hall, Grace Memorial Chapel and Clinton Hall, the Plaza of Heroines is a beautiful and welcome gathering place. Danseuse Espagnole (Spanish Dancer), by artist Sophia Vari, is a striking addition to WSU's highly regarded outdoor sculpture collection and the centerpiece of the plaza. Landscaping and benches surround the sculpture enhancing the circular plaza, constructed of bricks and granite pavers engraved with the names of honored women. Proceeds from the plaza project benefit the Center for Women's Studies scholarship fund.

Ulrich Museum of Art

Most recognized for the iconic Joan Miró mosaic mural *Personnages Oiseaux,* the Ulrich Museum of Art is located in the southwest section of campus. The Museum and the Martin H. Bush Outdoor Sculpture Collection are unique and essential parts of campus life at WSU. The Museum features changing exhibitions, installations, performances and

programs that examine the art and issues of modern and contemporary culture.

Students are invited to use the museum as a research space, a place to discover the world through a broad range of disciplines, a free to be space, and a haven for just hanging out and meeting new people. The museum is also a resource for internships and part-time employment.

Make your next visit to the Ulrich or day on campus more rewarding by downloading the free Ulrich Museum App available on the App Store or Google Play, with multi-media self-guided tours and interactive maps for easy navigation of Wichita State University's campus. The Ulrich app highlights the extraordinary Martin H Bush Outdoor Sculpture Collection, which was named one of the top 10 outdoor sculpture collections on a college/university campus in the United States (2006 *Public Art Review*).

Hours: 11 a.m. to 5 p.m. Tuesday through Friday and 1 p.m to 5 p.m. Saturday and Sunday. Closed Mondays and major/university holidays.

- Admission: free
- Phone: 316-978-3664
- Email: ulrich@wichita.edu
- Ulrich Museum of Art Website (http://ulrich.wichita.edu)[1]
- Ulrich Museum of Art on Facebook (http://facebook.com/ulrichmuseum/)[1]
- Ulrich Museum of Art on Twitter (http://twitter.com/ulrichmuseum/)[1]

[1] Link opens new window.

WSU Haysville

WSU Haysville, located at 106 Stewart Avenue, Haysville, KS 67060 since July 1, 2018, is a WSU off-campus location offering a variety of courses, including general education and technical courses in partnership with WSU Tech.

WSU Haysville has a diversity of students: high school guest students, regular and transfer WSU students, nontraditional students including working adults, and senior citizens who can audit many classes tuition-free. WSU Haysville provides flexible higher learning options, with classes offered in the afternoon and evening, and many 3 credit hour classes offered in a once-a-week, three-hour format. Some classes are also offered in hybrid format, where students meet in person only a few times a semester, but the majority of classwork is done online. Students can complete their sign language minor at WSU Haysville. More WSU classes and programs are being developed to help students south of Wichita to attend WSU classes.

Starting fall 2019, WSU Haysville began to host HVAC classes from WSU Tech for the Haysville high school students. More WSU Tech classes will be offered at WSU Haysville in future semesters.

Since its inception, WSU Haysville has established a WSU Little Free Library Network in Haysville with its flagship library right at the WSU Haysville location, and offered non-credit community classes, an Art Show, job application workshops and a job fair. WSU Haysville staff are also involved in various Haysville community and city committees and events.

WSU Haysville offers a premium, comfortable and safe higher learning environment for its students. Well-trained and friendly staff help students with printing and copying, payments, registration and enrollment, fee payments, proctored testing, math and English placement testing, as well as assist students in making career and academic counseling appointments. Also offered are WSU Library and Shocker Store materials, merchandise pickups and library returns. WSU Haysville provides lactation room access and storage for nursing mothers, and provides information on classes and programs at WSU Haysville and other locations. Parking is free, with no parking permit required. For the latest updates on WSU Haysville, please call 316-978-8001 or visit WSU Haysville online (http://wichita.edu/haysville/)[1].

[1] Link opens new window.

WSU Old Town

WSU Old Town, a complex of facilities and services, is located in downtown Wichita's Old Town district. The complex comprises office space in three buildings located at 121 N. Mead, and buildings at 213 N. Mead and 238 N. Mead.

Several WSU units focused on health care and outreach to Wichita businesses and the larger community are housed at the satellite location including:

- Community Engagement Institute;
- Kansas Procurement Technical Assistance Center (PTAC);
- KMUW Wichita Public Radio;
- Physician Assistant and Physical Therapy graduate degree programs;
- Training and Technology Team (T3);
- Ennovar; and
- WSU Tech — health professions.

The Old Town location is a natural fit with the university's mission to be an essential economic driver for Wichita and the state of Kansas.

The university generates substantial activity in all three buildings, with numerous educational sessions and public events — especially in the large activity space at the 238 N. Mead property.

WSU Old Town's close proximity to the university's main campus is convenient for WSU employees, while its central location with access to many area amenities benefits those who visit and take courses at this location.

WSU South

Previously in Derby, WSU South is now located at 3821 E. Harry Street, Suite B105, Wichita, KS 67218. With its unique learning environment, classroom technologies, helpful instructors and friendly professional staff, WSU South offers general education classes and professional bachelor's degree completion curriculum, including elementary education, psychology and others. Many of these classes are offered in the late afternoon and evening in a once-a-week, three-hour class format for the students' convenience. Increasingly, many classes are being offered in the hybrid format (online and in-class) favored by many students. WSU South has a diversity of students taking classes and graduating from its programs: high school guest students, regular and transfer students, returning adults, Shocker Pathway students, as well as senior citizens (60 years old and above), who can audit WSU classes free in most cases.

At its new location on Harry Street in Wichita, WSU South is co-located with the WSU Shocker Studios, WSU Tech (Wichita State University Campus of Applied Sciences and Technology) and the Shocker Store. The WSU Shocker Studios (http://www.wichita.edu/mediaarts/)[1] is a state-of-the-art professional production facility and consists of over 35,000 square feet of facilities and equipment. It is heavily engaged with industry professionals in the fields of audio

production, animation, filmmaking and game design. WSU Tech (https://wsutech.edu/)[1] provides over 100 degree and certificate options designed to meet the workforce needs of Kansas. At WSU South, students find several of WSU Tech's technical programs including interior design, police science, business administration, massage therapy, veterinary technician and emergency medical technician (EMT). Students also find transferable general education courses and the Shocker Pathway program. The Shocker Pathway (https://wsutech.edu/shockerpathway/)[1] is a partnership between WSU Tech and WSU that provides an affordable, convenient and respected way to earn a two-year Associate of Arts (AA) degree from WSU.

As a continuation of previous operations in Derby, WSU South schedules general education classes not offered by WSU Tech. In addition, WSU South continues to offer classes for completion of majors in psychology, elementary education and others. Emphasis is also placed on offering classes/programs relevant to the Shocker Pathway, in which WSU Tech students after completing 50 credit hours in their relevant fields of study at WSU Tech, can get a WSU AA degree or transition to WSU to finish a bachelor's degree.

At the new WSU South center on Harry Street, with its spacious hallways adorned with artistic murals, and classrooms with the latest classroom technologies, WSU South continues its tradition of offering a premium and comfortable learning environment and outstanding customer services. Well-trained, friendly and helpful staff continue to help students with printing and copying, payments, registration and enrollment, proctored testing, math and English placement testing, arrangement of career and academic counseling, scan-and-email services, WSU Library materials pickups and returns, lactation room access and storage for nursing mothers, and general desktop support for workstations in the main office. WSU South also provides general information on classes and programs, the Shocker Pathway, and other WSU programs offered at that location. Parking permits are not required for parking at WSU South. There is also a bus shuttle operating between the main campus and WSU South. For the latest updates on WSU South, please call: 316-978-8000 or visit the WSU South Website (http://wichita.edu/south/)[1].

[1] Link opens new window.

WSU West

WSU offers general education and upper-level courses in select disciplines each semester at WSU West, located at 3801 N. Walker Avenue, which is near the intersection of 37th Street North and Maize Road. In addition, limited WSU Tech courses are available for enrollment (must be a WSU Tech student). Textbook ordering and delivery are also available through the Shocker Store. Textbooks are delivered to WSU West main office (WM 101) and are available for pickup from WSU West staff.

WSU West has access to the "WSU Secure" Wi-Fi network for use by WSU faculty, staff and students. Members of the general public also may access the open "WSU Guest" Wi-Fi network. In addition, a quiet, computer-equipped study room and a group study room are available. All WSU students, WSU Tech students (some restrictions), faculty and staff are welcome to use resources at WSU West, even if they are not enrolled in coursework at WSU West. Parking permits are not required to park in the WSU West parking lot.

For further questions call: 316-978-6777, or visit the WSU West website (https://wichita.edu/west/)[1].

[1] Link opens new window.

University and Student Support Areas

Alumni Association

Courtney M. Marshall, *president and CEO*

The WSU Alumni Association is the world's largest network of Shockers who share the mission of supporting Wichita State University. Founded in 1913, the alumni association is the network through which the university community and its alumni communicate with and serve one another. The primary intent of the partnership between the association and the university is to ensure the continued excellence of Wichita State. But this serious mission certainly doesn't mean the association isn't serious about having fun, too. Scores of exciting Shocker opportunities to participate in fun programs and events prove this point every semester.

Many traditional university events — including commencement and homecoming — are supported by association staff, dollars or volunteers. The association also sponsors Students Today Alumni Tomorrow (STAT), a dynamic student group. STAT provides students unequaled opportunities to network with fellow students and WSU alumni of all ages. Another WSU initiative that directly benefits students and relies on alumni participation for its success is the *Drive Your Pride* license plate program. This program offers alumni and students the chance to sport WuShock on their official Kansas tags, and at the same time, contribute to student scholarships. The tag program pours thousands of dollars each year into scholarships for deserving students.

For more information about the groups, events, projects and programs of the WSU Alumni Association, visit the association online (http://ShockerAlumni.org)[1], call 316-978-3290, or drop by the Woodman Alumni Center, 4205 E. 21st Street, just east of Eck Stadium/Tyler Field.

[1] Link opens new window.

Career Development Center

Nail the resume, land the interview and prepare for the job with the Career Development Center. Build marketable skills and gain professional work experience before and after graduation through targeted internships, one-on-one counseling, targeted workshops, career fairs and more. Now is the time to develop the right habits and skills for a lifetime of professional success.

Need help choosing a major? No problem! The Career Development Center understands that deciding on a major isn't always easy — and sometimes it's downright hard. That's why the center provides every student the perfect environment to explore their interests, discover their options and create a blueprint for success.

WSU students also have access to one of the best cooperative education and internship programs. WSU students can earn work experience, college credit and a paycheck — all while bolstering their resumes and getting a leg up on the competition. Get started today by calling 316-978-3688, visit the Career Development Center online (http://wichita.edu/careerdevelopment/)[1] or visit in person at the center's main office in Brennan III.

[1] Link opens new window.

WSU Foundation

Elizabeth H. King, *president and CEO*

WSU Foundation is the private fund-raising organization of the university. The mission of the WSU Foundation is to enhance a

community of learning excellence for students and faculty through philanthropy and stewardship. Private contributions of cash, stock, real estate, in-kind and planned gifts help support the programs and vision of the university beyond current funding from fees, tuition and government monies.

In today's world, as higher education is pressed to do more with less, the WSU Foundation has launched the ***Shock the World*** campaign, a fundraising initiative for Wichita State focusing on three areas: people, places and programs. Set to conclude in June 2020, the campaign strives to provide students with enhanced resources, new opportunities and applied learning experiences to help them achieve their dreams and add value to their communities and our world. *To learn more, visit the* Shock the World website *(*https://wichita.edu/shocktheworld/*)*[1]**.**

Want to Shock the World with us? *Learn more by calling the WSU Foundation at 316.978.3040 or going to the* WSU Foundation website *(*https://wichita.edu/foundation/*)*[1]**.**

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Student Involvement, Services

Disability Services

The Office of Disability Services provides academic accommodations for students who experience physical, learning or mental disabilities. Students are required to provide appropriate documentation to the director of Disability Services before classroom services are provided. For more information, contact:

Office of Disability Services
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0132
316-978-3309 front office
316-978-6128 for rides
316-854-3032 video phone
316-978-3114 fax
Disability Services Webpage (https://wichita.edu/disability-services/)[1]

Services are based on the student's need for academic accommodation. Disability Services encourages students to be independent on campus and to use those services which help maximize their educational experience.

[1] Link opens new window.

Diversity and Inclusion

The Office of Diversity and Inclusion aims to cultivate and sustain an inclusive campus that strives for academic excellence by creating an environment that educates, empowers and mobilizes all members of the Shocker community. The office provides dynamic programs, which range from speakers and film showings to award ceremonies, cultural festivities and LGBTQ programming — each representing a small piece of the diversity displayed on the WSU campus. The Office of Diversity and Inclusion collaborates with many campus departments and student organizations for various diversity and multicultural student success initiatives. In conjunction with campus partners, the office celebrates Hispanic Heritage, LGBTQ, Native American, Black History, Women's History and Asian/Pacific American Heritage months.

The office also sponsors the Multicultural Student Mentoring Program (MSMP) which facilitates the retention, academic success, holistic development and timely graduation of all minority students at WSU, through academic support services, educational and cultural programming, interpersonal relationships and mentoring. MSMP matches successful continuing WSU students with freshmen and transfer students to help ease the transition from high school or community college to WSU. The program helps new students quickly identify all the support services available and provides direct tutorial assistance to any program participants who have committed to achieving their personal best.

The Office of Diversity and Inclusion is located in the Rhatigan Student Center, suite 208. Much more detailed information describing the Ambassadors for Diversity and Inclusion, Men of Excellence and Phenomenal Women support groups and additional resources the office provides can be found at the office website (https://wichita.edu/odi/)[1].

[1] Link opens new window.

International Student Services

The Office of International Education serves the special needs of approximately 1,500 international students from more than 100 countries enrolled at Wichita State University. (See the international student admission section for requirements.) An orientation program specially designed for new international students prepares them for entrance into the U.S. academic system and way of life.

The office also sponsors the Cultural Ambassador Program and other activities that promote interaction between U.S. and international students.

In addition, the office houses a study abroad reference center which provides information to U.S. students on study, work and travel opportunities abroad.

For more information, contact the Garvey International Center, 316-978-3232.

Military and Veteran Services

Wichita State is proud to be committed to helping veterans, active service members, dependents and spouses receiving military benefits make the successful transition into WSU's academic community. Whether it's needing assistance with educational benefits, access to resources that ease the transition into the university, or wanting to connect with fellow vets, WSU has access to resources that will help smooth the transition. An overview of resources can be found at the military student services website (http://wichita.edu/military/)[1].

In the capacity of serving active duty military and veterans, the Director of Adult Learning serves as the point of contact (POC) for inquiries pursuant to the Department of Defense Memorandum of Understanding. For questions concerning POC needs, contact Larry Burks via the Adult Learning website (http://wichita.edu/adultlearning/)[1].

Captain Riley Leroy Pitts Military and Veteran Student Center

The Captain Riley Leroy Pitts Military and Veteran Student Center, in 105 Grace Wilkie Hall, exists to build and maintain a community of students with military experience and to provide comprehensive support for the unique needs of veterans, military members and military dependents in an environment of respect. All students with military experience — past or present — and military dependents are welcome to visit the Military and Veteran Student Center to ask questions, find resources, make connections, study, use the free computer stations, get a free cup of coffee or to just unwind between classes. Call 316-978-3856 or visit the Military and Veteran Student Center website (http://wichita.edu/veterancenter/)[1] for more information. (Current or recent military members needing help with the transition to college can also contact the TRIO Veterans Upward Bound program.)

Veteran Benefits

The Office of Military and Veteran Services provides assistance to military members, veterans and their dependents in using their VA education benefits. It provides information on education benefit programs through the Department of Veterans Affairs, the application process for obtaining education benefits, and the certification process for using these benefits. Additionally, military-connected students who are admitted to Wichita State as non-Kansas residents may be eligible for in-state tuition rates. For additional information on VA education benefits, please visit the WSU VA Education Benefits webpage (http://wichita.edu/veterans/)[1], stop by 105 Grace Wilkie, call 316-978-3547 or email: veterans.services@wichita.edu.

Military Tuition Assistance

Tuition Assistance may be offered through the various branches of the military. Students wishing to use military tuition assistance should check with their branch of service education office and chain of command to determine the appropriate procedures for using these benefits. For questions regarding student accounts and tuition assistance billing, contact the Office of Financial Operations at wsu3rdparty@wichita.edu.

[1] Link opens new window.

OneStop

OneStop offers student-focused support for most WSU student-related needs. OneStop allows students the ability to get many answers for admissions, financial aid, advising, student accounts and registration in a central place. OneStop offers self-service options 24/7/365 at the OneStop website (http://wichita.edu/onestop/)[1] and toll-free phone service at 855-978-1787. Students will need a OneStop telephone access code found by logging in to the myWSU portal (https://mywsu.wichita.edu/)[1] and selecting "Manage your Password" for current students or "New to *my*WSU" for incoming students. In-person service is also available in the OneStop office.

OneStop also provides first-year advising for incoming traditional freshman students. OneStop specialists (first-year advisors) work collaboratively with academic college advising offices to develop a degree plan for each student as well as educate them on the operational tools and resources that will aid their success at Wichita State.

OneStop is located in Jardine Hall, Room 112. Regular office hours are 8 a.m.–7 p.m. Mondays–Thursdays, and 8 a.m.–5 p.m. on Fridays.

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Student Government Association

Wichita State believes that one of its primary tasks is preparing students for the responsibilities of citizenship in a democratic society. With this in mind, the university places an increasing emphasis on the role the Student Government Association plays on campus.

The legislative, executive and judicial responsibilities of SGA are vested in the Student Senate, the executive officers and cabinet, and the University Supreme Court. The senate appoints students to many university and faculty senate committees, recognizes and funds more than 300 student organizations, and allocates approximately $10 million annually in student fees to campus agencies including the Heskett Center, Rhatigan Student Center and Student Health Services. SGA also provides opportunities to fund education through scholarships. The scholarships include the James J. Rhatigan Leadership Scholarship, SGA International Student Scholarship, SGA Endowed Scholarship and the SGA Summer Scholarship.

Students come first. Each student is automatically a member of SGA and is eligible to vote in the annual elections in April. Throughout the year, openings exist on the Student Senate, as well as in many of the university committees. All students are encouraged to participate in student government through the many opportunities SGA offers.

For more information, contact the Student Government Association, 219 Rhatigan Student Center, Wichita State University; 316-978-3480.

Student Money Management

Students wanting to learn more about managing their finances can receive free help from peer financial coaches. Located in 115 Neff Hall, the Office for Student Money Management (OSMM pronounced *awesome*) is open during normal office hours and is available in the evenings by appointment.

OSMM, as part of the Office of Student Success, is designed to help increase retention and graduation rates by addressing one of the major stressors for WSU students and one of the major reasons for dropping out of college across the country: struggles related to money.

OSMM provides students with information and coaching on a variety of topics related to personal finances in college — including completing the FAFSA, making and sticking with a spending plan, matching a plan for paying for college with a plan for graduation, ways to establish good credit or get out of credit trouble, figuring out how much to borrow for college and how to pay it back, and finding campus and community resources.

OSMM does not offer scholarships, credit counseling or advice related to bankruptcy, investment or retirement. Contact 316-978-3254, or email the office (osmm@wichita.edu) for more information or to make an appointment to meet with a peer financial coach.

Student Organizations

Student organizations may be granted the privileges of university recognition if they are registered with Student Involvement and approved by the Student Government Association (SGA). To be approved, each organization must create a profile on ShockerSync.wichita.edu, which can be accessed through *my*WSU. As part of the profile, each organization must list their officers with contact information, upload a copy of the organization's constitution and bylaws, and list an advisor's name and contact information. Once an organization has provided all necessary information, it may be granted official recognition by SGA which means it may use Wichita State in its name, use university venues for meetings/events, use university marketing resources, request funds from SGA in accordance with established procedures and guidelines, and be listed as a WSU organization in university publications. Records of recognized organizations are maintained in Student Involvement.

For more information on how to become a recognized student organization, please see the Student Involvement website (http://wichita.edu/involvement/).[1]

For a list of currently recognized student organizations, visit the WSU ShockerSync website (http://shockersync.wichita.edu/).[1]

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TRIO Programs

- **Disability Support Services**
- **Educational Opportunity Centers**
- **McNair Scholars Program**
- **Student Support Services**

- **Talent Search — Project Discovery**
- **Upward Bound —**
  - **Communication**
  - **Galaxy Experience**
  - **Veterans**
  - **Wichita Prep**

Disability Support Services, Educational Opportunity Centers, McNair Scholars Program, Student Support Services, Talent Search Project Discovery and four Upward Bound programs — Communication, Regional Math-Science Center/The Galaxy Experience, Veterans and Wichita Prep — are special programs designed to help students prepare for university life, succeed on a university campus and successfully complete their course of study.

The TRIO Disability Support Services program provides opportunities for academic development, assists students with basic college requirements, and motivates students with disabilities toward the successful completion of a baccalaureate degree.

The program's goal is to increase the college retention and graduation rates of students with learning, physical and psychological disabilities.

Services provided by TRIO DSS include individualized academic tutoring, advice and assistance in postsecondary course selection and degree planning, assistance with graduate and professional program applications, and career exploration and referral. TRIO DSS assists students with information about financial aid programs and scholarship opportunities, provides assistance in completing financial aid applications, and offers education or counseling services designed to improve financial/economic literacy. Students at TRIO DSS sharpen life/study skills through workshops, access to the computer technology lab and textbook loan program, and exposure to cultural events and academic programs on campus and in the community.

For information, contact TRIO DSS at 316-978-5949, stop by 158 Grace Wilkie Annex, or visit the TRIO DSS website (http://wichita.edu/dss/)[1].

[1] Link opens new window.

The Educational Opportunity Centers (EOC) program, seeks to provide services for adults desiring to pursue their education beyond high school. The Center's goal is to increase the number of adults in the target areas enrolling in colleges and universities. Free technical assistance and advising on college application processes, financial aid applications and career exploration is offered to each program participant. Learning events that incorporate best practices and adult education theory are offered to help adults prepare for college entry and re-entry. EOC seeks to inform both adults and the larger community about educational opportunities that foster the ability of adults to enter the workforce as educated personnel. For more information, contact TRIO EOC at 316-978-7800, or visit the EOC website (http://wichita.edu/eoc/)[1].

The Ronald E. McNair Postbaccalaureate Achievement Program encourages qualified college juniors and seniors to pursue graduate studies. Named in honor of Challenger space shuttle crew member Dr. Ronald E. McNair, the program provides services which prepare students for postbaccalaureate study, including assistance in locating financial aid, preparation for the Graduate Record Examination (GRE), and opportunities to attend and present papers at national conferences and to write for scholarly publications. Scholars participate in research conducted by university faculty. Local and national symposiums provide an opportunity for students to present their research. In addition, regular workshops encourage students' serious consideration of doctoral study. For more information, contact 316-978-3139, or visit the McNair website (http://wichita.edu/mcnair/)[1].

Student Support Services, a federally-funded program, provides limited income, first generation college students, and individuals with disabilities with a multiplicity of academic support services which assist students to persist and graduate from WSU. The program has three components which provide individualized semester-long peer tutoring, academic advice and course selection, computer and typewriter usage, textbook-loan library, scholarships, comprehensive degree planning, study skills development, and graduate school advisement. The program serves 250 students each year and has been in operation at WSU since 1970.

For additional information, visit the Student Support Services website (http://wichita.edu/sss/)[1], or call 316-978-3715.

Talent Search — Project Discovery, a federally-funded Talent Search Program, was established at Wichita State University in July 1977. The project assists approximately 1,165 low-income and/or first generation individuals in gaining admission to postsecondary institutions throughout the nation and preparing them for secondary school and secondary completion. The program provides assistance to middle school students, high school students, and dropouts from secondary and postsecondary schools. Specific help is provided with admission forms, financial aid forms and preparation for ACT/SAT assessment examinations. Tutorial assistance and instruction to middle school students also are provided. The project's office at Wichita State serves middle schools, high schools and community agencies in Wichita. The office is located in Brennan I, third floor. Visit the Talent Search website (http://wichita.edu/talentsearch/)[1], or call 316-978-3127.

The Upward Bound programs are federally-funded programs that have been at WSU since 1966 (Wichita Prep) and 1991 (The Galaxy Experience). Communication and Veterans were added in 2008.

The *Communication Upward Bound* program offers youth in the Wichita area an opportunity to hone their communication skills and learn how to work with and write for varied media outlets. The centerpiece of the program is a four-week intensive residential summer camp for high school students housed on the Wichita State University campus and run by faculty and staff in the Elliott School of Communication. Year-round tutoring in all academic areas, field trips and Saturday activities help students stay in touch with their peers and their mentors. Students learn about the new world of communication while learning and perfecting public speaking, writing and media production skills. Students produce their own newspapers, video broadcasts and websites, and learn to work together in a professional setting to express their unique views. Community media professionals contribute their time and skills to help mentor this important generation of future communicators. All services are provided to program participants completely free of charge. In fact, students receive a small stipend for their participation. For more information call 316-978-6731, or visit the Communication Upward Bound website (http://wichita.edu/cub/)[1].

Upward Bound Empowerment assists high school students from limited-income backgrounds who are first generation, limited income, and foster care students with academic potential but who may have inadequate secondary school preparation. These Wichita-area high school students participate in a summer and nine-month academic year schedule to improve and enhance academic and social skills. Services include tutorial assistance; academic, career and personal counseling; postsecondary admission; and academic classes and workshops. The

program serves 60 students each year. The residential program and Saturday sessions are designed to help students complete secondary requirements and provide them exposure to college opportunities. An eight-week residential program for students who enroll in university classes in the fall provides them their first experience and exposure to college coursework. Visit the website, or call 316-978-6923.

The *Upward Bound Math-Science Center — The Galaxy Experience* is designed to serve 74 economically disadvantaged high school students who have the potential to be the first in their family to attend college and earn a four-year degree, preferably in a science or mathematics field. It is the mission of the Upward Bound Math-Science Center to: educate students with the propensity for study in STEM (Science, Technology, Engineering and Mathematics) areas for postsecondary; to stimulate and sustain interest in STEM careers; and to motivate low-income and potential first generation college students to realistically consider the attainment of a postsecondary degree in STEM.

The UBMS program is provided to students in two interrelated components, a summer component known as the *Galaxy Experience* and an academic year component referred to as *The Leadership Academy*. With major foci on acquisition of 21st century learning skills, mastery of core content and application of concepts mastered, and development of leadership talents, the center works with students via homework assistance, community service projects, bi-weekly leadership training and monthly academic skills workshops. The center also offers its students the opportunity to interact with industry and peer mentors and participate in campus visits and social/cultural events. Visit the Upward Bound Math-Science Center website (http://wichita.edu/ubms/)[1], or call 316-978-3316.

The *Veterans Upward Bound* program (VUB) is an educational and skills program designed to serve the needs of today's veteran. This program offers a range of services designed to prepare eligible veterans for success when they enter their chosen educational program whether it is a two-year community college, a four-year college or university, public or private school, or a vocational or technical school. All services, including instruction, textbooks, advising and supplies are free of charge. VUB is a TRIO Program federally funded by the U.S. Department of Education at Wichita State University. It serves eligible veterans from Wichita, Sedgwick, Butler and Harvey counties. The main office is located on the Wichita State University campus at 419 Brennan Hall I. For more information visit the Veterans Upward Bound website (http://wichita.edu/vub/)[1], or call 316-978-6742.

Wichita Prep assists high school students from limited-income backgrounds who are first generation university students with academic potential but who may have inadequate secondary school preparation. The Wichita-area high school students participate in an intensive six- to eight-week summer and nine-month academic year schedule to improve academic and social skills. Services include tutorial assistance; academic, career and personal counseling; postsecondary admission; and academic classes and workshops. The program serves 97 students each year. The residential program for students returning to high school assists them in the completion of secondary requirements and gives them exposure to college life. An eight-week residential program for students who will enroll in university classes in the fall provides them their first experience with college coursework. Visit the Wichita Prep website (http://wichita.edu/ubwp/)[1], or call 316-978-3019.

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)

Kansas Kids @ GEAR UP: Wichita State University hosts a seven-year statewide federal grant, Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP), 50 percent funded by the U.S. Department of Education, with foster students identified as priority students for receiving educational support. Students in state custody (JJAI KDOC) also qualify for this program. The overall goal of Kansas Kids @ GEAR UP is to increase the number of students graduating from middle and high school who are prepared for enrollment in postsecondary education, thereby enabling students to reach their full potential and consequently improve educational and social outcomes.

Kansas Kids @ GEAR UP works to expand existing efforts to enhance student achievement by partnering with DCF and privatized foster care agencies, the Kansas Board of Regents, the Kansas State Department of Education, TRIO programs, school districts, and other community and state agencies. Key components of Kansas Kids @ GEAR UP are academic development through homework assistance and workshops, mentoring and counseling (academic and career planning), postsecondary access education and providing scholarships for postsecondary education.

For more information, contact Kansas Kids @ GEAR UP at 316-978-7810 or visit the GEAR UP website (http://wichita.edu/gearup/)[1].

Haysville GEAR UP (HGU) expands the college-going culture in the Haysville school district. By using an empowerment model that recognizes the assets and needs of local communities, HGU looks to shift the district educational culture. HGU supports efforts to develop long-term, successful partnerships to support students in reaching college and providing them with the resources to succeed in college.

Haysville GEAR UP is a partnership grant administered by Wichita State University. HGU follows a cohort or whole-grade model, meaning that services are provided to all students in the participating grade level, rather than a selected group of students. This grant provides college access and success services to all cohort students starting in the 6th and 7th grade and will continue to provide services through the students' first year of postsecondary education.

Haysville GEAR UP implements a community-based partnership with the USD 261 district in order to accomplish goals and objectives. Through the partnership, HGU provides students with direct services including mentoring, tutoring and college visits. Class of 2024 and 2025 are directly impacted by the program.

For additional information, contact diana.carbajal@wichita.edu.

North Wichita GEAR UP (NWGU) is a college access program that is federally funded through the U.S. Department of Education and is designed to help students prepare for postsecondary education. North Wichita GEAR UP is an exclusive cohort program that serves current USD 259 students enrolled at Wichita North or Wichita West high schools. For more information, contact NWGU at 316-973-7936, or visit the NWGU website (http://wichita.edu/gearup/)[1].

South Wichita GEAR UP (SWGU) is a college access program that is federally funded through the U.S. Department of Education and is designed to help students prepare for postsecondary education. South Wichita GEAR UP is an exclusive cohort program that serves current USD 259 students enrolled at Wichita South or Wichita Southeast high schools. For more information, contact SWGU at 316-973-7934, or visit the SWGU website (http://wichita.edu/swgu/)[1].

Southeast Wichita GEAR UP (SEWGU) is a college access program that is federally funded through the U.S. Department of Education and is designed to help students prepare for postsecondary education. Southeast Wichita GEAR UP is an exclusive cohort program that

serves current USD 259 8th grade students enrolled at Coleman, Curtis, Jardine and Truesdell middle schools in Wichita. The program continues when students enroll at South and Southeast high schools. The project offers three early and intervention services: (1) Academic programming to improve reading and math performance, (2) Workshops to students and families on postsecondary education preparation, and (3) Professional development for teachers and staff. For more information, contact SEWGU at 316-973-3456, or visit the website.

West Wichita GEAR UP (WWGU) is a college access program that is federally funded through the U.S. Department of Education and is designed to help students prepare for postsecondary education. West Wichita GEAR UP is an exclusive cohort program that serves current USD 259 8th grade students enrolled at Hadley, Hamilton, Marshall, Mead and Pleasant Valley middle schools in Wichita. The program continues when students enroll at Wichita South or Wichita Southeast high schools. The project offers three early and intervention services: (1) Academic programming to improve reading and math performance, (2) Workshops to students and families on postsecondary education preparation, and (3) Professional development for teachers and staff. For more information, contact WWGU at 316-973-3456, or visit the website.

[1] Link opens new window.

Rhatigan Student Center

The Rhatigan Student Center (RSC) is the community center for Wichita State University. Through its facilities and services, the RSC serves students, faculty, staff, alumni and the Wichita community.

The RSC Food Court features Panda Express, Chick-Fil-A Express®, Pizza Hut Express®, Starbucks and Freddy's Frozen Custard & Steakburgers.

The Shocker Store, on the first floor of the RSC, stocks textbooks for rent or purchase, casual and professional Shocker apparel, art supplies, and Shocker souvenirs and gifts.

The RSC's Shocker Sports Grill and Lanes is for leisure use. Located on the lower level of the RSC, it includes billiards, bowling, poker tournaments, darts and fun foods and beverages. It's the perfect place for Shocker basketball watch parties, birthday parties and group events.

The RSC has meeting rooms of all sizes, as well as a 7,800 square foot ballroom, and all are made available for campus and noncampus group rentals at reasonable rates. The University Event Services office schedules the use of all facilities in the RSC as well as most university facilities for out-of-classroom use.

The RSC is home for the Student Government Association, Student Advocate, the Office of Diversity and Inclusion, Student Affairs, Student Involvement, the Shocker Card Center, the University Information Center (UIC), Commerce Bank, Lords and Ladys Hair Salon, and the Engraving Shop.

The nationally-ranked Shocker men's and women's bowling teams are also housed in the RSC.

For more information, visit the RSC online (http://wichita.edu/RSC/).[1]

[1] Link opens new window.

Sports and Recreation

Numerous sports and recreation programs exist at the university.

As an NCAA Division I member, Wichita State competes in the American Athletic Conference; WSU teams compete in men's and women's basketball, baseball, softball, men's and women's cross country, men's and women's indoor and outdoor track and field, men's and women's tennis, men's and women's golf and women's volleyball. The university fields teams in men's and women's bowling and men's and women's rowing as independent sports.

There is also an extensive campus recreation program. Club sports include eSports, spirit squad, dance squad, racquetball, soccer, men's volleyball, wheelchair athletics, ice hockey, aikido and more. Intramural sports include flag football, basketball, table tennis, badminton, soccer, softball, bowling, swimming, racquetball and more.

Students with a current Shocker ID card are admitted free to all varsity athletic events.

Sport Facilities

The 10,506-seat *Charles Koch Arena*, which is used for intercollegiate basketball and volleyball games; the 7,851-seat *Eck Stadium – Home of Tyler Field*, home to the Shocker baseball program; the *Sheldon Coleman Tennis Complex* with eight lighted courts, home to WSU's intercollegiate tennis program; the 1,000-seat *C. Howard Wilkins Softball Facility* for intercollegiate softball; and the 24,000-seat *Cessna Stadium* for intercollegiate track and field. Visit Shocker sports online (https://goshockers.com)[1].

[1] Link opens new window.

Wellness Programs

Campus Recreation

Providing exciting and fun sport, fitness and informal recreation opportunities for students, faculty and staff is Campus Recreation's top priority. Encouraging individuals to develop a lasting appreciation for recreational activity. Whether interested in playing an intramural sport, grabbing a quick workout or participating in an F45® fitness class Campus Recreations has something for everyone!

Heskett Center

The Heskett Center, home of Campus Recreation, is a 166,000-square-foot facility located in the middle of campus. It features everything needed to get in shape and relieve some stress, including:

- 5 convertible basketball/volleyball/badminton courts
- A 200-meter, six-lane indoor track (7 laps of lane 6 = 1 mile)
- Performance Studio; strength and conditioning program for sport club athletes, classes and events
- E-Sports Hub, with 20 computers, X-Box and VR
- Racquetball and squash courts
- A padded multipurpose room for Martial arts, stretching and TRX® workouts
- Two fitness studios featuring mirrored walls and hardwood floors
- A rowing studio with 16 ergs
- A state-of-the-art F45® studio
- A circuit room with Cybex resistance machines, a rowing erg and stretching mat
- Outdoor Kouri Parcourse with 8 different exercise pieces
- A 25-meter, eight-lane swimming pool and separate diving well with 350,000 gallons of crystal-clear climate controlled water
- Locker rooms featuring restrooms, lockers, showers and a dry sauna

- Heskett Outdoor Court Complex with four tennis courts, one futsal court and two half court basketball courts

Campus Recreation Programs

Programs encompassing all sorts of fantastic opportunities for fitness and fun and relaxation

- **Aquatics**
  The natatorium is the perfect place to get an impact free workout, have a little fun with friends or learn to swim. The consistently clean and controlled water/air temperature facility is available for lap swimming, diving, open recreation and more. All under the watchful eye of trained lifeguards. Splash away with friends while playing water basketball, water volleyball, jumping off the diving boards and a host of other fun activities.
- **Intramural Sports**
  Fuel some competitive fire by participating in intramural sports through Campus Recreation. Open to all students. Intramural sporting events range from single-day tournaments to multi-week leagues. Leagues: *Men, Women, Co-Rec, Fraternity, Sorority;*
  - Basketball, Billiards, Canoe Battleship, eSports, Futsal, Flag Football, Soccer, Softball, Volleyball and more.
- **Massage Therapy**
  Whether you're nursing sore muscles, rehabbing an injury or just needing to relieve some stress, our massage therapists can provide the healing touch you need to get back to feeling like yourself again - or better.
- **Outdoor Adventures**
  Join Campus Recreation as they get outdoors, away from campus and enjoy some fun. Affordable outdoor recreation and adventure opportunities allow students, faculty and staff to get involved! The trips offer a chance to get engaged at the level that fits your interests and abilities.
  - KC Royals games, Spring Break ski trip, Horseback Trail Riding, Whitewater Rafting, Sporting KC and more.
- **Shocker Fit**
  Shocker Fit is dedicated to providing safe, fun and effective FREE group fitness classes to Wichita State University students and Campus Recreation members. All of their instructors are trained and passionate about providing a variety of classes to challenge ALL fitness levels.
  - F45®, Glide Fit™, and Glide Fit™ Yoga
- **Shocker Rowing**
  A national player, taking on such perennial powers as Harvard, as well as local and regional competitors. Categorized as an independent varsity sport, the program comprises both experienced and novice rowers and is divided into men's and women's teams.
- **Special Events**
  We invite everyone to participate in a number of healthy lifestyle events and activities. These events are a collaborative effort between other Wichita State departments, as well as many Wichita area businesses.
  - Beach Party, Big Pink Volleyball, Canoe Battleship, Cardboard Regatta, F45® playoffs, Finals Frenzy, NIRSA Basketball Championship, 5k/1k Pumpkin Run, Puppy Paddle, RecFest, S'mores and Oars, Wellness Expo, and Wu Lifts
- **Sport Clubs**
  Organized and run by students, sport clubs at Wichita State offer a great way to develop skills while engaging in serious competition.
  - Basketball: Men's, Bass Fishing, Cricket, eSports, Judo, Paintball, Quidditch, Shooting Sports, Soccer: Men's and Women's, Table Tennis, Volleyball: Men's and Women's, Water Ski and Wakeboard, and WSU Student Officials Association

Campus Recreation is here to provide students with solutions to their fitness, leisure and recreational needs. To learn more about the programs and services provided check out the Campus Recreation webpage (http://wichita.edu/campusrec/)[1], Facebook (https://www.facebook.com/WichitaStateCampusRecreation/)[1], Twitter (https://twitter.com/WSU_CampusRec/)[1] or speak with a guest services assistant at 316-978-3082.

[1] Link opens new window.

Child Development Center

The WSU Child Development Center is located at 3026 East 21st Street North, at the NW corner of Hillside and 21st Street. It is a licensed child care center for children of WSU students, faculty, staff and alumni. A diverse staff of qualified lead teachers and WSU student assistants facilitates developmentally appropriate activities — art, language, science, math, music and literature — in a hands-on learning environment. The child care center is open Monday through Friday from 7:30 a.m. to 5:30 p.m. for children 6 weeks to 6 years old.

Enrollment is limited so it is recommended to get on the waiting list as soon as possible. There is a $70, nonrefundable fee to be added to the waitlist.

Students taking 6 credit hours or more receive a $50 discount. Students who receive financial aid and have an EFC of 0 receive a $100 discount.

For more information, call 316-978-3109, or visit the Child Development Center website (http://wichita.edu/childdevelopmentcenter/).[1]

[1] Link opens new window.

Counseling and Prevention Services

Counseling and Prevention Services (CAPS) provides mental health treatment, training and prevention to support WSU community wellness, while fostering optimal academic and personal growth.

- Offers low cost, confidential mental health services provided by licensed mental health providers to enrolled WSU students. CAPS will not turn students away for inability to pay.
- Call to schedule an appointment at 316-978-4SWC (4792). Please notify front office staff of any safety emergencies.
- Offers formal psychological, ADHD and learning disability assessments.
- Provides support to the university, departments, faculty and staff with behavior and mental health consultation and community referral assistance.
- Offers mental wellness programming and education to campus including #WSUWeSupportU positive mental health suspenders campaign and weekly meditation class, Keep Calm and Breathe On. Trainings to reduce stigma and educate regarding mental wellness, suicide prevention, self-care, healthy relationships and stress management, among other topics.
- Provides psychiatric medication services for students receiving on-going therapy through the Center in partnership with Student Health Services and a consulting psychiatrist.
- Located in the Steve Clark YMCA and Student Wellness Center. One convenient check-in for both health and mental health services.

Contact Counseling and Prevention Services in the Student Wellness Center, at 316-978-4792, or on the Counseling and Prevention Services website (https://wichita.edu/counselingtesting/)[1]. Office hours are Monday through Friday, 8 a.m. to 5 p.m.

[1] Link opens new window.

Student Health Services

Student Health Services (SHS) provides professional medical care and health education to enrolled students by licensed health care providers. General health care services are available, ranging from routine and preventive care to managing acute illnesses and minor injuries. SHS offers convenient onsite laboratory and medication services including vaccinations. Staff are available to provide health education on a variety of topics both in and out of the classroom setting. All services are confidential.

Features

- Outpatient care for acute and long-term illnesses and minor injuries
- No insurance is needed to be seen at Student Health
- Physical exams for class requirements or for general health
- Gynecological services including pap tests, birth control and pregnancy testing
- Medications — over the counter and prescriptions when ordered by our providers
- Lab services including onsite rapid testing, blood draws and testing for sexually transmitted disease
- Free STI testing events during fall and spring semesters
- Vaccinations
  - Routine and travel immunizations
  - Ongoing allergy shot regimens
  - Annual flu shots each fall
- myShockerHealth (https://studenthealth.wichita.edu)[1] — a secure web portal providing 24 hour access to specific student health services including making an appointment, requesting a medication refill, exchanging messages with providers, checking Student Health financial accounts and paying a bill. A link to the portal is found on the SHS website (http://wichita.edu/shs/)[1].

Appointments are encouraged and can be scheduled anytime through the student portal (http://studenthealth.wichita.edu)[1] or by calling 316-978-4SWC (4792).

For more information, visit the Student Health Services website (http://wichita.edu/shs/)[1].

Student Health is located in the Student Wellness Center in the Steven Clark YMCA. Hours are Monday - Friday 8 a.m. to 5 p.m.

[1] Link opens new window.

University Policies and Procedures

Notice of Nondiscrimination

Wichita State University (WSU) does not discriminate in its employment practices, or in its educational programs or activities on the basis of age (40 years or older), ancestry, color, disability, ethnicity, gender, gender expression, gender identity, genetic information, marital status, national origin, political affiliation, pregnancy, race, religion, sex, sexual orientation, or status as a veteran. WSU also prohibits retaliation against any person making a complaint of discrimination or against any person involved or participating in the investigation of any such allegation. Sexual misconduct, relationship violence and stalking are forms of sex discrimination and are prohibited under Title IX of the Education Amendments Act of 1972, other federal law and WSU policy. The following persons have been designated to handle inquiries regarding WSU's non-discrimination policies: the Institutional Equity and Compliance Director (Telephone: 316-978-3205), Title IX Coordinator (Telephone: 316-978-5177), or Equal Opportunity Coordinator (Telephone: 316-978-3186), each located at Wichita State University, 1845 Fairmount, Wichita, KS 67260, Human Resources Building.

Individuals who believe they have experienced discrimination or retaliation in violation of this policy should contact the following:

- **Christine Taylor, J.D., LL.M., Director Institutional Equity and Compliance**
  Wichita State University
  Human Resources Center, 110A
  1845 Fairmount, Wichita KS 67260-0138
  Telephone: 316-978-3205
  Email: christine.taylor@wichita.edu
- **Sara Zafar, J.D., Title IX Coordinator**
  Wichita State University
  Human Resources Center, 116
  1845 Fairmount, Wichita KS 67260-0138
  Telephone: 316-978-5177
  Email: sara.zafar@wichita.edu
- **Michael Irvin, J.D., MPA, Equal Opportunity Coordinator**
  Wichita State University
  Human Resources Center, 110
  1845 Fairmount, Wichita KS 67260-0138
  Telephone: 316-978-3186
  Email: michael.irvin@wichita.edu
- **Isabel Medina Keiser, Section 504/ADA Coordinator and Director of Disability Services**
  Wichita State University
  Office of Disability Services
  1845 Fairmount, Wichita KS 67260
  Telephone: 316-978-6970
  Email: isabel.medinakeiser@wichita.edu
- Kansas Human Rights Commission **(**http://www.khrc.net/**)**[1]
  900 SW Jackson, Suite 568-South
  Landon Office Building
  Topeka, KS 66612-2818
  Telephone: 785-296-3206
  Fax: 785-296-0589
  Email: khrc@ink.org
- Equal Employment Opportunity Commission **(**https://www1.eeoc.gov/field/kansascity/**)**[1]
  Gateway Tower II
  400 State Ave., Suite 905
  Kansas City, KS 66101
  Telephone: 800-669-4000
  Fax: 913-551-6957
  TTY: 800-669-6820
- **Office for Civil Rights, Kansas Office**
  U.S Department of Education
  Office for Civil Rights
  One Petticoat Lane
  1010 Walnut St, Suite 320
  Kansas City, MO 64106
  Telephone: 816-268-0550
  Fax: 816-268-0599; TDD: 800-877-8339
  Email: OCR.KansasCity@ed.gov
- **Office for Civil Rights, National Headquarters**
  U.S Department of Education
  Office for Civil Rights
  Lyndon Baines Johnson Dept. of Education Building
  400 Maryland Avenue, SW
  Washington, DC 20202-1100
  Telephone: 800-421-3481
  Fax: 202-453-6012; TDD: 800-877-8339
  Email: OCR@ed.gov

[1] Link opens new window.

Release of Student Information Policy (Privacy Law)

The Family Educational Rights and Privacy Act of 1974 (FERPA), as amended, is a federal law that sets forth requirements pertaining to the disclosure of, and access to, education records maintained by Wichita State University.

Wichita State University accords all rights under the law to students. Those rights are:

1. The right to inspect and review the student's education records;
2. The right to request amendment of the student's education records to ensure that they are not inaccurate, misleading or otherwise in violation of the student's privacy or other rights;
3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent; and
4. The right to file with the U.S. Department of Education a complaint concerning alleged failures by Wichita State University to comply with the requirements of FERPA.

No one outside the institution shall have access to, nor will the institution disclose any information from, students' education records without the prior written consent of the student **with the exception of** disclosure to:

1. Personnel within the institution who have a legitimate educational interest,
2. Persons or organizations providing students financial aid,
3. Accrediting agencies carrying out an accreditation function,
4. Persons in compliance with a judicial order,
5. Persons in an emergency in order to protect the health or safety of the student or other persons, or
6. Other persons or entities to whom disclosure is permitted under FERPA.

Upon request, the institution may also disclose, without the student's consent, education records to officials of another school in which the student seeks or intends to enroll, or is enrolled.

Within the Wichita State community, only those members, individually or collectively, acting in the students' "legitimate educational interests" are allowed access to student education records. These members include personnel in the offices of admissions, registrar, financial operations, computing center, dean of students, financial aid, career services, cooperative education, planning, testing, library, college deans, academic advisors, and other administrative and academic personnel within the limitation of their need to know. "Legitimate educational interests" means:

1. The information or records requested is/are relevant and necessary to the accomplishment of some task or determination; and
2. The task or determination is an employment responsibility for the inquirer or is a properly assigned subject matter for the inquirer's employment responsibility.

A Social Security number and student status data may be provided to other state agencies for use in detection of fraudulent or illegal claims against state monies.

Family Educational Rights and Privacy Act (FERPA)

1. ***Definitions***
   a. ***Attendance*:** Attendance at Wichita State University is considered to begin on the announced first day of classes for the initial semester (fall, spring or summer) for which a person is enrolled in one or more classes, and shall include any person "attending" on campus or via any format (e.g., online, face-to-face, hybrid, etc.) as prescribed by the class requirements. Noncredit-bearing courses, workshops, seminars, etc., developed for and targeted to external audiences or consisting solely of minor children shall not be considered in attendance for the purposes of this policy.
   b. ***Consent:*** Consent shall be in writing and shall be signed and dated by the student giving consent. It shall include:
      i. Specification of records to be released;
      ii. Purposes for such release; and
      iii. Parties or class of parties to whom such records may be released.
   c. ***Directory Information:*** FERPA defines directory information as: "Information contained in an education record of a student which would not generally be considered harmful or an invasion of privacy if disclosed." Under FERPA, such information includes, but is not limited to, the student's name, address, telephone listing, electronic mail address, photograph, age in years, place of birth, major field of study, dates of attendance, grade level, enrollment status, participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards received, and the most recent educational agency or institution attended.
   d. ***Disclosure:*** Permitting access to, or the release, transfer, or other communication of, the education records of the student or the personally identifiable information contained therein, orally, or in writing, or by electronic means, or by any other means to any party.
   e. ***Education Records:*** Those records that are directly related to a student and that are maintained by the university or by a party acting for the university. A record means any information recorded in any way, including, but not limited to, handwriting, print, tape, film, microfilm, microfiche, computerized and/or digitized storage. Records described in items i-vi below are excluded from the category of "education records." Therefore, the law does not guarantee the right of student access to the following:
      i. **Sole possession records**: Records that are kept in the sole possession of the maker, are used only as a personal memory aid, and are not accessible or revealed to any other person except a temporary substitute for the maker of the record.
      ii. **Employment records**: Records related solely to the employment of a student by the institution, provided the student is not "employed as a result of his or her status as a student." Records on a work study or GTA/GRA student are covered by FERPA.
      iii. **Medical and mental health records used only for the treatment of the student**: Such records may be personally reviewed by a physician or other appropriate professional of the student's choice and with the student's written consent.
      iv. **University law enforcement records**: Records of the WSU Police Department maintained solely for law enforcement purposes, which are maintained separately, and which are not disclosed to individuals other than law enforcement officials sharing the same territorial jurisdiction.
      v. **Alumni records**: Records that contain only information relating to a person after that person is no longer a student at the university. An example would be information collected by the university or the WSU Alumni Association pertaining to the accomplishments of its alumni.
      vi. **Peer graded papers and exams prior to the grade being recorded in the instructor's grade book**.
   f. ***Legitimate Educational Interests:*** The interests of university personnel who have a demonstrably legitimate need to review records in order to fulfill their official professional responsibilities. Such responsibilities must involve the university in its primary educational and scholarly functions and/or secondary administrative functions of maintaining property, disbursing funds, keeping records, providing living accommodations and other services, sponsoring activities, and protecting the health and safety of persons or property in the university community. If a question arises concerning the legitimacy of a request to review records, such question shall be referred to the registrar and/or the general counsel prior to release of the records.
   g. ***Parent:*** Includes a parent, guardian, or individual acting as a parent of a student in the absence of a parent or guardian.
   h. ***Personally Identifiable Information:*** Includes the name of the student; the student's parent(s) or other family member(s); the address of the student or student's family; personal identifiers such as a social security number, student number, or biometric record; or other indirect identifiers such as the student's date of birth, place of birth, and mother's maiden name; or other information that, alone or in combination, is linked or is linkable to a specific student that would allow a reasonable person in the school community, who does not have personal knowledge of the relevant circumstances, to identify the student with reasonable certainty; or information requested by a person who WSU reasonably believes knows the identity of the student to whom the education record relates.
   i. ***School Official:*** Includes a teacher, school principal, president, chancellor, board member, trustee, registrar, counselor, admissions officer, attorney, accountant, human resources professional, information systems specialist, and support or clerical personnel. A contractor, consultant, volunteer, or other party to whom a school or institution has outsourced institutional services or functions may also be considered a "school official" provided that they are performing an

institutional service or function for which the agency would otherwise use employees and is under the direct control of the agency or institution with respect to the use and maintenance of education records.

j. ***Student:*** Anyone who is or has been enrolled at Wichita State University, with the following exception: A person who has applied for admission to, but has never been in attendance at a component unit of the university (such as the various schools and colleges of the university), even if that individual is or has been in attendance at another component unit of the university, is not considered to be a student with respect to the component to which an application for admission has been made. Enrolled is defined as registered for any course in any format (online, face-to-face, hybrid) on the first day of a regular (full) term — spring, summer or fall.

k. ***Unit Custodian of Student Records:*** The head of each academic or administrative unit that is responsible for the education records within the unit (unless otherwise defined elsewhere in this policy).

2. ***Student Access to Education Records***

a. A student has the right and shall be accorded the opportunity to inspect, review, and/or receive copies of his or her educational record, except as provided for below. The university must comply with the student's request within a reasonable period of time, not to exceed 45 days after the request.

b. The student has the right to a reasonable request for explanation of the records and to copies of the records where necessary to provide full inspection and review. Such copies will be provided at the student's request and expense; however, the charge to the student for any such records may not exceed $.25 per page. The university may not charge a fee to search for or retrieve a record. If any question arises as to the identity of the requesting student, the student shall be asked to provide his or her university ID card and/or other positive identification.

c. The university is not required to afford inspection and review of the following records:

i. Financial records of the student's parents submitted as part of the financial aid process;

ii. Confidential letters and statements of recommendation that were placed in the student's education records prior to January 1, 1975, if such letters were submitted with an understanding of confidentiality, and are used only for the purpose for which they were specifically intended;

iii. Confidential letters and statements of recommendation received after January 1, 1975, for which the student has signed a waiver of the right to access and which pertain to:

1. Admission to this or any other educational institution or agency;
2. Application for employment; or
3. Receipt of an honor or honorary recognition so long as these letters are used solely for the purpose(s) for which they were specifically intended.

iv. Records connected with an application to attend Wichita State University if that application was denied.

v. Those records which are excluded from the FERPA definition of education records.

d. If an education record contains information about more than one student, the student may inspect only the information about himself or herself.

3. ***Waiver of Rights***

The university may request, but not require, students to waive rights under this policy. All waivers must be in writing and signed by the student. Applicants for admission to the university and eligible students may waive rights to review confidential letters of recommendation only if:

a. The applicant or student, upon request, is notified of the names of all persons providing letters;

b. The letters are used only for the purpose for which they were originally intended;

c. The waiver is not required as a condition of admission or for any other service or benefit of the university.

All waivers under this paragraph must be executed by the individual, regardless of age, rather than by the parent or legal guardian of the individual. All waivers must be in writing and signed by the student. The student may revoke any waiver in writing, the revocation to apply only to documents received or entered into the record after the date of execution of the revocation.

4. ***Disclosure of "Personally Identifiable" and "Directory Information"***

The university shall obtain the written consent of the student before disclosing personally identifiable information from education records, other than directory information, except as otherwise provided in this policy.

The university may, without the consent of the student, disclose *directory information*. If a student wishes to have such information withheld, he or she must notify the Office of the Registrar in writing, as described previously. If a student wishes to prevent the inclusion of such information in the online student directory, he or she must notify the Office of the Registrar.

The university may disclose personally identifiable information from a student's education record(s) without the consent of the student if the disclosure is made to:

a. School officials within the institution determined to have a legitimate educational interest(s).

b. Authorized persons to comply with a judicial order or lawfully issued subpoena, provided the university makes a reasonable effort to notify the student in advance of compliance; except the university will not disclose to the student information about a grand jury subpoena, a subpoena issued for a law enforcement purpose when notice is prohibited, or a court order obtained by the United States Attorney General or Assistant Attorney General in investigations or prosecutions of certain criminal offenses or an act of terrorism, in accordance with the law or regulations, certain officials of the U.S. Department of Education, the Comptroller General and state and local educational authorities in connection with an audit or evaluation of federal or state supported education programs, or for the enforcement of or compliance with Federal legal requirements that relate to those programs.

c. Financial aid personnel in conjunction with an application for or receipt of financial assistance, provided that the disclosure is needed:

i. To determine the eligibility of the student for financial aid;

ii. To determine the amount of financial aid;

iii. To determine the conditions for the financial aid; or

iv. To enforce the terms or conditions of the financial aid.

d. Appropriate parties, including parents, in connection with an emergency, if knowledge of the information is reasonably considered to be necessary to protect the health or safety of the student or other individuals. Disclosures for this purpose shall take into account the totality of the circumstances pertaining to the threat to the health or safety of a student or

other individuals. If the university determines that there is an articulable and significant threat to the health or safety of a student or other individuals, it may disclose information from education records to any person whose knowledge of the information is reasonably considered necessary to protect the health or safety of the student or other individuals.

e. A parent regarding the student's violation of any federal, state or local law, or of any rule or policy of the university, governing the use or possession of alcohol or a controlled substance if the institution determines that the student has committed a disciplinary violation with respect to that use or possession and the student is under the age of 21 at the time of disclosure to the parent.

f. Parent(s) or legal guardian(s) of dependent students who provide a written request for grades to the university registrar pursuant to Board of Regents policy. Dependency, for this purpose, is defined by the Internal Revenue Code of 1954, Section 152. The student will be notified in writing and/or electronically of any disclosure of grades made to the student's parent(s) or legal guardian(s).

g. Another institution of postsecondary education where the student seeks or intends to enroll, or is enrolled, so long as the disclosure is for purposes related to the student's enrollment or transfer.

h. Authorized representatives of federal, state and local educational authorities, to organizations conducting studies for or on behalf of educational agencies or institutions, to accrediting organizations, to comply with judicial orders or lawfully issued subpoenas, to victims of a crime of violence or nonforcible sex offense, in connection with university disciplinary proceedings, or if disclosure concerns sex offenders and other individuals required to register under federal law.

i. The university student health service is required to report to the Kansas Department of Health the names of students who have certain communicable diseases such as hepatitis, tuberculosis, and venereal disease. The health service is also required to report to local law enforcement officials the name of any student who is wounded with a deadly weapon.

5. ***Notice to Third Parties***
   The university must inform the parties to whom personally identifiable information is given that they are not permitted to disclose that information to others without the written consent of the student and that the information is to be used only for the purpose(s) intended.

6. ***Providing Copies of Disclosed Records***
   When the unit custodian discloses personally identifiable information from the education record of a student, the unit custodian shall, at the student's request and expense, provide a copy of the disclosed record to the student, unless otherwise specified by this policy.

7. ***Destruction of Records***
   Education records shall be maintained consistent with university policy on the retention of records. No education record, however, may be destroyed if there is an outstanding request to inspect and review the record. Also, the record of access to the education record and any explanations which are a part of the record must be maintained for as long as the education record to which it pertains is maintained.

8. ***Maintaining Records of Requests and Disclosures***
   The unit custodian shall maintain a record of requests and disclosures of personally identifiable information from a student's education record. The record shall include, whether requests are granted or not, the name(s) of the person(s) who requested the information and their legitimate interests in the information. Records of requests and disclosures will not be maintained:
   a. For requests made by the student;
   b. For requests for which the student has given written consent;
   c. For requests made by school officials with legitimate educational interests;
   d. For requests for directory information;
   e. For disclosures in compliance with certain judicial orders or lawfully issued subpoenas, after a reasonable attempt has been made to notify the eligible student or parent.

   The record of requests and disclosures may be inspected by the student, by school officials responsible for the custody of the records, and by federal and state officials who have been given permission to access records by the registrar.

9. ***Students' Right to Challenge Information Contained in Education Records***
   a. The student has the right, upon reasonable request, for a brief explanation and interpretation of the record in question from the respective unit custodian.
   b. The unit custodian of the challenged education record, after reviewing the record with the student, may settle the dispute informally with the student with regard to the deletion or modification of the education record. The unit custodian shall make his or her decision within a reasonable amount of time and shall notify the student of the decision.
   c. In the event the unit custodian disapproves the student's request to delete or modify the record in question, the student shall be notified by the unit custodian, in writing, of the decision and of the student's right to a formal hearing upon the request.
      i. All requests for formal hearings by the student shall be directed to the registrar, and shall contain a plain and concise written statement of the specific facts constituting the student's claim.
      ii. The hearings shall be conducted by a university staff member (hearing officer) who does not have a direct interest in the outcome of the challenge and who shall be appointed by the registrar. The hearing shall be held within a reasonable time of receipt of the student's request and the student shall be notified reasonably in advance by the hearing officer of the date, place, and time of the hearing.
      iii. At the hearing the student shall be afforded a full and fair opportunity to present evidence relevant to the claim and may, at his or her expense, receive assistance or be represented by any individuals of choice.
      iv. Based solely on the evidence presented at the hearing, and within ten (10) working days of the hearing, the hearing officer shall make a written recommendation to the registrar together with written findings of fact concerning the student's request. Within an additional fourteen (14) working days of receipt of the hearing officer's report, the registrar shall notify the student in writing of the decision. The decision must include a summary of the evidence and the reasons for the decision.
   d. In the event the decision of the registrar is adverse to the student's request, the student shall be notified of the opportunity to place with the education record a summary statement commenting upon the information in the records and/or setting forth any reason for disagreeing with the decision. If the questioned document is released to a third person, the student's summary statement shall accompany the release of any such

information. The summary information shall be maintained for as long as the contested record is maintained.

e. If a student challenge to the content of a given record is successful, the university shall amend the education record accordingly and so inform the student. Upon the student's specific written request to the registrar, the university shall make a reasonable effort to contact student-designated third persons who have received copies of the previous record to inform them of the change which has been made.

10. A student may challenge the content of an education record on the grounds that the record is inaccurate, misleading or otherwise in violation of the privacy or other rights of the student. No hearing under this policy shall be granted for challenging the underlying basis for the grade. However, the accuracy of its recording could be challenged.
    The following procedure for challenging the content of an education record shall apply:
11. ***Complaint Procedure***
    If a student believes that the university is not in compliance with FERPA, the student should first contact the office involved and/or the Office of the Registrar.
    If a student wishes to file a complaint with the federal government concerning the university's failure to comply with FERPA, he or she must submit the complaint, in writing, within 180 days of an alleged violation of FERPA to the Family Policy Compliance Office (FPCO), U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202. The FPCO office will notify the student when the complaint has been received. The FPCO office will investigate the complaint, and may require further information of its findings and basis for such findings. In the event the university is found not to be in compliance, it will be afforded the necessary time to comply. If it does not then comply, the matter will be sent to a review board for a hearing. For information concerning this hearing procedure, see 34 C.F.R. Sections 99.64 through 99.67.

Public Notice Designating "Directory Information"

The Family Educational Rights and Privacy Act (FERPA) of 1974, as amended, designates certain information related to a student as "directory information." FERPA gives the university the right to disclose such information to anyone inquiring without having to ask a student for permission, unless the student specifically requests in writing that *all* such information not be made public without written consent, except by the National Student Clearinghouse to loan guarantors.

Wichita State University hereby designates the following student information as public or directory information.

Directory information includes the student's name, address, telephone listing, electronic mail address, photograph, age in years, place of birth, major field of study, dates of attendance, grade level, enrollment status, participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards received, and the most recent educational agency or institution attended.

The name(s) and address(es) of the student's parent(s) or guardian(s) may be disclosed when used for an official university news release about the student's receipt of degrees or awards or about participation in officially recognized activities or sports. Parent name, address, telephone number and email address is designated as directory information for the limited purpose of disclosure to the Wichita State University Foundation, Inc. to support programs and activities of the institution and the WSU Foundation.

Currently enrolled students may withhold disclosure of directory information (on an all or none basis) to non-institutional persons or organizations. If a student wishes to withhold the disclosure of all directory information items, she or he may obtain the request form from the Office of the Registrar, 117 Jardine Hall, or call 316-978-3090. Return the completed form, along with a *readable* copy of a government-issued photo ID (e.g., a driver's license) to the Office of the Registrar. The request form will be processed within one business day of receipt.

Consider carefully the consequences of any decision to withhold directory information, as any future requests for such information will be refused. Examples of, but not limited to, potential impacts are: no acknowledgement of a student's attendance at WSU to potential employers, no verification of degrees to requestors, no printing of the student's name in the commencement program and no press releases pertaining to graduation and/or honors. The institution will honor a request to hold directory information but does not assume responsibility to contact the student for subsequent permission to release it. Regardless of the effect upon the student, WSU assumes no liability for honoring instructions that such information be withheld.

If a student has previously submitted a nondisclosure request, but now wishes to disclose the information (i.e., release the nondisclosure hold), please contact the Office of the Registrar.

Additional Policies and Procedures

Injury or Accident

The state of Kansas and Wichita State University do not insure against, and are not responsible for, accidents or injury to students which may occur during university-sponsored activities on or off campus. The university will make every reasonable attempt to advise students concerning potential danger of accident or injury. Students are expected to act responsibly by taking necessary precautions to prevent accidents. Students also are advised to protect themselves from the financial burden of accident or injury through a personal insurance policy.

Offender Registry

Law enforcement agency information concerning registered sex offenders who are employed by or who are currently enrolled at Wichita State University may be obtained from the university police department. This information is made available to the campus community pursuant to the requirements of the Campus Sex Crimes Prevention Act. Further information on any registered offender can be obtained from the Kansas Bureau of Investigation or the sheriff's office in the registrant's county of registration.

Safety

Campus safety is a priority at Wichita State. The university campus is well lighted and parking lots are regularly patrolled by WSU police officers. WSU police and parking services personnel are available to provide safety escorts for students in the evenings. In case of emergencies, phones (designated by a blue light at the top of the pole) with direct access to the university police station are strategically placed around the campus.

More information about campus safety including links to emergency news and the option to opt in to Shocker*Alert* System emergency notifications can be found at the campus safety website (http://wichita.edu/safety/)[1].

The annual security and fire report (http://wichita.edu/annualsecurityreport/)[1] is available online. Review safety and crime prevention information in addition to daily crime logs and crime statistics at the police website (http://wichita.edu/police/)[1].

[1] Link opens new window.

Care Team

Wichita State cares about the well-being of all members of the campus community. The Care Team assesses student concerns and intervenes in a manner intended to promote the success and safety of individual students as well as that of the entire campus community. To submit a concern or learn more about the Care Team visit their website (http://wichita.edu/CARE/)[1].

[1] Link opens new window.

Title IX

Title IX of the Educational Amendments of 1972 prohibits discrimination based on sex in any educational institution that receives federal funding. Wichita State University does not tolerate sex discrimination of any kind including: sexual misconduct, sexual harassment, relationship/sexual violence and stalking. These incidents may interfere with or limit an individual's ability to benefit from or participate in the university's educational programs or activities. Students are asked to immediately report incidents to the University Police Department, 316-978-3450, or directly to the Title IX coordinator, 316-978-5177. Students may also report incidents to an instructor, faculty or staff member, who are required by law to notify the Title IX coordinator. If a student wishes to keep the information confidential, the student may speak with staff members of the Counseling and Prevention Center, 316-978-3440, or Student Health Services, 316-978-3620. For more information, visit the Institutional Equity and Compliance website (https://wichita.edu/OIEC/).[1]

[1] Link opens a new window.

Tobacco-Free Campus

Wichita State University is committed to provide a tobacco-free environment for the health, well-being and safety of university students, employees and visitors; accordingly, Wichita State University is a tobacco-free campus.

This policy includes buildings and parking lots and covers traditional as well as other types of tobacco use such as vaping and electronic cigarettes or devices.

University Weapons Policy

For the full text of the policy, please refer to Wichita State University Policy 11.19 (http://wichita.edu/policiesprocedures/)[1].

It is the policy of the Kansas Board of Regents, to the extent permitted by law, to allow concealed carry of handguns and prohibit possession of other weapons and open carry of firearms on the university campus.

Beginning July 1, 2017, any individual who is 21 years of age or older and who is lawfully eligible to carry a concealed handgun in Kansas can do so on the Wichita State University campus except in buildings and public areas of buildings for which adequate security measures are provided, as restricted by policy, or as otherwise prohibited by law.

There are no university buildings that have been designated as gun-free with permanent adequate security measures. The university may designate a specific location as temporarily gun-free. Appropriate notice will be given whenever this temporary designation is made.

Each individual who lawfully possesses a handgun on campus shall be wholly and solely responsible for carrying, storing and using that handgun in a safe manner and in accordance with law and policy. Nothing in this policy shall be interpreted to require individuals who lawfully possess a handgun to use it in defense of others.

Possession of weapons, other than concealed handguns, anywhere on any campus location shall be prohibited. This includes the open carry of any weapon, including a handgun or handguns. Every entrance to each building and facility at any campus location shall be conspicuously posted with appropriate signs indicating that openly carrying a weapon into that building or facility is prohibited. Additional signs may be posted as appropriate.

[1] Link opens new window.

Residency Defined

The residence of students, for tuition and fee purposes, is determined by acts of the Kansas legislature, rather than university policy.[1] The legislature has also granted the Kansas Board of Regents certain authority to adopt regulations and guidelines for the determination of residence, within the broader state law. The law and regulations are *different* than those that govern residency for any other purpose.

According to Kansas law and regulations, a resident, for tuition purposes, is someone who has resided (been physically present) in Kansas for 12 consecutive months prior to enrollment/re-enrollment as a U.S. citizen or permanent resident, and who has *demonstrated*, during those 12 months, the intent to make Kansas his or her permanent home. Intent is evaluated in light of:

1. The person's statement about why she or he came to Kansas in the first place, and
2. What the person has done since coming to Kansas (objective, verifiable facts).

Many factors are considered when evaluating intent. The Kansas Board of Regents' guidelines list nonconclusive factors or circumstances that could help support a claim for resident classification. The guidelines also specify a qualifier: "Any such factor, to be given weight, must be of at least one year's duration prior to enrollment/re-enrollment."

Residents of Kansas (for fee purposes) who leave the state retain their residency as long as they return to Kansas permanently within 60 months of departure.

A person who comes to Kansas to go to school, and who enrolls full time every semester after arriving, may not be able to demonstrate the intent to remain in Kansas permanently, as long as that pattern continues. In contrast, certain exceptions are authorized by state law to pay the equivalent of resident fees:

1. Regular employees of the university and their spouses and dependent children (does not apply to student assistants and graduate assistants);
2. Persons who are current military including members of the Kansas Air or Army National Guard, and their spouses and dependent children;
3. Veterans who live in Kansas and are eligible for post-9/11 benefits, or the eligible spouse or dependent child using the veteran's benefits;
4. Persons who graduated from a four-year program at an accredited Kansas high school within six months of their enrollment at a state

university, and who were Kansas residents for fee purposes at, or within 12 months of, high school graduation;

5. Dependent students as long as at least one parent is a Kansas resident for fee purposes;
6. Persons who were recruited to, or transferred to Kansas within the last 12 months for a full-time job, and their spouses and dependent children; and
7. Any person who is attending or has attended Haskell Indian Nations University and who is enrolled as an American Indian on a tribal membership roll maintained by the Bureau of Indian Affairs of the U.S. Dept. of the Interior.

The details about each of these exceptions are critical and are not all on this page. Several require certification of appropriate information on a special form. None of them is automatic. Contact the registrar's office for more information.

A person who is residing in Kansas and would not otherwise be considered a resident of Kansas *will* be considered to be a resident for tuition purposes *if* she or he has attended three years of high school in Kansas and graduated from an accredited Kansas high school or earned a Kansas GED *and* she or he is not on a student visa or eligible to pay resident rates in another state. This can apply to undocumented aliens and former Kansans who have not been back in Kansas long enough to re-establish residency. This law does not apply to an eligible person's spouse or dependents. People who have been admitted as nonresidents and think they are eligible to be considered residents because of this provision should contact the registrar's office. The three years of high school in Kansas (includes 9th grade), and Kansas high school graduation, must be documented. It doesn't matter when the person attended or graduated. Aliens with nonpermanent resident status must document that. Aliens must sign an affidavit indicating that they will apply for permanent residency as soon as they are eligible. All students must sign an affidavit indicating that they are not eligible to pay resident rates in any other state.

Students applying for residency should contact the Office of the Registrar, 102 Jardine Hall. There are many details about establishing Kansas residency for tuition purposes that will be explained upon further inquiry.

Residency of new students enrolling for the first time at Wichita State is determined by the appropriate (undergraduate, graduate or international) admissions office according to the above law/regulations. Such students should address questions concerning residency to the appropriate admissions office.

When a continuing student, who was initially classified as a nonresident, thinks he or she meets these residency requirements, then he or she must apply for residency using a form available from the registrar's office. Lower fees do not necessarily mean that someone has been classified as a resident — there are no nonresident fees, for example, for certain badge or market-based tuition courses.

The responsibility of registering under proper residence is placed on the student. If there is any possible question of residence classification, it is the duty of a student when registering and paying fees to raise the question with the registrar's office. Students who disagree with their residency classification are entitled to an appeal, provided they file a written appeal with the registrar within 30 days from enrollment and pay the fees as originally assessed. A standard appeal form is provided by the registrar's office. If notice of the appeal is not given in writing within 30 days, the classification or reclassification by the registrar becomes final. Appeals are reviewed and decided by the university committee on residency, and its decision is final. The committee is not empowered to make exceptions, just to apply the law and regulations to individual circumstances.

Students must report their correct address at the time of registration each semester. The address given must be the student's actual place of residence, because it will be the one to which all correspondence from Wichita State is sent. Any change in residence must be updated via the address change link in the *my*WSU portal immediately. More complete information on the residence law and regulations can be obtained from the registrar's office.

[1] The information in this section is a summary of Kansas law. Kansas law and Kansas regulations are controlling in case of conflict.

General Education Program

Well-Rounded Learning

Wichita State strives to offer the most complete college experience possible to produce well-rounded, successful Shocker graduates. Through general education courses, students explore subjects outside of their major, expanding their knowledge, perspective and skills and making a positive impact on their career and life.

Benefits of general education courses:

- *Improved critical thinking skills*
- *Better communication, written and spoken*
- *Increased analytical reasoning and problem solving*
- *An acquired knowledge of natural and social science, the arts and humanities*

Improve skills by taking courses that include diversity content, study abroad experiences, service learning and experience-based learning.

General Education Course Requirements

The 36-credit-hour general education program at WSU consists of the following kinds of courses.

Note: The BAA in media arts requires 30 credit hours of general education courses. See Additional Requirements section for details.

Foundation Courses

Complete four courses within the first 48 credit hours of enrollment with a grade of *C-* or better. *Foundation courses cover the fundamental skills needed throughout college and should be taken at the very beginning of a student's studies.*

- ENGL 100 or ENGL 101
- COMM 111
- ENGL 102
- MATH 111, MATH 112 or MATH 131[1]

Divisional Courses

Complete one course from each of the following areas (at least 12 credit hours): fine arts, humanities, social/behavioral science, mathematics and natural sciences.

Fine Arts	Humanities	Social/Behavioral Sciences	Mathematics and Natural Sciences
Subject Area	**Subject Area**	**Subject Area**	**Subject Area**
Art History	Communication[2]	Anthropology	Anthropology
Dance	English[2]	Criminal Justice	Biological Sciences
Musicology/Composition	History	Economics	Chemistry
Studio Arts	Modern and Classical Languages	Entrepreneurship	Computer Science
Theatre	Linguistics	Ethnic Studies	Geology
	Philosophy	Geography	Mathematics/Statistics[2]
	Religion	Political Science	Physics
	Women's Studies	Psychology	Public Health
		Sociology	
		Social Work	

Additional Courses

Complete four courses (at least 12 credit hours) from any approved general education course. Courses must come from at least two of the divisions. One course must be a first-year seminar, if required.

At least 9 credit hours of the 36-credit-hour general education coursework must be numbered 300 or above.

One course in the major can count toward general education.

1 MATH 111 or any math course that requires MATH 111 or MATH 112 as a prerequisite. MATH 131 does not fulfill the prerequisite for any further math course. MATH 131 does not meet degree requirements in all colleges.

2 Excluding foundation courses.

— Visit http://wichita.edu/generaleducation (http://wichita.edu/generaleducation/) —

Our Advice? Go See an Advisor

The best way to stay on course toward graduation is to meet with an advisor each semester before registering for classes. Advisors will help in selecting and sequencing classes that meet particular degree requirements. **To schedule a meeting, contact the advising office in the college of your major.**

- **Business** - 316-978-3203
- **Applied Studies** - 316-978-3300
- **Engineering** - 316-978-3400
- **Health Professions** - 316-978-3304
- **Honors** - 316-978-3375
- **Liberal Arts & Sciences** - 316-978-3700
- **Fine Arts** - 316-978-6634

Additional College/School General Education Requirements

- **Applied Studies** requires PSY 111. Teacher education students must take STAT 370 (Secondary Math majors must take MATH 242 instead of STAT 370). MATH 111 is a prerequisite for STAT 370.
- **Business** requires MATH 144 or MATH 242 and ECON 201 and ECON 202. MATH 111 or MATH 112 meets the prerequisite for MATH 144. Philosophy requirements: PHIL 105 and PHIL 306.
- **Engineering** requires PHIL 385 for engineering students or PHIL 354 for students in computer engineering and computer science.
- **College of Fine Arts** students majoring in art education, music education and special education music are required to take PSY 111 and STAT 370 (or a higher level MATH course).
  - **Fine Arts Exceptions.** The Bachelor of Applied Arts (BAA) in media arts requires 30 credit hours of general education courses. In addition to the foundation courses, students in the BAA in media arts take one course each from humanities, social/behavioral science, and mathematics/natural sciences with an additional three courses selected from at least two divisions. Of the 30 general education credit hours, at least 6 credit hours must be numbered 300 or above. Fine arts courses do not fulfill general education requirements for the BAA in media arts.
- **Health Professions** requirements are listed by major. General education requirements vary.
- **Honors College** requires the following:
  - Honors students fulfill general education requirements set by their major college. Honors students have dual advising: They should meet first with their major college advisor and then as needed with an Honors advisor to choose Honors courses that meet general education requirements.
  - Students working toward the Emory Lindquist Honors Scholar distinction or the Honors Baccalaureate degree are required to fulfill any 3 of their general education credits with an HNRS seminar.
  - Honors Baccalaureate students meet with an honors advisor to select additional courses to fulfill the 36-credit-hour general education program.
- **Liberal Arts and Sciences** requires the following:
  - English or foreign language literature (humanities)
  - HIST 131, HIST 132 (humanities) or POLS 121 (social science)
  - Three natural science courses: At least one biology course and one physical sciences course; one must have a laboratory experience (does not include mathematics, personal computing, statistics or computer science)
  - Foreign language in all BA degrees and the BS degree in criminal justice
  - Undecided students meet with an academic advisor in the Liberal Arts and Sciences Advising Center. Students who have not declared a major may want to take a variety of courses to help clarify interests, identify possible majors and remain academically flexible.

Transfer Students with Associate Degrees

Community College Transfers

- A student transferring to WSU having earned an AA or AS degree from a Kansas public community college will be considered to have satisfied WSU's general education curriculum provided that he or she successfully completes at WSU (with a grade of *C*- or better) two general education courses numbered 300 or above. The two courses must be in two separate divisions or subject areas. Students must also complete the foundation skills courses of ENGL 101 and ENGL 102, COMM 111, and MATH 111 or equivalent.

RN-to-BSN and Dental Hygiene Degree Completion Students

- A student enrolled in WSU's RN-to-BSN degree completion program having earned an associate degree in nursing will be considered to have satisfied WSU's general education curriculum provided that he or she successfully completes (with a grade of *C*- or better) two general education courses numbered 300 or above taken at WSU.
- A student enrolled in WSU's dental hygiene degree completion program having earned an associate degree in dental hygiene will be considered to have satisfied WSU's general education curriculum provided that he or she successfully completes (with a grade of *C*- or better) two general education courses numbered 300 or above taken at WSU.

These policies are effective for any student graduating from WSU fall 2014 or beyond.

General Education Courses

General education courses must be at least 3 credit hours and from the approved general education course list. For more information, visit the general education website (https://wichita.edu/generaleducation/)[1].

General education courses offered in a given semester are identified in the online schedule of courses (https://wichita.edu/schedule/)[1].

[1] Link opens new window.

Foundation Courses

Foundation courses cover the fundamental skills needed throughout college. They should be completed within the first 48 credit hours of enrollment with a grade of *C-* or better. MATH 111 or any math course that requires MATH 111 or MATH 112 as a prerequisite can be used to meet the foundation math requirement.

Course	Title	Hours
COMM 111	Public Speaking	3
COMM 111H	Public Speaking Honors	3
ENGL 100	English Composition	3
ENGL 101	College English I	3
ENGL 102	College English II	3
MATH 111	College Algebra	3
MATH 131	Contemporary Mathematics	3

Fine Arts Courses

Course	Title	Hours
ARTE 303	Stimulating Creative Behavior	3
ARTH 103	Art Appreciation	3
ARTH 125	Introduction to Visual and Material Culture	3
ARTH 125A	Introduction to Visual and Material Culture: Play	3
ARTH 125B	Introduction to Visual and Material Culture: Bodies	3
ARTH 125C	Introduction to Visual and Material Culture: Power and Propaganda	3
ARTH 346	Modernisms I	3
ARTH 347	Themes in Contemporary Art and Design I	3
ARTH 387	Theories of Art and Culture	3
ARTS 270	Introduction to Ceramics	3
DANC 140	Art of The Dance	3
DANC 225	Dance History: Ancient Civilization to Early 1900s	3
DANC 325	Dance History: 20th and 21st Centuries	3
FA 110	Introduction to the Fine Arts	3
FA 301	An Introduction to Entrepreneurship in the Arts	3
FA 321	Avant-Garde Art, Film, Rock Music and Subcultures	3
HNRS 104	Seminar I: Fine Arts	3-4
HNRS 150	Seminar II: Fine Arts	3-4
HNRS 304	Seminar III: Fine Arts	3-4
HNRS 304E	The Arts in Wichita	3
HNRS 304F	Discovering Creativity	3
HNRS 404	Seminar in Fine Arts	3-4
MUSC 113	Music in Context	3
MUSC 160	What to Listen for in Music	3
MUSC 161	Music Through the Ages	3
MUSC 162	World Music	3
MUSC 334	History of Music I	3
MUSC 335	History of Music II	3
MUSC 346	Styles of Jazz	3
MUSC 493	American Popular Music	3
THEA 143	The Art of the Theater	3
THEA 221	Oral Interpretation	3
THEA 241	Improvisation and Theatre Games	3
THEA 243	Acting I	3
THEA 260	History of Musical Theatre	3
THEA 385	Theatre as a Mirror of Today's America	3
THEA 450	Contemporary Theatre and Drama: Topics	3
THEA 516	Scriptwriting I	3
THEA 517	Scriptwriting II	3
THEA 624	Theatre History II	3
WSUF 102	First Year Seminar - Fine Arts	3
WSUF 102A	First-Year Seminar: Music Really Does Make You Smarter	3
WSUF 102B	First-Year Seminar: Music As My Key To Success	3
WSUF 102C	First-Year Seminar: Seminar in Creativity and Play: Yes, Really	3
WSUN 102C	First-Year Seminar: Honors Creative Discovery	3

Humanities Courses

Course	Title	Hours
COMM 190	Introduction to Human Communication	3
COMM 221	Oral Interpretation	3
COMM 302	Interpersonal Communication	3
COMM 312	Nonverbal Communication	3
COMM 313	Argumentation and Advocacy	3
COMM 321	Introduction to Film Studies	3
COMM 335	International and Intercultural Communication	3
COMM 430	Communication Research and Inquiry	3
COMM 535	Communication Analysis and Criticism	3
COMM 631	Historical and Theoretical Issues in Communication	3
COMM 636	Advanced Public Speaking	3
ENGL 152	Language of Food	3
ENGL 230	Exploring Literature	3
ENGL 232	Themes in American Literature	3
ENGL 232D	Themes in American Literature: Literature in the Jazz Age	3
ENGL 232E	Themes in American Literature: American Dream	3
ENGL 232I	Crime, Mystery and Detection	3
ENGL 232K	Images of Insanity	3
ENGL 232L	Asian American Fiction	3

ENGL 232M	Ecology and the Wild in American Literature	3
ENGL 232OH	Coming of Age Honors	3
ENGL 232P	Images of Women in 20th Century Literature	3
ENGL 232Q	The Midwestern Identity	3
ENGL 232R	Horror and the Supernatural	3
ENGL 232S	Writing by Women of Color	3
ENGL 232T	Hip-Hop and Culture	3
ENGL 240	Introduction to Shakespeare	3
ENGL 241	Jane Austen and Popular Culture	3
ENGL 252	Modern American Writers	3
ENGL 254	Modern British Literature	3
ENGL 273	Science Fiction	3
ENGL 276	The Literature of Sports	3
ENGL 277	The Detective Story	3
ENGL 278	Literary Representations of LGBTQ + Culture	3
ENGL 285	Introduction to Creative Writing	3
ENGL 310	Nature of Poetry	3
ENGL 315	Introduction to English Linguistics	3
ENGL 320	The Nature of Drama	3
ENGL 322	Origins of Western Literature	3
ENGL 323	World Literature	3
ENGL 330	The Nature of Fiction	3
ENGL 340	Shakespeare	3
ENGL 343	Great Plains Literature	3
ENGL 344	Regional Literature	3
ENGL 360	Major British Writers I	3
ENGL 361	Major British Writers II	3
ENGL 362	Major American Writers I	3
ENGL 363	Major American Writers II	3
ENGL 365	African-American Literature	3
ENGL 375	Popular Literature	3
ENGL 377	Graphic Novels	3
ENGL 378	Technologies of the Book	3
ENGL 379	Storytelling, Video Games, and Literature	3
ENGL 517	Scriptwriting I	3
ENGL 518	Scriptwriting II	3
ENGL 579	Introduction to Digital Humanities	3
FREN 210	Intermediate French	5
FREN 210H	Intermediate French Honors	5
FREN 223	Intermediate French Readings I	3
FREN 223H	Intermediate French Readings I Honors	3
FREN 300	Intermediate French Readings II	3
FREN 300H	Intermediate French Readings II Honors	3
FREN 540	French Literature in English Translation	3
FREN 541	French Literature of Africa and the Caribbean in Translation	3
GERM 210	Intermediate German I	5
GERM 224	Intermediate German II	3
GERM 300	Intermediate German Readings	3
HIST 100	The Human Adventure: World Civilization Since 1500	3
HIST 101	World Civilization to 1500	3
HIST 102	History of Western Civilization Since 1648	3
HIST 131	History of the United States: Colonial to 1865	3
HIST 132	History of the United States Since 1865	3
HIST 306	The U.S. Century: Decades of Change	3
HIST 308	A History of Lost Civilizations	3
HIST 312	Modern Latin America	3
HIST 314	English History	3
HIST 317	The Holocaust	3
HIST 320	Russian History Survey	3
HIST 321	The Vietnam Conflict	3
HIST 330	The Americans: Conflict and Consensus in the Development of American Society and Culture	3
HIST 333	Ethnic America 20th Century	3
HIST 340	World War II	3
HIST 357	Women in the Ancient World	3
HIST 359	Greek World	3
HIST 362	The Roman World	3
HIST 501	American Colonies	3
HIST 502	American Revolution and the Early Republic	3
HIST 503	Age of Jefferson & Jackson	3
HIST 504	Civil War	3
HIST 505	The United States, 1865 to 1920	3
HIST 507	United States 1900-1945	3
HIST 508	United States Since 1945	3
HIST 511	Women in Early America, 1600-1830	3
HIST 512	Women and Reform in America, 1830-Present	3
HIST 513	History of United States and the Modern Middle East	3
HIST 514	History of the Modern Middle East	3
HIST 517	Constitutional History of the United States	3
HIST 517H	Constitutional History of the United States Honors	3
HIST 518	Constitutional History of the United States	3
HIST 518H	Constitutional History of the United States Honors	3
HIST 521	Diplomatic History of the United States to 1914	3
HIST 522	United States Foreign Relations Since 1898	3
HIST 525	American Military History	3
HIST 528	History of Wichita	3
HIST 530	The American Woman in History	3
HIST 531	American Environmental History	3

HIST 535	History of Kansas	3
HIST 536	Survey of American Indian History	3
HIST 538	The American West in the 20th Century	3
HIST 541	Modern France	3
HIST 553	History of Mexico	3
HIST 559	Classical Athens	3
HIST 560	The Hellenistic World and Rise of Rome	3
HIST 562	Roman Republic	3
HIST 563	Roman Empire	3
HIST 566	Medieval History 500-1200	3
HIST 567	Medieval History 1200-1500	3
HIST 575	Italian Renaissance	3
HIST 576	The Reformations: From Heresies to Diversity	3
HIST 581	Europe 1789-1870	3
HIST 582	Europe 1871-1945	3
HIST 588	History of Early Russia	3
HIST 589	History of Imperial Russia	3
HIST 592	History of Soviet Union	3
HIST 593	Former Soviet Union	3
HNRS 105	Seminar I: Humanities	3-4
HNRS 105G	War: Strategic Studies	3
HNRS 151	Seminar II: Humanities	3-4
HNRS 305	Seminar III: Humanities	3-4
HNRS 305F	Epidemics in World History	3
HNRS 305G	Governing Women's Bodies in the 20th Century	3
HNRS 305I	Science, Religion & Philosophy	3
HNRS 305J	Minds and Machines	3
HNRS 305K	The Rise and Fall of Athens	3
HNRS 305M	Science Fiction and Human Destiny	3
HNRS 305P	Epics and Identities: The Emergence of European Nationhood	3
HNRS 305Q	Dystopian Literature & the Modern Era	3
HNRS 305R	Philosophy of Space Exploration	3
HNRS 305S	American Law and Film	3
HNRS 305T	The Invention of Latin America	3
HNRS 305U	The Power of Storytelling	3
HNRS 305V	Language and Community	3
HNRS 305W	Women in Tech: Historical, Social and Philosophical Perspectives	3
HNRS 351	Survey of Leadership	3
HNRS 352	Survey of Law & Public Policy	3
HNRS 405	Seminar in Humanities	3-4
HNRS 405B	Isms & Ologies: Choose Your Own Adventure	3
HNRS 405C	Nature of Fiction: Writing the Real	3
HNRS 405D	Race, Racism, Social Justice	3
HNRS 405E	The Calamitous 14th Century	3
HNRS 405F	Walling the Self: Dwelling and Identity in Early Lit	3
HNRS 405G	After the Fall: The Search for Identity from Classical to Modern Literature	3
LASI 300	Global Issues	3
LATN 223	Intermediate Latin	3
LATN 224	Intermediate Latin	3
LING 151	Nature of Language	3
LING 152	Language of Food	3
LING 315	Introduction to English Linguistics	3
PHIL 100	Meaning of Philosophy	3
PHIL 100H	Meaning of Philosophy Honors	3
PHIL 105	Critical Reasoning	3
PHIL 125	Introductory Logic	3
PHIL 125H	Introductory Logic Honors	3
PHIL 144	Moral Issues	3
PHIL 300	Science and the Modern World	3
PHIL 300H	Science and the Modern World Honors	3
PHIL 302	Values & the Modern World	3
PHIL 305	Analytic Philosophy	3
PHIL 306	Business Ethics	3
PHIL 311	Philosophy of Law	3
PHIL 311H	Philosophy of Law Honors	3
PHIL 313	Political Philosophy	3
PHIL 315	Late Modern Philosophy	3
PHIL 320	Philosophy of Science	3
PHIL 322	Early Modern Philosophy	3
PHIL 327	Bioethics	3
PHIL 331	Ancient Greek Philosophy	3
PHIL 338	Philosophy of Feminism	3
PHIL 341	Contemporary Ethics	3
PHIL 342	History of Ethics	3
PHIL 346	Philosophy of Religion	3
PHIL 352	Contemporary Chinese Philosophy	3
PHIL 354	Ethics and Computers	3
PHIL 360	Ethical Theory	3
PHIL 361	Metaethics	3
PHIL 365	Survey of Asian Philosophy	3
PHIL 385	Engineering Ethics	3
PHIL 530	Ethics of Space Exploration	3
PHIL 577	Philosophy of The Arts	3
REL 110	Old Testament	3
REL 115	New Testament	3
REL 327	Magic, Witchcraft and Religion	3
REL 420	Women and the Bible	3
REL 576	The Reformations: From Heresies to Diversity	3
RUSS 210	Intermediate Russian	5
RUSS 224	Intermediate Russian	3
RUSS 300	Intermediate Russian Readings	3
SPAN 210	Intermediate Spanish	5
SPAN 223	Selected Spanish Readings	3
SPAN 223H	Selected Spanish Readings Honors	3
SPAN 300	Intermediate Spanish Readings	3

WOMS 190	Diverse Women in Popular Culture	3
WOMS 287	Women in Society: Social Issues	3
WOMS 306	Introduction to Gender Studies	3
WOMS 316	Men and Masculinities	3
WOMS 338	Philosophy of Feminism	3
WOMS 361	Gender, Work and Culture	3
WOMS 365	Gender and Digital Culture	3
WOMS 385	Lesbian, Gay, Bisexual, Transgender Studies	3
WOMS 387	Women in Society: Cultural Images	3
WOMS 389	Gender, Science and Technology	3
WOMS 391	Women's Global Issues	3
WOMS 392	Gender and Popular Music	3
WOMS 399	Asian American Women and Men	3
WOMS 420	Women and the Bible	3
WOMS 511	Women in Early America, 1600-1830	3
WOMS 513	Issues and Perspectives on African Women and Globalism	3
WOMS 516	Sociology of Gender	3
WOMS 530	The American Woman in History	3
WOMS 534	Psychology of Women	3
WOMS 541	Women, Children and Poverty	3
WOMS 571	Contemporary Issues and Perspectives: LGBTQ	3
WOMS 588	Gender, Race and the West/ East Divide	3
WSUA 102	First-Year Seminar - LAS	3
WSUA 102C	First-Year Seminar: Powerful Narratives: Storytelling and Social Justice in the Hispanic World	3
WSUA 102D	First-Year Seminar: Cross Cultural Communication	3
WSUA 102E	First-Year Seminar: World Cultures in Popular Media	3
WSUA 102F	First-Year Seminar: Cooking Communities: Food and Culture in the Hispanic World	3
WSUA 102G	First-Year Seminar: Latinos in the US and the Midwest	3
WSUA 102I	First-Year Seminar: World Comics, World Cultures	3
WSUA 102J	First-Year Seminar: Fundamentals of Diversity	3
WSUA 102K	First-Year Seminar: Contemporary Civil Rights Movements in the United States	3
WSUA 102M	First-Year Seminar: History and Rock 'n' Roll	3
WSUA 102N	First-Year Seminar: World Food and Foodways	3
WSUA 102O	First-Year Seminar: Career, Life and the Humanities Geek!	3
WSUA 102P	First-Year Seminar: Imagining Climate Change	3
WSUA 102R	First-Year Seminar: Exploring WSU In Your Photos and Words	3
WSUA 102S	First-Year Seminar: On Humor	3
WSUE 102B	First Year Seminar: Innovations of World War II	3
WSUN 102D	First-Year Seminar: Honors Discovering Humanity	3

Social and Behavioral Sciences Courses

Course	Title	Hours
AGE 404	Psychology of Aging	3
AGE 405	Sociology of Aging	3
AGE 512	Diversity and Aging	3
ANTH 102	Cultural Anthropology	3
ANTH 103	Introduction to Archaeology	3
ANTH 200	Intercultural Relations	3
ANTH 303	World Cultures	3
ANTH 305	World Archaeology	3
ANTH 318	Psychological Anthropology	3
ANTH 327	Magic, Witchcraft and Religion	3
ANTH 335	Archaeology of North America	3
ANTH 344	Ecological Anthropology	3
ANTH 352	Linguistic Anthropology	3
ANTH 416	Archaeology of Sex and Gender	3
ANTH 511	The Indians of North America	3
ANTH 522	Art and Culture	3
ANTH 528	Medical Anthropology	3
ANTH 555	Paleoanthropology and Human Paleontology	3
ANTH 613	Archaeology of the Great Plains	3
ARTS 211	Introduction to Community and Social Practice	3
ARTS 211H	Introduction to Community and Social Practice Honors	3
ARTS 312	Community Arts Engagement	3
ARTS 312H	Community Arts Engagement Honors	3
ARTS 322	Video, Sound and Performance	3
ARTS 324	Art and Social Media	3
CESP 334	Introduction to Diversity: Human Growth and Development	3
CJ 191	Introduction to Criminal Justice	3
CJ 315	Criminal Law	3
CJ 351	The Victim in Criminal Justice	3
CJ 355	Special Populations in the Criminal Justice System	3
CJ 394	Courts & Judicial Systems	3
CJ 453	Crime Prevention	3
CJ 513	Violent Crime	3
CJ 518	Criminal Justice and Crime in Film	3

CJ 593	Crime Causation and Criminal Justice Policy	3
CJ 652	Juvenile Justice and Social Policy	3
COMM 130	Communication and Society	3
ECON 201	Principles of Macroeconomics	3
ECON 201H	Principles of Macroeconomics Honors	3
ECON 202	Principles of Microeconomics	3
ENTR 310	The Entrepreneurial Experience	3
ENTR 440	New Venture Feasibility Analysis	3
ETHS 100	Introduction to Ethnic Studies	3
ETHS 210	Fundamentals of Cross-Cultural Communications	3
ETHS 330	Ethnic America, 1500-1924	3
ETHS 331	The Black Family	3
ETHS 332	The Native American	3
ETHS 334	Ethnic America in the 20th Century	3
ETHS 360	Dealing with Diversity	3
ETHS 381AC	Issues and Perspectives on African Women and Globalism	3
ETHS 399	Asian American Women and Men	3
ETHS 512	Diversity and Aging	3
ETHS 540	Advanced Cross-Cultural Communication	3
GEOG 125	Principles of Human Geography	3
GEOG 210	Introduction to World Geography	3
GEOG 530	Geography of Latin America	3
GEOG 542	Geography of Europe	3
HNRS 106	Seminar I: Social and Behavioral Sciences	3-4
HNRS 106AB	Parks, People and Place: Exploring Our National Parks	3
HNRS 152	Seminar II: Social and Behavioral Sciences	3-4
HNRS 152F	Leadership Challenge	3
HNRS 306	Seminar III: Social and Behavioral Sciences	3-4
HNRS 306C	The Art of Criminal Investigation	3
HNRS 306D	Law and Public Policy	3
HNRS 306E	Hunger in NYC: Service and Leadership Needed	3
HNRS 306F	Media Innovation, and Entrepreneurship	3
HNRS 306G	Alternative Break: Service Leadership	3
HNRS 306H	Aging as a Societal Issue: OK Boomer and Beyond	3
HNRS 406	Seminar in Social and Behavioral Sciences	3-4
HNRS 406A	What a Difference a Nonprofit Makes	3
HNRS 406B	Leading for Change in an Unpredictable World	3
HNRS 406C	Making Social Impact	3
HNRS 406D	Service Learning: Namibia HIV/AIDS and Food Security Service	3
HP 310	Introduction to the U.S. Health Services System	3
HP 326	Emerging Health Care Issues of the 21st Century	3
HP 408	Leadership in Self and Society	3
HP 408H	Leadership in Self and Society Honors	3
IB 333	International Business	3
ID 300	Design Thinking & Innovation	3
ID 301	Leadership is Essential Seminar	3
POLS 121	American Politics	3
POLS 121H	American Politics Honors	3
POLS 220	Introduction to International Relations	3
POLS 226	Comparative Politics	3
POLS 232	Political Theory and Philosophy	3
POLS 232H	Political Theory and Philosophy Honors	3
POLS 305	Environmental Politics	3
POLS 310	Latin American Politics	3
POLS 315	The Presidency	3
POLS 315H	The Presidency Honors	3
POLS 316	Legislative Politics	3
POLS 319	State Government	3
POLS 320	Developing World	3
POLS 336	International Organizations	3
POLS 337	Conflict Analysis	3
POLS 337H	Conflict Analysis Honors	3
POLS 352	Law and Political Power	3
POLS 352H	Law and Political Power Honors	3
POLS 356	Civil Liberties	3
POLS 356H	Civil Liberties Honors	3
POLS 380	Parties and Elections	3
POLS 380H	Parties and Elections Honors	3
POLS 385	Democracy and Authoritarianism	3
POLS 390	Special Topics in Political Science	3
POLS 390C	Developing World	3
POLS 390F	Lobbyists and Interest Groups	3
POLS 390G	Presidential Nominations	3
POLS 391	Special Topics in Political Science	3
POLS 391L	Democracy and Authoritarianism	3
POLS 391M	Legislative Leadership and Politics	3
POLS 391MH	Legislative Leadership and Politics Honors	3
POLS 391P	Public Opinion and Political Psychology	3
POLS 391R	Space Politics	3
POLS 395	U.S. Foreign Policy	3
PSY 111	General Psychology	3

PSY 111H	General Psychology Honors	3
PSY 320	Biological Psychology	3
PSY 321	Psychology of Learning	3
PSY 322	Cognitive Psychology	3
PSY 323	Social Psychology	3
PSY 323H	Social Psychology Honors	3
PSY 324	Psychology of Personality	3
PSY 324H	Psychology of Personality Honors	3
PSY 325	Developmental Psychology	3
PSY 404	Psychology of Aging	3
PSY 406	Introduction to Community Psychology	3
PSY 409	Psychology of Perception	3
PSY 410	Substance Use & Abuse	3
PSY 413	Leadership in Self and Society	3
PSY 413H	Leadership in Self and Society Honors	3
PSY 414	Child Psychology	3
PSY 416	Psychology and Problems of Society	3
PSY 534	Psychology of Women	3
SCWK 201	Introduction to Social Work and Social Welfare	3
SCWK 304	Social Diversity and Ethics	3
SCWK 385	Lesbian, Gay, Bisexual, Transgender Studies	3
SCWK 541	Women, Children and Poverty	3
SCWK 571	Contemporary Issues and Perspectives: LGBTQ	3
SOC 111	Introduction to Sociology	3
SOC 306	Introduction to Gender Studies	3
SOC 315	Marriage and Families	3
SOC 316	Men and Masculinities	3
SOC 319	Sociology of Sexualities	3
SOC 320	Contemporary Social Problems	3
SOC 322	Deviant Behavior	3
SOC 325	Parenting	3
SOC 326	Sociology of Race & Ethnicity	3
SOC 330	Social Inequality	3
SOC 332	Media Through a Sociological Lens	3
SOC 336	Work In Modern Society	3
SOC 337	Young Women's Health	3
SOC 338	Health & Lifestyle	3
SOC 346	Sociology of Globalization	3
SOC 350	Social Interaction	3
SOC 405	Sociology of Aging	3
SOC 515	Family Diversity	3
SOC 516	Sociology of Gender	3
SOC 528	Schools and Society	3
SOC 534	Urban Sociology	3
SOC 538	Medical Sociology	3
SOC 539	Juvenile Delinquency	3
WSUA 102Q	First-Year Seminar: Criminalistic Methods: What Would Sherlock Holmes Do?	3
WSUA 102T	First-Year Seminar: This Is Us, Who Are You? Family in Modern America	3
WSUB 102	First Year Seminar-Business	3
WSUB 102A	First-Year Seminar: Solutions by Design: An Introduction to Design Thinking	3
WSUB 102B	First-Year Seminar: The Business of You	3
WSUD 102	First Year Seminar - AS	3
WSUD 102A	First-Year Seminar: Superheroes Go to School	3
WSUD 102B	First-Year Seminar: Race and Ethnicity in Modern America	3
WSUD 102C	First-Year Seminar: Creativity and Problem Solving	3
WSUD 102D	First-Year Seminar: Finding Fitness, Fun and Food as a WSU Freshman	3
WSUD 102E	First-Year Seminar: Monsters in Movies: Disability in the Horror Genre	3
WSUE 102A	First-Year Seminar: Introduction to Technology and Innovation	3
WSUE 102C	First-Year Seminar: Community Connection: Teamwork Makes the Dream Work	3
WSUH 102A	First-Year Seminar: Food, Culture and Privilege	3
WSUH 102B	First-Year Seminar: Leadership and Self Discovery	3
WSUN 102	First Year Seminar - Honors	3
WSUN 102A	First-Year Seminar: Election 2020	3
WSUN 102B	First-Year Seminar: Honors Law and Politics Postelection 2016	3
WSUN 102E	First-Year Seminar: Me and My Place in the World	3

Math and Natural Sciences Courses

Course	Title	Hours
ANTH 101	Biological Anthropology	3
ANTH 356	Human Variability and Adaptation	3
ANTH 356H	Human Variability and Adaptation Honors	3
BIOL 103	Microbes and You	3
BIOL 106	The Human Organism	3
BIOL 107	The Human Organism Laboratory	1
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 220	Introduction to Microbiology	4
BIOL 223	Human Anatomy and Physiology	5
BIOL 309	Foundations of Human Heredity	3
BIOL 309H	Foundations of Human Heredity Honors	3

BIOL 310	Human Reproduction: Issues and Perspectives	3
BIOL 360	How Evolution Explains the Living World	3
BIOL 370	Introductory Environmental Science	3
CHEM 101	Science of Chemistry	3
CHEM 103	Introductory General, Organic and Biochemistry	5
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 514	Inorganic Chemistry	3
CHEM 523	Analytical Chemistry	4
CHEM 531	Organic Chemistry I	5
CHEM 545	Physical Chemistry I	3
CHEM 661	Principles of Biochemistry	3
CS 210	Introduction to Computer Science	3
GEOG 235	Meteorology	3
GEOL 102	Earth Science and the Environment	4
GEOL 111	General Geology	4
GEOL 200	Introduction to Environment and Sustainability	3
GEOL 235	Meteorology	3
GEOL 300	Energy, Resources and Environment	3
GEOL 302	Earth and Space Sciences	3
GEOL 310	Oceanography	3
GEOL 312	Historical Geology	4
GEOL 570	Biogeology	3
GEOL 574	Special Studies in Paleontology	3
GEOL 574C	Micropaleontology	3
HNRS 107	Seminar I: Mathematics and Natural Sciences	1-5
HNRS 153	Seminar II: Mathematics and Natural Sciences	3-5
HNRS 153B	The Dynamic Universe	3
HNRS 153T	Big Bang, Black Holes, the Fate of the Universe	3
HNRS 307	Seminar III: Mathematics and Natural Sciences	3-4
HNRS 307C	Aviation and Spaceflight Physiology	3
HNRS 407	Seminar in Mathematics and Natural Sciences	3-4
HP 105	Introduction to Public Health	3
HP 330	Cancer: Perspectives and Controversies	3
HP 430	Impact of Disease Upon Global Events	3
HS 290	Foundational Human Anatomy and Physiology	5
MATH 144	Business Calculus	3
MATH 242	Calculus I	5
MATH 242H	Calculus I Honors	5
MATH 243	Calculus II	5
MATH 243H	Calculus II Honors	5
MATH 344	Calculus III	3
MATH 344H	Calculus III Honors	3
MATH 531	Introduction to the History of Mathematics	3
MATH 531H	Introduction to the History of Mathematics Honors	3
PC 105	Introduction to Computers and Applications	3
PHYS 111	Introductory Physics	4
PHYS 131	Physics for Health Sciences	3
PHYS 195	Introduction to Modern Astronomy	3
PHYS 210	Physics of Sound	3
PHYS 213	General College Physics I	5
PHYS 214	General College Physics II	5
PHYS 313	Physics for Scientists I	4
PHYS 314	Physics for Scientists II	4
PHYS 315	University Physics Lab I	1
PHYS 316	University Physics Lab II	1
PHYS 395	Solar System Astronomy	3
STAT 370	Elementary Statistics	3
STAT 460	Elementary Probability and Mathematical Statistics	3
STAT 571	Statistical Methods I	3
STAT 572	Statistical Methods II	3
STAT 576	Applied Nonparametric Statistical Methods	3
WSUA 102A	First-Year Seminar: Energy Science and The Environment	3
WSUA 102U	First-Year Seminar: Building a Sustainable Planet	3
WSUE 102	First-Year Seminar: Engineering	3

Applied Studies, College of

Shirley Lefever, ***dean***
104 Corbin Ed. Center • 316-WSU-3300
College of Applied Studies Website **(**http://wichita.edu/education/**)**[1]
Clay Stoldt, *associate dean*
Ashlie Jack, *assistant dean/accreditation officer*

The WSU College of Applied Studies comprises four departments whose synergy provides a powerful understanding of life span development and academic innovation in living and learning. It prepares teachers, school professionals, school counselors, educational psychologists, exercise scientists, athletic trainers and sport professionals for 21st century careers. College faculty also contribute to the improvement of the profession at local, state, national and international levels through teaching, research and professional service.

The College of Applied Studies (CAS) houses programs accredited by:

- The Kansas State Department of Education (KSDE);
- The Council for the Accreditation of Educator Preparation;
- The National Association of School Psychologists;
- The Commission on Accreditation of Athletic Training Education; and
- The Commission on Sport Management Accreditation.

The college offers BA degree programs in teacher education, exercise science, sport management and athletic training. It also offers the BAS degree program in workforce leadership.

Teacher education programs help prepare individuals to meet application requirements for Kansas teacher licensure in early childhood unified, elementary, middle level or secondary education, and to teach in public or private school settings.

The exercise science degree program prepares students for careers involving exercise physiology, health promotion, clinical exercise-related fields or graduate education. The Athletic Training Education Program (ATEP) prepares students for entry-level positions in the broad allied health field of athletic training.

The sport management degree program prepares students for careers in a variety of sport settings, including school and college athletics, major and minor league professional sports, fitness centers, recreation services, sporting goods, and sport service providers.

The workforce leadership degree program is a flexible program focused on applied learning and workforce education integration with a concentration in education and innovation with an individualized plan of study.

Transfer Credit

Courses completed at a community college or four year institution of higher education other than WSU may be accepted as the College of Applied Studies program's course equivalency at the discretion of the program faculty and upon a review by the program faculty of related issues, e.g., the transfer course content, grade earned, year course completed, etc. The CAS has formal agreements with WSU Tech, Butler County Community College and Cowley College for 2+2 programs in which students complete two years at community college and the remaining two years at WSU.

College of Applied Studies Policies

Undergraduate Admission

Students who have declared a major in one of the programs in the College of Applied Studies and have the required 2.000 GPA (2.500 for athletic training and teacher education programs[1]), will be admitted directly into the college upon admission to WSU. Students are required to maintain at least a 2.000 overall GPA (2.500 for athletic training and teacher education programs[1]) to remain in good standing.

[1] The ECU/elementary education apprentice program (TAP) is 2.000.

Advising

The College of Applied Studies faculty and staff advisors are available to assist and guide students regarding course requirements in accordance with teacher education licensure program(s) and/or degree requirements.

The College of Applied Studies Advising — CASA (https://wichita.edu/casa/)[5] — office staff is available to advise undergraduate students, complete transcript analysis for undergraduate and/or teacher education program coursework, and maintain undergraduate student records.

CAS faculty advise undergraduate juniors and seniors. Graduate faculty advise students pursuing a graduate degree, graduate coursework and/or degree options. Students should call CASA for information regarding student advising.

Enrollment Limits

Students enrolled in the College of Applied Studies may not enroll in more than 21 credit hours per semester during the academic year without permission by the dean. Summer session enrollments are limited to a maximum of 6 credit hours for each four-week session or 12 credit hours during the eight-week summer session. Students who have completed at least 24 credit hours at WSU with a WSU grade point average of 3.000 or better may petition their department chairperson for permission to enroll in excess hours.

Probation and Dismissal

Students who are admitted into the College of Applied Studies are placed on probation at the end of any semester when either their overall or institutional GPA has fallen below the required 2.000 (2.500 for athletic training and teacher education programs[2]). As long as a student's semester GPA is at least a 2.000, the student is eligible to take classes.

Students will be dismissed at the end of any semester on probation if they fail to earn a semester grade point average of 2.000 (2.500 for athletic training and teacher education programs[2]). Students who have been dismissed for academic reasons should seek the counsel of their advisor to explore their options. A dismissed student whose GPA qualifies the student for admission to another college at WSU may apply to the exceptions committee of that college.

Students on probation normally are limited to a maximum load of 14 credit hours per semester, although exceptions may be made. The limitation of 14 credit hours also applies to students who have declared a transition semester.

Students who have been dismissed may seek readmission to the College of Applied Studies by appealing, in writing, for an exception to the regulations.

Transfer Students

Transfer students admitted on probation must complete at least 12 hours of credit work and achieve a 2.000 grade point average (2.500 for

athletic training and teacher education programs[2]) on work at Wichita State before probation is removed.

[2] The ECU/elementary education apprentice program (TAP) is 2.000.

WSU General Education Requirements

The College of Applied Studies conforms to the policy set forth by the division of academic affairs at Wichita State University. Many College of Applied Studies programs incorporate specific general education courses, which are required. Students should refer to the General Education Program (p. 57) requirements as well as their specific program check sheet.

Cooperative Education Internships

The College of Applied Studies participates in the university's cooperative education internship program. This program is designed to provide off-campus, paid work experiences that integrate, complement and enhance the student's regular academic program. Students are placed in a variety of educational experiences which range from public schools to university athletic departments. Participation in the program requires completion of 12 credit hours with the required GPA and enrollment for credit in specific cooperative education courses designated by the appropriate academic department in the college. To enroll in the program or for more information, students should contact the cooperative education coordinator.

Admission to Teacher Education

Students are advised on the basis of the program requirements (check sheet) in effect when they are admitted into teacher education rather than the program requirements (check sheet) in effect when they began their college or university work.

Admission to the College of Applied Studies does not mean that a student is accepted into one of the licensure programs in teacher education. Students must satisfy the following requirements to be admitted as a candidate for a Kansas teacher's license[3]:

1. Foundation courses:

Course	Title	Hours
ENGL 101 & ENGL 102	College English I and College English II	6
COMM 111	Public Speaking	3
MATH 111	College Algebra (MATH 242 for math majors)	3

   Note: Above courses must be completed within a student's first 48 hours of college credit.
2. PSY 111;
3. STAT 370;
4. Thirty-five (35) credit hours of general education courses with a 2.750 GPA or above; (may include up to 10 credit hours of required coursework in the subject major);
5. Standardized test requirement
   Note: A prospective teacher education candidate must meet *only one* of the following four standardized test requirements. The basic skills test used to fulfill his or her admission requirements must have been taken within 10 years from the date of his or her application to the teacher education program. Candidates may not mix and match category scores between the CAAP and Praxis Core exams unless they have filed an application to do so and have received approval by the unit's exceptions committee:
   a. ACT: composite score of 21 or above; *or*
   b. SAT: combined score of 980 or above; *or*
   c. College Assessment of Academic Proficiency (CAAP)[4]: minimum required scores — writing, 55; reading, 56; and mathematics, 53; *or*
   d. Praxis Core Academic Skills: minimum required scores — reading (exam code 5712) 152; writing (exam code 5722) 162; and mathematics (exam code 5732) 142.
6. Prospective *elementary/early childhood majors only* must *also* complete two sections of the CBASE test (i.e., social studies and science) with a minimum required score. The social studies and science CBASE scores are used to affirm a candidate's mastery of elementary education content. The social studies minimum score is 235, the science minimum score is 235.
   CBASE registration website (http://registerblast.com/wsu/)[5] for additional information visit CBASE online (https://arc.missouri.edu/cbase/)[5]
7. Introduction to the Education Profession (CI 270) (*B*- or better);
8. Criminal background check: Prospective teacher education candidates are required to pass a criminal background check that they obtain at their own expense. Information regarding the approved background check service provider is available from Education Support Services.
9. Grade Point Average (GPA)
   a. Overall: 2.500;
   b. WSU: 2.500.
10. Signed attestation of eligibility;
11. Signed grounds for dismissal regulations; and
12. Proof of completed Certification of Health for School Personnel (K.S.A. 72-5213) form.

The application packet is available online (https://wichita.edu/casa/)[5] and at the CASA office, 107 Corbin.

[3] Program admission requirements differ for the ECU/elementary education apprentice program (TAP). Please see the program website (http://wichita.edu/tap/) (link opens new window).

[4] As of 2018, this exam is no longer available. However, CAAP scores will continue to be accepted if they fall within the 10-year requirement specified for standardized test scores.

Teacher Education Requirements

Professional education coursework, disciplinary or content area coursework, and extensive field experiences in professional development schools form the structure for all teacher education licensure areas.

Field Experiences

All initial teacher preparation programs at Wichita State University employ a professional development school model that engages students in field experiences. Beginning in their freshman year, students may enroll in cooperative education where they are paid as school district employees while earning Wichita State University course credit. As students matriculate through the teacher education program, responsibilities during field experiences increase from observation in early field experiences to more active involvement in teaching responsibilities during the final semesters while enrolled in pedagogy coursework. In total, Wichita State University students spend a minimum of four semesters in supervised field experiences in private and/or public school settings.

Early Childhood Unified (Birth through Grade 3)

Wichita State University provides Kansas state licensure preparation for birth through grade 3 through the early childhood unified program, preparing teachers to work with typical and atypical developing

children birth through grade 3 in special day schools, inclusive settings and public school regular education classrooms. The program of study contains courses in general education, teacher education and content courses in reading/language arts/literacy, mathematics, science, social studies, the arts and health/nutrition/physical education offered in the colleges of education, fine arts, and liberal arts and sciences.

Elementary Education (Kindergarten through Grade 6)

The elementary major prepares students to teach in grades K–6, the range of grades covered in a typical elementary school. The program of study covers general education, teacher education and content courses in reading/language arts, mathematics, science, social studies, the arts and health/nutrition/physical education offered in the colleges of education, fine arts, and liberal arts and sciences. The selection of courses is made with an academic advisor representing the College of Applied Studies and should begin as soon as possible.

Middle Level (Grades 5–8)

The middle level programs prepare students to teach in grades 5–8, the range of grades covered in a typical middle school. Students desiring to teach at the middle level must complete coursework in two of the four available endorsement areas: i.e., math, history comprehensive, English/language arts and/or science. Each content area includes approximately 30 credit hours in the liberal arts and sciences beyond general education courses. In addition, candidates must complete teacher education coursework.

Secondary Education (Grades 6–12)

Students majoring in secondary education should meet the requirements in the general education program as defined on the respective program check sheet. In addition to the professional education coursework, students complete approximately 30 credit hours of content coursework in the liberal arts and sciences beyond general education.

WSU College of Applied Studies offers secondary teaching fields in biology, chemistry, earth and space science, physics, English/language arts, history/government and mathematics.

PreK–12

The teacher education program includes PreK–12 licensure in foreign language, music, art and physical education. Students complete approximately 30 credit hours of content coursework in their content area beyond general education and professional education requirements.

ECU/Elementary Education Apprentice Program (TAP)

Para educators now have a shortened pathway to teacher of record with the TAP at Wichita State University. The inverted curriculum allows para educators to complete their degree without leaving their local school district position. This immersive, hands-on educational experience combines the best of traditional and alternative teacher preparation programs. Upon program completion, students will possess a strong foundation of pedagogy and the skills necessary to manage student behaviors and positively impact student learning.

- Fully online course delivery.
- Earn field experience credit for work as a para educator.
- Flexible program of study based on prior coursework.
- Ongoing mentor support throughout program.

Visit the teacher apprentice program webpage (http://wichita.edu/tap/)[5] for more information.

Check sheets that list the requirements for all CAS programs are available in the CASA office (107 Corbin) and on the CAS website *(*https://wichita.edu/casa/*)*[5].

Requirements for Teacher Licensure

Upon completion of a bachelor's degree, the college may recommend teacher education candidates for Kansas state initial teacher licensure in one or more areas of teaching.

All WSU graduates applying for teacher licensure in Kansas are required to:

1. Pass all examinations established by the Kansas State Department of Education: the Principles of Learning and Teaching (PLT), and the Praxis content(s) examination;
2. Have a passing score on the Kansas Performance Teaching Portfolio;
3. Meet 2.500 GPA requirements; and
4. Receive a *B-* or better in all methods courses, practicums and teaching internship. Some programs specify *B-* or better grade requirements in additional courses.

Teacher education students assume responsibility for knowing and fully understanding their respective program assessment plan and transition point requirements.

[5] Link opens new window.

Degrees and Licensure Programs Offered

Undergraduate

The college offers teaching and nonteaching programs leading to the bachelor's degree. For a list of programs and required coursework, visit the CAS website (https://wichita.edu/majors/)[1].

Bachelor's Degrees

- Athletic training
- Exercise science
- Sport management
- Teacher education
- Workforce leadership

Initial Licensure Teaching Programs

State teacher licensure preparation is offered at the early childhood, elementary, middle, secondary and PreK–12 levels.

The Kansas State Department of Education regulates standards for all teaching licenses. Curricula offered by the college may be altered as needed to meet changes in the KSDE requirements.

The CAS recommends to KSDE those students who have met all approved program licensure requirements in the following programs:

- PreK–12
  - Art[2]
  - Music (instrumental)[2]
  - Music (vocal)[2]
  - Physical education
  - French
  - Spanish
- Early childhood unified
- Elementary education
- Middle school
  - English
  - Math
  - Science
  - History comprehensive
- Secondary education

- Biology
- Chemistry
- Earth and space science
- English/language arts
- History/government
- Math
- Physics

[1] Link opens new window.

[2] *Art and music education degrees are awarded by the College of Fine Arts.*

Inter-College Double Major

An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Applied Studies, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 35).

Transition to Teaching Program

The Transition to Teaching program represents an alternative initial licensure program for those students possessing a bachelor's degree in a middle or secondary endorsement area (e.g., mathematics, English). All of the standards of the traditional teacher education program are required, but the model of delivery is designed to meet the needs of schools and adults making the transition from another career into teaching. Please contact the Transition to Teaching program coordinator in the department of curriculum and instruction for more information.

Second Bachelor's Degree

A student may obtain a second bachelor's degree in the College of Applied Studies. This requires:

1. Admission to the College of Applied Studies,
2. Completion of a minimum of 30 credit hours in a program not required for the first bachelor's degree, and
3. Completion of all the requirements for graduation from the College of Applied Studies.

Graduate

The College of Applied Studies offers three programs leading to the Master of Arts in Teaching (MAT): transition to teaching, early childhood residency, and middle level and secondary residency for high need areas. Additional degrees include Master of Education (MEd) in counseling, educational leadership, educational psychology, exercise science, learning and instructional design, sport management and special education; the Specialist in Education (EdS) in school psychology; and the Doctor of Education (EdD) in educational administration. Courses are available to support the continued academic and professional development of teachers and other school professionals. Endorsements, certificates and licensure are also offered at the graduate level.

Endorsements

In addition to initial licensure, the CAS offers programs leading to endorsement in the following areas: district administrators, school counselors, early childhood teachers, English as a second language teachers, second content area teachers, special education teachers and reading specialists.

Certificates

The College of Applied Studies offers graduate certificates in building-level leadership, child/play therapy, engineering education, educational technology, functional aging, higher education leadership, literacy and superintendency/district leadership.

Licensure

- Building level
- District level
- School counselor
- School psychologist

Education Programs Housed in Other Colleges

- Art Education (p. 145)
- Music Education (p. 165)

Graduation Requirements

For graduation from the College of Applied Studies, students must satisfactorily complete all program requirements, complete a minimum of 120 credit hours (some programs have higher requirements), have at least a 2.000 grade point average (2.500 for athletic training and teacher education programs) in the major field and must have at least a 2.000 overall and WSU grade point average (2.500 for athletic training and teacher education programs). Students should study any additional requirements (e.g., passing criteria on key program assessments) that may be required for their particular area of study.

Courses in the College of Applied Studies

- Counseling, Educational and School Psychology (CESP) (p. 326)
- Counseling, Educational Leadership, Educational and School Psychology (CLES) (p. 353)
- Curriculum and Instruction (CI) (p. 331)[1]
- Education (EDUC) (p. 372)
- Educational Leadership (EL) (p. 377)
- Human Performance Studies (HPS) (p. 419)
- Sport Management (SMGT) (p. 499)
- WSU First-Year Seminar: Education (WSUD) (p. 518)

[1] CI courses are housed in the School of Education.

Counseling, Educational Leadership, Educational and School Psychology

The Department of Counseling, Educational Leadership, Educational and School Psychology offers courses at the undergraduate level taken by students both in and outside the College of Applied Studies. In addition, the department offers graduate programs in counseling, educational leadership, educational psychology, school psychology, and a Doctor of Education (EdD) in educational leadership. The CLES department also offers graduate certificates in applied behavior analysis, superintendency/school district leadership, building leadership/principalship, child/play therapy, higher education leadership and engineering education.

For additional information, please visit the counseling, educational leadership, educational and school psychology website (http://wichita.edu/cles/)[1].

[1] Link opens new window.

Courses in the Department of Counseling, Educational Leadership, Educational and School Psychology

- Counseling, Educational and School Psychology (CESP) (p. 326)
- Counseling, Educational Leadership, Educational and School Psychology (CLES) (p. 353)

- Educational Leadership (EL) (p. 377)

Human Performance Studies

The mission of the department of human performance studies is to prepare students for careers in athletic training, exercise science and physical education as well as to provide the university community with physical activity experiences. Students are provided with quality instruction and practical experiences by faculty who engage in intellectual inquiry and service to the community and profession. The following degrees are offered: BA degrees in physical education, PreK–12, exercise science and athletic training. Each degree area provides students with a quality education leading to numerous career opportunities.

Athletic Training Program (ATP)

The mission of the Athletic Training Program (ATP) at WSU is to provide a comprehensive program of academic coursework and field experience that will educate athletic training students for entry-level positions in the profession of athletic training. The ATP strives to meet the standards, educational competencies and clinical proficiencies for athletic training education through professional service, research activities and curriculum design. The ATP abides by the policies and procedures as set forth by the Commission on Accreditation of Athletic Training Education (CAATE), National Athletic Trainers' Association Education Council (NATAEC), Board of Certification (BOC) and the Kansas Board of Healing Arts.

Exercise Science

Wichita State's exercise science program is for those interested in careers involving exercise physiology, health promotion, clinical exercise-related fields, rehabilitation, medicine, biology of exercise, research and academia or graduate education in health-related fields. The department also has a comprehensive human performance laboratory that is available for students completing exercise science coursework.

Physical Education: PreK–12

Wichita State's PreK–12 physical education teacher preparation degree program offers a quality education for students desiring a career teaching physical education. The curriculum provides students with a scientific and practical background upon which to base teaching content and methods. The PreK–12 program addresses the importance of a developmentally appropriate curriculum based on the national physical education standards. Students are provided numerous practical experiences to interact with K-12 students in the public schools.

Physical Education Activity Program

The Physical Education Activity Program represents a variety of 1-credit-hour courses in areas including team activities, individual activities, combatives, fitness activities and aquatics. Activity courses in the service program may be repeated for credit. Students should consult their college requirements to ascertain whether the activity courses will count toward degree requirements.

Majors in Human Performance Studies

- Dual/Accelerated BA to MEd in Exercise Science (p. 71)
- BA in Athletic Training (p. 72)
- BA in Exercise Science (p. 73)
- BA in Physical Education: Prek-12 (p. 74)

Minors in Human Performance Studies

- Minor in Exercise Science (p. 75)

Certificates in in Human Performance Studies

- Certificate in Physical Education Coaching (p. 75)
- Certificate in Physical Education Fitness (p. 75)
- Certificate in Physical Education Weight Training (p. 75)

Courses in Human Performance Studies

- Human Performance Studies (HPS) (p. 419)

Dual/Accelerated BA to MEd in Exercise Science

Exercise Science PLUS

The dual/accelerated 4+1 BA to MEd in exercise science (called Exercise Science PLUS) is specifically designed to prepare qualified students for graduate level work in exercise science through a coordinated accelerated program leading to both a Bachelor of Arts in exercise science and a Master of Education in exercise science. A student admitted into the accelerated program is allowed to enroll in courses for graduate credit while completing their undergraduate degree requirements for exercise science.

Admission

The student should apply for tentative graduate admission to the accelerated program at least one semester before the semester in which he or she desires to obtain credit at both the undergraduate and graduate levels.

To be considered for admission to the Accelerated 4+1 program, the following must be satisfied:

1. An undergraduate GPA of 2.750 overall;
2. Completion of at least 60 credit hours of undergraduate study (junior standing);
3. Currently hold and maintain a nationally accredited CPR/AED certification; and
4. Completion of HPS prerequisite courses for the master's program.

Exercise Science PLUS Program Requirements

A student admitted into the accelerated program is allowed to enroll in up to 9 credit hours of courses for graduate credit while completing their undergraduate degree requirements for exercise science.

All students majoring in exercise science are required to hold and maintain a nationally accredited CPR/AED certification throughout the program. First Aid certification is recommended.

Course	Title	Hours
Exercise Science Course Electives		
Must be a 500-level or higher course		
HPS 510	Coaching Principles	3
HPS 590	Independent Study	1-3
HPS 715	Body Composition and Weight Management	3
HPS 732	Pathophysiology of Cardiovascular Disease	3
HPS 750L	Motivation	3
HPS 780	Physical Dimensions of Aging	3
HPS 790	Applied Exercise Physiology	3
HPS 795	Physiology of Athletic Performance	3
HPS 797	Exercise in Health and Disease	3

Electives outside the HPS department may be considered for "ES Course Electives" upon approval.	

Graduate Exercise Science (ES) Curriculum

(Post Dual/Accelerated Process)

Fall Semester		Credit Hours
HPS 815	Fitness Assessment/Exercise Recommendations	3
HPS 800	Recent Literature in the Profession	3
Special Topics		3
Elective		3
	Credit Hours	12
Spring Semester		
HPS 860	Research Methods in the Profession	3
HPS 830	Advanced Physiology and Anatomy of Exercise	3
Elective		3
	Credit Hours	9
	Total Credit Hours	21

BA in Athletic Training

Program Design and Accreditation

The department of human performance studies (HPS) offers a four-year program of study leading to a Bachelor of Arts degree in athletic training. The Athletic Training Program (ATP) consists of a one-semester preprofessional phase and a three-and-a-half-year professional phase. Students begin their sequenced program in the fall of their first year enrolled at WSU. The program of study incorporates academic course requirements with clinical experiences to encompass the entry-level professional qualifications of the athletic trainer. The academic structure involves courses, laboratories and practicums to fulfill the NATA Athletic Training Educational Competencies. Students engage in areas of concentration for upper body and lower body injuries, sports that use protective equipment, and general medical conditions. The final year of the program incorporates a clinical internship through local affiliated sites. The ATP has been granted accreditation by the Commission on Accreditation of Athletic Training Education (CAATE).

BOC vs. NATA

The Board of Certification (BOC) is the certifying agency for the National Athletic Trainers' Association (NATA). The mission of the BOC is to provide exceptional credentialing programs for health care professionals to assure the protection of the public. The National Athletic Trainers' Association (NATA) is the national membership organization for the profession of athletic training. The mission of the NATA is to enhance the quality of health care provided by certified athletic trainers and to advance the athletic training profession. Athletic training students are eligible to sit for the BOC certification exam upon graduation from a CAATE accredited program.

Technical Standards

Wichita State University is committed to the principle that no qualified individual, on the basis of disability, be excluded from participation in or denied the benefits or services, programs or activities of the university, or be subjected to discrimination by the university as required by the Americans with Disabilities Act of 1990. A copy of the technical standards for admission into the ATP is available in the ATP program director's office. The ATP adheres to the policies for academic accommodation as determined by the Office of Disability Services. The Office of Disability Services provides academic accommodations for students who experience physical or mental disabilities. Students are required to provide appropriate documentation to the director of disability services before classroom services are provided. Services are based on the student's need for academic accommodation.

Probation and Dismissal

Students are placed on probation for the next semester if their overall institutional GPA falls below 2.500. Preprofessional students placed on probation jeopardize their admission to the professional phase. Students on probation will not be academically dismissed from the ATP until:

1. They accumulate 12 or more attempted hours after being placed on probation,
2. Fail to earn at least a 2.500 GPA semester average, and
3. Their overall or institutional grade point average remains below a 2.500.

Students dismissed for academic reasons may seek readmission to the ATP and the College of Applied Studies by appealing, in writing, for an exception to the regulations. Students should contact the ATP program director and the College of Applied Studies for specific procedures.

Special Requirements and Costs

Students are responsible for all application expenses, including the purchase of professional liability insurance in the minimum range of $1,000,000–$3,000,000, security background clearance and demonstrated proof of standard health insurance before beginning the professional phase of the ATP. Students enrolled in HPS 130, are required to pay a departmental cost-recovery fee for the use of consumable athletic training materials in order to meet the objectives of the course as outlined in the WSU Undergraduate Catalog. Students are required to provide their own transportation to each clinical site. Students should contact the ATP program director if they have any questions about these special requirements and costs.

Clinical Affiliation and Education

The ATEP has affiliation agreements with various health facilities in Wichita to assist with the clinical education of the athletic training student. The clinical affiliates include a variety of settings. Clinical education involves the rotation of specific experiences tailored to meet program standards and objectives. The athletic training student must complete the academic course(s) relating to these experiences before the clinical rotation assignment. The entire clinical rotation process is a three-year commitment. Students can contact the ATP program director for information on student responsibilities, expectations and policies for clinical education assignments.

Admission

A prospective student interested in pursuing the Bachelor of Arts degree in athletic training needs to request an application from the AT program director or the department of HPS. The applicant must meet all admission requirements by WSU.

1. **Application to preprofessional program:** An ATP application for the preprofessional program can be completed by visiting the athletic training website (http://www.wichita.edu/athletictraining/)[1], or it can be obtained from the AT program director. The student application file for the preprofessional program must be complete by March 1st and include:
   a. Letter of interest;
   b. Complete application;
   c. Three letters of recommendation; and
   d. Completion of WSU admission criteria.
2. **Application to professional program:** In order for the student to be selected into the professional program of the ATP, the student

must complete the following criteria before formal admittance is granted. All professional program criteria must be completed by November 15th and include:

a. Completed health examination;
b. Immunization verification;
c. Personal background check;
d. Record of work or volunteer hours;
e. Signed technical standards;
f. Current CPR certification;
g. Purchase of liability insurance;
h. Personal interview with Athletic Training Advisory Committee and ATP faculty; and
i. Completed core courses with a *B* average or better:

Course	Title	Hours
HPS 114	Introduction to Athletic Training	3
HPS 130	Taping and Bandaging in Athletic Training	1
HP 203	Medical Terminology	2

Transfer Students

Transfer students are considered on a case-by-case basis. Students wishing to transfer must have completed at least one year of athletic training experience at the college level, completed a care and prevention course or equivalent, a taping section or lab and have clinical hours endorsed by a supervising athletic trainer. In addition, the transfer student must have completed all admission requirements for the preprofessional and professional phase of the program. Students should contact the ATP program director if they have any questions.

[1] Link opens new window.

Program Requirements

Students must have a total of 120 credit hours to receive a Bachelor of Arts degree. In addition to meeting WSU General Education requirements (p. 57), requirements for the BA degree in athletic training are as follows:

Course	Title	Hours
Required Courses		
PSY 111	General Psychology [1]	3
BIOL 210	General Biology I [1]	4
CHEM 211	General Chemistry I [1]	5
HPS and Athletic Training Core		
HPS 114	Introduction to Athletic Training	3
HPS 130	Taping and Bandaging in Athletic Training	1
HPS 131	Instrumentation in Athletic Training	1
HP 203	Medical Terminology	2
BIOL 223	Human Anatomy and Physiology	5
or HS 290	Foundational Human Anatomy and Physiology	
HPS 229	Applied Human Anatomy	3
HS 301	Clinical Pharmacology	3
HPS 328	Kinesiology	3
HPS 331	Care and Prevention of Athletic Injuries	3
HS 331	Principles of Dietetics & Nutrition	3
HPS 350	Upper Extremity Assessment	4
HPS 351	Lower Extremity Assessment	4
HPS 352	General Medical Conditions in Athletics	3
STAT 370	Elementary Statistics	3
or HPS 762	Statistical Concepts in Human Performance Studies	
HPS 440	Concepts in the Prescription of Exercise	3
HPS 450	Therapeutic Modalities	3
HPS 451	Therapeutic Exercise	3
HPS 490	Physiology of Exercise	3
HPS 442	Administration of Athletic Training	3
HPS 541	Seminar in Strength and Conditioning	3
Practicum		
HPS 121	Professional Practicum	2
HPS 220	Athletic Training Practicum	2
HPS 221	Athletic Training Practicum II	2
HPS 320	Athletic Training Practicum III	2
HPS 321	Athletic Training Practicum IV	2
HPS 420	Athletic Training Practicum V	2
HPS 421	Athletic Training Practicum VI	2
Electives		
With an advisor, select sufficient general education and elective hours to bring the total credit hours to 120.		
Total Credit Hours		85

[1] These courses may also be used to fulfill general education requirements.

Applied Learning

Students in the Bachelor of Arts in athletic training program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by successfully completing all of the following program course requirements: HPS 220, HPS 221, HPS 320, HPS 321, HPS 420 and HPS 421.

BA in Exercise Science

Admission

Students seeking admission to the BA in exercise science program must have an overall and WSU GPA of 2.000.

Program Requirements

All students enrolled in exercise science **must** hold and maintain a CPR/AED certification. First aid certification is recommended but not required.

A minimum total of 120 credit hours is required for the BA in exercise science and includes the 56 credit hours of major courses that must be completed with a minimum grade point average of 2.000. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BA in exercise science must take the following courses:

Course	Title	Hours
Required Courses		
PHYS 213	General College Physics I	5

CHEM 211	General Chemistry I	5
ID 300	Design Thinking & Innovation	3
HPS 113	Introduction Exercise Science	3
BIOL 223	Human Anatomy and Physiology	5
or HS 290	Foundational Human Anatomy and Physiology	
HPS 302	Administration in Exercise Science	3
HPS 313	Exercise & Sport Nutrition	3
HPS 328	Kinesiology	3
HPS 440	Concepts in the Prescription of Exercise	3
HPS 461	Biomechanics of Human Movement	3
HPS 470	Experiential Fitness Practicum in Exercise Science	3
HPS 490	Physiology of Exercise	3
HPS 495	Internship in Exercise Science	8
HPS 541	Seminar in Strength and Conditioning	3
HPS 762	Statistical Concepts in Human Performance Studies [1]	3
Total Credit Hours		56

Electives

Select additional exercise science electives, electives and general education (p. 57) credits to total 120 credit hours. Please consult with an advisor for options.

[1] CESP 704 and STAT 370 can substitute for HPS 762.

Applied Learning

Students in the Bachelor of Arts in exercise science program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by successfully completing HPS 495 Internship in Exercise Science.

BA in Physical Education: Prek-12

Program Requirements

General requirement for the bachelors: 120 minimum credit hours; overall GPA 2.500; major GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BA in physical education: PreK-12 must take the following courses:

Course	Title	Hours
Content courses to be completed before beginning Core I		
HPS 111	Foundations in Physical Education	3
HPS 202	Individual Sports	2
HPS 203	Adventure Sports	2
HPS 204	Movement Concepts	2
HPS 205	Team Sports	2
HPS 229	Applied Human Anatomy	3
Prerequisite for entrance into Teacher Education		
CI 270	Introduction to the Education Profession [1]	3
Elective		
Select 4 credit hours of electives. HPS 107A - Swimming is recommended.		4
Courses that may be taken with Cores I and II		
HPS 306	Water Safety Instructor	2
HPS 328	Kinesiology	3
HPS 329	Health and Wellness Concepts for PreK-12 Teacher Education	2
HPS 331	Care and Prevention of Athletic Injuries	3
HPS 490	Physiology of Exercise	3
Teacher Education Cores I, II and III		
CESP 334	Introduction to Diversity: Human Growth and Development [2]	3
CI 321	Introduction to Diversity: Cultural Issues	2
HPS 360	Adapted Physical Education	3
CI 311	Introduction to Diversity: Field Experience	1
HPS 300	Rhythmic Activities in PreK-12 Physical Education	2
HPS 310	Organization and Administration of Physical Education Program	3
HPS 311	ISAM: Physical Education in Secondary Grades 6-12 [1]	4
HPS 312	ISAM: Preteaching Internship: Physical Education-Secondary [1]	1
HPS 324	ISAM: Physical Education in Elementary Grades PreK–5 [1]	4
HPS 325	ISAM: Preteaching Internship: Physical Education-Elementary [1]	1
HPS 334	Assessment and Technology for PreK-12 Physical Education	3
HPS 402	Health Education for the Physical Educator	2
CI 317	Literacy Strategies in the Content Areas	2
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction	3
CI 427	Philosophy, History and Ethics of Education	3
HPS 471	Teaching Internship - Physical Education - Secondary [1]	6
HPS 472	Teaching Internship - Physical Education - Elementary [1]	6
HPS 473	Teaching Internship Seminar - Physical Education [1]	1
Total Credit Hours		84

[1] Must pass with a *B-* or better.

[2] General education course.

Licensure

The program coursework prepares a student for the teacher work sample and PRAXIS licensure exams required by the State of Kansas for application for a teacher license or endorsement. Completion of the teacher work sample and PRAXIS licensure exams with passing scores

is required by the State of Kansas for a candidate applying for teacher licensure and/or endorsement.

Applied Learning

Students in the Bachelor of Arts in physical education PreK –12 program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by successfully completing HPS 471 Teaching Internship - Physical Education - Secondary.

Minor in Exercise Science

The exercise science minor provides minimum knowledge for careers in the exercise industry. It consists of 15 credit hours including the following courses:

Course	Title	Hours
HPS 229	Applied Human Anatomy	3
HPS 313	Exercise & Sport Nutrition	3
HPS 328	Kinesiology	3
HPS 440	Concepts in the Prescription of Exercise	3
HPS 490	Physiology of Exercise	3
Total Credit Hours		15

At least 12 credit hours must be taken at WSU. A minimum GPA of 2.500 in the minor courses is required.

Certificate in Physical Education Coaching

The physical education program provides students the opportunity to complement their degree program with an undergraduate certificate in coaching. This certificate program is open to all undergraduate students. Participation in this certificate program requires an additional 12 credit hours of coursework. The coaching certificate provides students with additional training to pursue opportunities outside of a school setting as well as make them more marketable and proficient in a school setting.

Program Requirements

Students need to complete 12 credit hours from among the choices that follow to earn their certificate in physical education coaching.

Course	Title	Hours
HPS 510	Coaching Principles	3
HPS 750L	Motivation	3
SMGT 465	Psychology of Sport and Physical Activity	3
SMGT 750D	Sociology of Coaching	3
SMGT 750N	Social Psychological Foundations of Sport	3

Certificate in Physical Education Fitness

The physical education program provides students the opportunity to complement their degree program with an undergraduate certificate in fitness. This certificate program is open to all undergraduate students. Participation requires an additional 12 credit hours of coursework. The physical education fitness certificate provides students with additional training to pursue opportunities outside a school setting as well as making them more marketable and proficient in a school setting.

Program Requirements

Students need to complete the following courses to earn the certificate in physical education fitness.

Course	Title	Hours
HPS 313	Exercise & Sport Nutrition	3
HPS 440	Concepts in the Prescription of Exercise	3
HPS 541	Seminar in Strength and Conditioning	3
HPS 750L	Motivation	3
Total Credit Hours		12

Certificate in Physical Education Weight Training

The physical education program provides students the opportunity to complement their degree program with an undergraduate certificate in weight training. This certificate program is open to all undergraduate students. Participation in this certificate program requires an additional 12 credit hours of coursework. The weight training certificate provides students with additional training to pursue opportunities outside of the school setting as well as make them more marketable and proficient in the school setting.

Program Requirements

Students need to complete 12 credit hours from among the choices below to earn their certificate in physical education weight training.

Course	Title	Hours
HPS 106E	Weight Training	1
HPS 313	Exercise & Sport Nutrition	3
HPS 440	Concepts in the Prescription of Exercise	3
HPS 541	Seminar in Strength and Conditioning	3
HPS 750L	Motivation	3
HPS 590	Independent Study	2

School of Education

Undergraduate teacher education in curriculum and instruction is built on the guiding principles of the Conceptual Framework for Preparation of Teachers and Other School Personnel:

1. Professionalism and reflection on the vocation;
2. Human development and respect for diversity;
3. Connection of teaching and assessment;
4. Technology integration;
5. Understanding of content knowledge, pedagogical content knowledge and their alignment with standards; and
6. Collaboration with stakeholders.

The program includes general education, professional education, field experiences and a content major. The professional education experience begins with the Introduction to the Education Profession course and includes four full semesters of field experiences. Through intensive academic and field experience combined with systematic student reflection, the goal of this program is to produce teachers who are competent, collaborative, reflective professionals.

Criteria for entering, matriculating and exiting the program, and for field experiences, graduation and licensure are clearly outlined and monitored by faculty and community professional advisory groups.

Requirements for these criteria are detailed under the Policies heading found at the beginning of the College of Applied Studies section of this catalog. Students should see an advisor in the College of Applied

Studies Advising office to determine the appropriate program and check sheet.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education.

Applied learning occurs when students develop knowledge, skills and values from personal direct experiences that go beyond the traditional lecture or lab. Applied learning encompasses a variety of activities including service learning, undergraduate research, theses, dissertations and other creative (e.g., live performances) and professional services (e.g., practicums, internships, clinical rotations and cooperative education).

The applied learning experience requirements for the initial licensure programs develop knowledge, skills and values primarily through practicums and internships. These internship experiences allow students to apply educational theory to practice. In addition, students complete a teacher work sample, which is a product of research in the K–12 classroom that includes data collection, teaching, data analysis and reflection.

Majors in the School of Education

Bachelor of Arts in Education (BAED)

PreK-12

- BAED - PreK-12 French (Secondary) (p. 86)
- BAED - PreK-12 Latin (Secondary)
- BAED - PreK-12 Spanish (Secondary) (p. 97)

Early Childhood Unified

- BAED - Early Childhood Unified (Elementary) (p. 78)

Elementary Apprentice

- BAED - Early Child Unified/Elementary Education Apprentice (Elementary) (p. 79)

Elementary Education

- BAED - Elementary Education (Elementary) (p. 82)

Middle School

- BAED - English/Science (5-8) (Middle) (p. 84)
- BAED - History/English (5-8) (Middle) (p. 90)
- BAED - History Comprehensive/Mathematics (5-8) (Middle) (p. 87)
- BAED - History Comprehensive/Science (5-8) (Middle) (p. 88)
- BAED - Mathematics/English (5-8) (Middle) (p. 94)
- BAED - Mathematics (5-8) (Middle) (p. 91)
- BAED - Mathematics/Science (5-8) (Middle) (p. 95)

Secondary Education

- BAED - Biology (6-12) (Secondary) (p. 76)
- BAED - Chemistry (6-12) (Secondary) (p. 77)
- BAED - Earth and Space Science (6-12) (Secondary) (p. 81)
- BAED - English/Language Arts (6-12) (Secondary) (p. 83)
- BAED - History, Government and Social Studies (6-12) (Secondary) (p. 89)
- BAED - Mathematics (6-12) (Secondary) (p. 92)
- BAED - Physics (6-12) (Secondary) (p. 96)

Courses in the School of Education

- Curriculum and Instruction (CI) (p. 331)

BAED - Biology (Secondary)

General requirements for a Bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - biology (secondary) must take the following courses:

Course	Title	Hours
Requirements for a Major		
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 330	General Microbiology	5
BIOL 418	General Ecology	4
BIOL 419	Genetics	4
PHYS 502	Science Investigations: Physics	5
CHEM 533	Elementary Organic Chemistry	3
GEOL 300	Energy, Resources and Environment [1]	3
Total Credit Hours		32

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425S	ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences	2
CI 426S	Core II Practicum - Science	1
CI 427	Philosophy, History and Ethics of Education [3]	3
Core III - Fall Only		
CI 413S	Teaching Internship I: Secondary Level Sciences	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435S	ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences	3
CI 505	Science Technology and Society	1
CI 780S	Technology in the Classroom: Science	2
Core IV - Spring Only		
CI 436S	ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences	2
CI 471S	Teaching Internship II: Secondary Level Sciences	10
Licensure Exams		
PLT		

Praxis II Science Content Knowledge Test	
Total Credit Hours	40

[1] General education course.

[2] *B-* or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
or ANTH 352	Linguistic Anthropology	
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		22

Course	Title	Hours
Elective		
Select 5 credit hours of electives (to complete 120 credit hours)		5
Total Credit Hours		5

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Chemistry (Secondary)

General requirements for a Bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - chemistry (secondary) must take the following courses:

Course	Title	Hours
Requirements for a Major		
CHEM 211	General Chemistry I [1]	5
CHEM 212	General Chemistry II [1]	5
CHEM 531	Organic Chemistry I	5
CHEM 532	Organic Chemistry II	5
CHEM 523	Analytical Chemistry (fall only)	4
CHEM 524	Instrumental Methods of Chemical Analysis (spring only)	4
CHEM 661	Principles of Biochemistry	3
PHYS 213	General College Physics I	5
GEOL 300	Energy, Resources and Environment [1]	3
BIOL 210	General Biology I	4
Total Credit Hours		43

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425S	ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences	2
CI 426S	Core II Practicum - Science	1
CI 427	Philosophy, History and Ethics of Education [3]	3
Core III - Fall Only		
CI 413S	Teaching Internship I: Secondary Level Sciences	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435S	ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences	3
CI 505	Science Technology and Society	1
CI 780S	Technology in the Classroom: Science	2
Core IV - Spring Only		
CI 436S	ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences	2

CI 471S	Teaching Internship II: Secondary Level Sciences	10
Licensure Exams		
PLT		
Praxis II Science Content Knowledge Test		
Total Credit Hours		40

[1] General education course.

[2] *B*- or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
or ANTH 352	Linguistic Anthropology	
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		12

Course	Title	Hours
Elective		
Select sufficient electives to complete 120 credit hours		

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B*- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Early Childhood Unified

General requirements for bachelor's degree: 132 minimum credit hours. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - early childhood unified must take the following courses:

Course	Title	Hours
Other Required Courses		
CI 270	Introduction to the Education Profession [1]	3
BIOL 370	Introductory Environmental Science [2]	3
or GEOL 300	Energy, Resources and Environment	
Geography with a global perspective. GEOG 125 or GEOG 210 recommended. [2]		3
Total Credit Hours		9

Teacher Education

Must have entrance into teacher education to take any of the following. All teacher education courses require a *B*- or better (unless otherwise noted).

Course	Title	Hours
Pre-Core 1		
MATH 501	Elementary Mathematics [3,4]	5
CI 345	Integrating Learning through the Arts	2
HPS 425	Health, Movement and Physical Activity	2
Pre-Core 2		
CI 519	Mathematical Investigations [4]	3
CESP 334	Introduction to Diversity: Human Growth and Development [1,2]	3
CI 203	Self-Care for Today's Educator	1
CI 416	Classroom Management and Pedagogy	2
Spring: Core I: Foundations of Education		
CI 320	Introduction to Diversity: Exceptionalities [1]	2
CI 323	Technology Seminar in Elementary Education [1]	1
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [1]	3
CI 520	Physical Science in the Elementary Classroom [1]	3
CI 311	Introduction to Diversity: Field Experience [1]	1
or CI 305	Clinical Field Experience: Special Education I	
CI 427	Philosophy, History and Ethics of Education [1]	3
Fall: Core II: Methods and Field Experiences		
CI 327	Early Childhood Unified: Foundations [1]	2
CI 313	Reading and Writing Exceptionalities	2
CI 402E	ISAM: Elementary Teaching Early Literacy K-2 [1]	3
CI 402J	ISAM: Elementary Social Studies [1]	3

CI 411A	Preteaching Internship: Elementary Core IIA [1]	2
Spring: ECORE: Methods and Field Experiences		
CI 614	ECU Assessment and Methods: Infants, Toddlers and Families [1]	3
CI 614I	ECU Preteaching Internship: Infant Toddler [1]	2
CI 703	Assessments and Methods: K-3 [1]	3
CI 324	Linguistics for Elementary Teachers [1]	3
CI 796	Family and Professional Collaboration [1]	3
Fall: Core III: Methods and Field Experiences		
CI 402M	ISAM: Elementary Mathematics [1]	3
CI 402U	Instructional Strategies, Assessment and Management: Literacy Instruction for Upper Elementary [1]	3
CI 402S	ISAM: Elementary Science [1]	3
CI 411B	Preteaching Internship: Elementary Core IIB [1]	2
CI 617	ECU Assessment and Methods: Preschool [1]	3
CI 617P	ECU Preteaching Internship: Preschool [1]	2
Spring: Core IV: Teaching Internship		
CI 446	Student Teaching and Classroom Management Seminar: Elementary [1]	2
CI 647A	Teaching Internship: ECU K–3 (nine weeks) [1]	6
CI 647B	Teaching Internship: ECU Birth-PreK (six weeks) [1]	6
Total Credit Hours		87

Course	Title	Hours
Additional College Requirements - counted as General Education		
HIST 131	History of the United States: Colonial to 1865	3
or HIST 132	History of the United States Since 1865	
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
BIOL 106	The Human Organism (Life Sciences course)	3-5
or BIOL 210	General Biology I	
or BIOL 223	Human Anatomy and Physiology	
Approved General Education course in ANTH or SOC or Freshman Seminar		3
Total Credit Hours		15-17

[1] *B-* or better.

[2] General education course.

[3] Must complete before CI 519 and Core IIB.

[4] 2.000 or better required.

Official Program Transition Point Requirements:

1. Admission into teacher education - complete application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all professional teacher education courses, with the exception of a 2.000 grade requirement in CI 519,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Early Childhood Unified/ Elementary Education Apprentice

Admission Requirements

1. **Employed as a Para Educator:** Must serve as a para educator with instructional responsibilities at the early childhood (birth-3rd grade) level; or elementary education level (kindergarten-6th grade). The para educator position can be in an interrelated or regular education classroom. The para educator position must be held in a Wichita State University College of Applied Studies partner school[1] serving students up to 6th grade. The building must be accredited by KSDE (Kansas State Department of Education) or licensed by KDHE (Kansas Department of Health and Environment) or a similar setting.
2. **TAP Application:** Complete the WSU TAP Application online (http://www.wichita.edu/tap/)[2].
3. **WSU Admission:** Be admitted to Wichita State University meeting the adult learner or transfer requirements (http://wichita.edu/getadmitted/)[2]. When completing the admissions application, please select D21X Early Childhood Unified/Elementary Education Apprentice as the applicant's major.
4. **Official Transcripts:** Have completed a placement assessment indicating readiness for foundation courses (College English I, College Algebra, etc.) or provide official transcripts showing completion of required general education coursework.
5. **References**: Complete the Reference Request form with names and contact information for three references who are qualified to address the applicant's professional skills, communication skills (oral and written), and potential for success as a classroom teacher and as a student in this program.

6. **Verification Form:** Please use the Verification Form to verify your employment and that you have a Certificate of Health and/or Criminal Background Check on file with your district/interlocal where you serve as a para educator.

If you are unable to verify the Certificate of Health and/or Criminal Background Check through the verification form, please follow these steps:

Certificate of Health: Provide proof of a completed Certification of Health for School Personnel or TB test K.S.A. 72-6266 (prior law 72-5213) or verification that this has been completed per your employer.

Criminal Background Check: Provide verification of a completed Criminal Background Check.

- Option #1: Provide a copy of current Substitute License.
- Option #2: Provide a copy of recent background clearance with Validity, NATSB or district requirement.
- Option #3: Validity Screening Solutions - Submit the Validity Online Background Request Form with payment within 10 business days from the date of the Teacher Ed Application.

[1] Wichita State University College of Applied Studies partner schools are those with an established Memorandum of Agreement with the College of Applied Studies. If a Memorandum of Agreement does not already exist, Wichita State University College of Applied Studies will contact the employing school district. Placements with partner schools will be confirmed prior to program admission.

[2] Link opens new window.

Program Requirements

Option 1: For candidates who hold an Associate of Arts in elementary education or an Associate of Arts with general emphasis.

A total of 120 credit hours is required to earn the Bachelor of Arts in education. (Students will take 65 credit hours of WSU program requirements. Transfer credit from previous degree will likely meet general education requirements.) A grade of *B-* or better is required for all ECU/elementary education apprentice program (TAP) teacher education program courses.

Course	Title	Hours
Required Courses		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [1]	3
CI 270	Introduction to the Education Profession [1]	3
CI 345	Integrating Learning through the Arts	2
CI 313	Reading and Writing Exceptionalities [1]	2
CI 314	Principles of Effective Mentoring/Mentee Relationships [1]	1
CI 317	Literacy Strategies in the Content Areas [1]	2
CI 320	Introduction to Diversity: Exceptionalities [1]	2
CI 323	Technology Seminar in Elementary Education [1]	1
CI 324	Linguistics for Elementary Teachers [1]	3
CI 326	Engaging and Motivating the Learner [1]	3
CI 402E	ISAM: Elementary Teaching Early Literacy K-2 [1]	3
CI 402I	ISAM: Teaching Intermediate Literacy 3–6 [1]	2
CI 402M	ISAM: Elementary Mathematics [1]	3
CI 414	ISAM: Elementary Social Studies [1]	3
CI 415	Differentiated Instruction for Diverse Learners [1]	3
CI 416	Classroom Management and Pedagogy [1]	2
CI 427	Philosophy, History and Ethics of Education [1]	3
CI 458	Inquiry Based Learning [1]	2
CI 502	Math for Exceptionalities [1]	3
CI 504	Special Education Law [1]	3
CI 604	ECU Assessment and Methods: Infants, Toddlers and Preschool (B-PreK) [1]	3
CI 605	Internship I [1]	2
CI 606	Internship II [1]	2
CI 607	Internship III [1]	2
CI 608	Internship IV [1]	2
CI 796	Family and Professional Collaboration [1]	3
HPS 425	Health, Movement and Physical Activity	2
Total Credit Hours		65

[1] Requires a minimum grade of 2.700.

Option 2: For candidates who do not hold an Associate of Arts.

A total of 120 credit hours is required to earn the Bachelor of Arts in education. (Students will take 76 credit hours of WSU program requirements plus meet general education requirements (p. 57).) A grade of *B-* or better is required for all ECU/elementary education apprentice program (TAP) teacher education program courses.

Course	Title	Hours
Required Courses		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [1]	3
CI 270	Introduction to the Education Profession [1]	3
CI 345	Integrating Learning through the Arts	2
CI 313	Reading and Writing Exceptionalities [1]	2
CI 314	Principles of Effective Mentoring/Mentee Relationships [1]	1
CI 317	Literacy Strategies in the Content Areas [1]	2
CI 320	Introduction to Diversity: Exceptionalities [1]	2
CI 323	Technology Seminar in Elementary Education [1]	1
CI 324	Linguistics for Elementary Teachers [1]	3
CI 326	Engaging and Motivating the Learner [1]	3

CI 402E	ISAM: Elementary Teaching Early Literacy K-2 [1]	3
CI 402I	ISAM: Teaching Intermediate Literacy 3–6 [1]	2
CI 402M	ISAM: Elementary Mathematics [1]	3
CI 414	ISAM: Elementary Social Studies [1]	3
CI 415	Differentiated Instruction for Diverse Learners [1]	3
CI 416	Classroom Management and Pedagogy [1]	2
CI 418	Creating a Production Centered Classroom	2
CI 427	Philosophy, History and Ethics of Education [1]	3
CI 437	Field Experience I [1]	1
CI 438	Field Experience II [1]	1
CI 439	Field Experience III [1]	1
CI 440	Field Experience IV [1]	1
CI 458	Inquiry Based Learning [1]	2
CI 502	Math for Exceptionalities [1]	3
CI 504	Special Education Law [1]	3
CI 602	Social Emotional Learning in the School Community	2
CI 604	ECU Assessment and Methods: Infants, Toddlers and Preschool (B-PreK) [1]	3
CI 605	Internship I [1]	2
CI 606	Internship II [1]	2
CI 607	Internship III [1]	2
CI 608	Internship IV [1]	2
CI 796	Family and Professional Collaboration [1]	3
HPS 425	Health, Movement and Physical Activity	2
CI 203	Self-Care for Today's Educator	1
CI 204	Assistive Technology	1
CI 329	Universal Design for Learning	1
Total Credit Hours		76

[1] Requires a minimum grade of 2.700.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Earth and Space Science (Secondary)

General requirements for a Bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - Earth and space science (secondary) must take the following courses:

Course	Title	Hours
Requirements for a Major		
CHEM 211	General Chemistry I [1]	5
CHEM 212	General Chemistry II [1]	5
GEOL 102	Earth Science and the Environment	4
GEOL 302	Earth and Space Sciences	3
GEOL 312	Historical Geology	4
GEOL 324	Petrology and Petrography	3
GEOL 570	Biogeology	3
or GEOL 574	Special Studies in Paleontology	
PHYS 111	Introductory Physics	4
PHYS 195	Introduction to Modern Astronomy	3
PHYS 395	Solar System Astronomy	3
BIOL 210	General Biology I	4
Total Credit Hours		41

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425S	ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences	2
CI 426S	Core II Practicum - Science	1
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 413S	Teaching Internship I: Secondary Level Sciences	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435S	ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences	3
CI 505	Science Technology and Society	1
CI 780S	Technology in the Classroom: Science	2
Core IV - Student Teaching - Spring Only		
CI 436S	ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences	2
CI 471S	Teaching Internship II: Secondary Level Sciences	10
Licensure Exams		
PLT		
Praxis II Science Content Knowledge Test		
Total Credit Hours		40

[1] General education course.

[2] *B*- or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
or ANTH 352	Linguistic Anthropology	
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		12

Course	Title	Hours
Elective		
Select 3 credit hours of electives (to complete 120 credit hours)		3
Total Credit Hours		3

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B*- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Elementary Education

General requirements for bachelor's degree: 120 minimum credit hours; major GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - elementary education must take the following courses:

Course	Title	Hours
Other Required Courses [1]		
CI 270	Introduction to the Education Profession [2]	3
CI 345	Integrating Learning through the Arts	2
Geography with a global perspective. GEOG 125 or GEOG 210 recommended.		3
MATH 501	Elementary Mathematics [3, 4]	5
Earth Science. BIOL 370, GEOL 102 or GEOL 300 recommended.		3
Total Credit Hours		16

Teacher Education

Candidates must be admitted into Teacher Education to take any of the following teacher education and core courses. A grade of *B*- or better is required for all teacher education program courses. All courses must be completed before candidate is eligible to take CI 446 and CI 447.

Course	Title	Hours
Teacher Education Courses		
CI 323	Technology Seminar in Elementary Education	1
CI 329	Universal Design for Learning	1
CI 203	Self-Care for Today's Educator	1
CI 519	Mathematical Investigations (Must be taken after MATH 501 and before Core IIB; 2.000 or better required)	3
CI 324	Linguistics for Elementary Teachers (Recommended to complete with CI 402E)	3
HPS 425	Health, Movement and Physical Activity	2
CI 427	Philosophy, History and Ethics of Education	3
CI 416	Classroom Management and Pedagogy	2
CI 520	Physical Science in the Elementary Classroom	3
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction	3
CI 796	Family and Professional Collaboration	3
CI 504	Special Education Law	3
Total Credit Hours		28

Course	Title	Hours
Teacher Education Core - Must be taken in sequence		
Core I: Foundations of Education		
CI 311	Introduction to Diversity: Field Experience	1
or CI 305	Clinical Field Experience: Special Education I	
CI 320	Introduction to Diversity: Exceptionalities	2
Core IIA: Methods and Field Experiences		
CI 402J	ISAM: Elementary Social Studies	3
CI 313	Reading and Writing Exceptionalities	2

CI 402E	ISAM: Elementary Teaching Early Literacy K-2	3
CI 411A	Preteaching Internship: Elementary Core IIA	2
Core IIB: Methods and Field Experiences		
CI 402U	Instructional Strategies, Assessment and Management: Literacy Instruction for Upper Elementary	3
CI 402M	ISAM: Elementary Mathematics	3
CI 402S	ISAM: Elementary Science	3
CI 411B	Preteaching Internship: Elementary Core IIB	2
Core III: Teaching Internship		
CI 446	Student Teaching and Classroom Management Seminar: Elementary	2
CI 447	Elementary Teaching Internship	11
Total Credit Hours		37

[1] Can be taken in various semesters.

[2] *B*- or better.

[3] Must complete before CI 519 and Core IIB.

[4] 2.000 or better required.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
HIST 131	History of the United States: Colonial to 1865	3
or HIST 132	History of the United States Since 1865	
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
BIOL 106	The Human Organism (Life Sciences course)	3-5
or BIOL 210	General Biology I	
or BIOL 223	Human Anatomy and Physiology	
Approved General Education course in ANTH or SOC		3
Total Credit Hours		18-20

Course	Title	Hours
Electives		
Select 6 credit hours (to complete 120 credit hours)		6
Total Credit Hours		6

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B*- or better in all professional teacher education courses, with the exception of a 2.000 grade requirement in CI 519,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - English/Language Arts (Secondary)

General requirements for a bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in BAED - English/language arts (secondary) must take the following courses:

Course	Title	Hours
Requirements for a Major		
ENGL 310	Nature of Poetry	3
ENGL 315	Introduction to English Linguistics [1]	3
ENGL 317	History of the English Language	3
or ENGL 665	History of the English Language	
ENGL 322	Origins of Western Literature	3
or ENGL 323	World Literature	
ENGL 330	The Nature of Fiction [1]	3
ENGL 340	Shakespeare	3
or ENGL 515	Studies in Shakespeare	
ENGL 346	American Multicultural Literature	3
or ENGL 365	African-American Literature	
or ENGL 546	Studies in Ethnic Literature	
ENGL 360	Major British Writers I	3
or ENGL 361	Major British Writers II	
or ENGL 520	Epic and Romance	
or ENGL 521	Medieval Literature	
or ENGL 522	Renaissance Literature	
or ENGL 524	Restoration and 18th Century Literature	
or ENGL 526	Romantic Literature	
or ENGL 532	Modern British Literature	
ENGL 362	Major American Writers I	3
or ENGL 503	American Literature I	
ENGL 363	Major American Writers II	3
or ENGL 504	American Literature II	

ENGL 680	Theory and Practice in Composition	3
CI 616	Literature for Adolescents	3
Total Credit Hours		36

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425E	ISAM: Middle/Secondary Level Content-Specific Methods I - English	2
CI 426E	Core II Practicum - English/ Language Arts	1
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 413E	Teaching Internship I: Secondary Level English	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435E	ISAM: Middle/Secondary Level Content-Specific Methods II - English/ Language Arts	3
Core IV - Spring Only		
CI 436E	ISAM: Middle/Secondary Level Content-Specific Methods III - English	2
CI 471E	Teaching Internship II: Secondary Level English/ Language Arts	10
Licensure Exams		
PLT		
Praxis II English/Language Arts Content Knowledge Test		
Total Credit Hours		37

[1] General education course.

[2] *B*- or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		9

Course	Title	Hours
Elective		
Select 11 credit hours of electives (to complete 120 credit hours)		11
Total Credit Hours		11

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B*- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - English/Science (Middle)

General requirements for Bachelor's: 128 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in BAED - English/science (middle) must take the following courses:

Course	Title	Hours
Middle Level English Language Arts		
Content Prerequisites in General Education		
ENGL 101	College English I	3
ENGL 102	College English II	3
COMM 111	Public Speaking	3
ENGL 315	Introduction to English Linguistics [1]	3
ENGL 330	The Nature of Fiction	3
Content Courses Required for Middle Level English Language Arts		
ENGL 317	History of the English Language	3
or ENGL 665	History of the English Language	
ENGL 322	Origins of Western Literature	3
or ENGL 323	World Literature	

ENGL 346	American Multicultural Literature	3
or ENGL 365	African-American Literature	
or ENGL 546	Studies in Ethnic Literature	
ENGL 680	Theory and Practice in Composition	3
CI 616	Literature for Adolescents	3
Science		
Content Prerequisites in General Education		
PHYS 111	Introductory Physics	4
PHYS 395	Solar System Astronomy	3
Content Courses Required for Middle Level Content Area II		
CHEM 103	Introductory General, Organic and Biochemistry	5
PHYS 502	Science Investigations: Physics	5
GEOL 102	Earth Science and the Environment	4
BIOL 210	General Biology I [2]	4
BIOL 211	General Biology II	4
CI 505	Science Technology and Society	1
Total Credit Hours		60

Course	Title	Hours
CI 270	Introduction to the Education Profession [3]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [4]	3
CI 425S	ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences	2
or CI 425E	ISAM: Middle/Secondary Level Content-Specific Methods I - English	
CI 426S	Core II Practicum - Science	1
or CI 426E	Core II Practicum - English/Language Arts	
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 412E	Teaching Internship I: Middle Level English	2
CI 412S	Teaching Internship I: Middle Level Sciences	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435E	ISAM: Middle/Secondary Level Content-Specific Methods II - English/ Language Arts	3
CI 435S	ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences	3
Core IV - Spring Only		
CI 436E	ISAM: Middle/Secondary Level Content-Specific Methods III - English	2
CI 436S	ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences	2
CI 461E	Teaching Internship II: Middle Level English/ Language Arts	5
CI 461S	Teaching Internship II: Middle Level Sciences (15 weeks)	5
Licensure Exams		
PLT		
Praxis II English/Language Arts and Science Content Knowledge Test		
Total Credit Hours		44

[1] Prerequisite for ENGL 317.

[2] General education course.

[3] *B*- or better.

[4] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		9

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B*- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - French (PreK-12)

General requirements for a Bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in BAED - French (PreK-12) must take the following courses:

Course	Title	Hours
Requirements for a Major: 30 credit hours beyond the FREN 210 level		
FREN 223	Intermediate French Readings I	3
FREN 300	Intermediate French Readings II	3
FREN 324	Intermediate Conversation and Composition	3
MCLL 351	Linguistics and Foreign Languages	3
FREN 505	Advanced French Phonetics	3
FREN 525	Advanced French Conversation	3
FREN 526	Advanced French Composition and Grammar	3
FREN 552	Contemporary French Civilization	3
Choose two or three of the following courses for a minimum of 6 credit hours		6
FREN 623	Seminar In French	
FREN 629	Medieval French Literature	
FREN 630	Renaissance French Literature	
FREN 631	17th Century French Literature	
FREN 632	18th Century French Literature	
FREN 633	19th Century French Literature	
FREN 634	20th Century French Literature	
FREN 636	Contemporary French Literature	
Total Credit Hours		30

Course	Title	Hours
CI 270	Introduction to the Education Profession [1]	3
Teacher Education		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods [1]	1
CI 315	Core I Practicum [1]	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [2]	3
CI 425E	ISAM: Middle/Secondary Level Content-Specific Methods I - English [1]	2
CI 426E	Core II Practicum - English/ Language Arts [1]	1
CI 427	Philosophy, History and Ethics of Education	3
Core III - Concurrent Enrollment - Fall Only		
MCLL 411F	Preteaching Internship PreK-6 [1]	1
MCLL 413F	Preteaching Internship 6-12 [1]	1
MCLL 454F	ISAM: PreK-12 World Languages [1]	3
CI 417	ISAM: Literacy Strategies in the Content Areas [1]	2
Core IV - Teaching Internship - Spring Only		
MCLL 466	Teaching Internship PreK-12 in World Languages [1]	12
MCLL 455F	Teaching Internship Seminar in World Languages [1]	1
Licensure Exams		
PLT		
ACTFL Advisory Oral Proficiency Interview (OPI) - Advanced Low level or higher		
Praxis Content Knowledge Test		
Total Credit Hours		38

[1] *B*- or better.

[2] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		9

Course	Title	Hours
Electives		
Choose 13 credit hours (to complete 120 credit hours)		13
Total Credit Hours		13

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B*- or better in all methods, practicum and internship courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments, including an Advanced Low or higher rating on the Oral Proficiency Interview,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - History Comprehensive/ Mathematics (Middle)

General requirements for Bachelor's degree: 126 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - history comprehensive/mathematics (middle) must take the following courses:

Course	Title	Hours
History Comprehensive		
Content Prerequisites in General Education		
POLS 121	American Politics	3
HIST 100	The Human Adventure: World Civilization Since 1500	3
HIST 535	History of Kansas	3
ANTH 303	World Cultures	3
Content Courses Required for Middle Level Content Area		
HIST 101	World Civilization to 1500	3
HIST 131	History of the United States: Colonial to 1865	3
HIST 132	History of the United States Since 1865	3
ECON 400	Economics in the Classroom Part I	3
GEOG 125	Principles of Human Geography	3
Mathematics		
Content Prerequisites in General Education		
MATH 111	College Algebra [1]	3
STAT 370	Elementary Statistics [1]	3
Content Courses Required for Middle Level Content Area		
MATH 121	Geometry for College Students (offered summer only) [1]	3
MATH 123	College Trigonometry [1]	3
MATH 144	Business Calculus [1]	3
MATH 300	Evolution of Mathematics (offered summer only) [1]	3
MATH 501	Elementary Mathematics [1]	5
MATH 502	Mathematics for Middle School Teachers (offered fall only)	5
Total Credit Hours		55

[1] Needs 2.000 or better as prerequisite for MATH 502.

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425J	ISAM: Middle/Secondary Level Content-Specific Methods I - History/ Government	2
or CI 425M	ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics	
CI 426J	Core II Practicum - History/ Government	1
or CI 426M	Core II Practicum - Mathematics	
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 412J	Teaching Internship I: Middle Level History/ Government	2
CI 412M	Teaching Internship I: Middle Level Mathematics	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435J	ISAM: Middle/Secondary Level Content Specific Methods II - History/ Government	3
CI 435M	ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics	3
Core IV - Spring Only		
CI 436J	ISAM: Middle/Secondary Level Content-Specific Methods III - History/ Government	2
CI 436M	ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics	2
CI 461J	Teaching Internship II: Middle Level History/ Government	5
CI 461M	Teaching Internship II: Middle Level Mathematics	5
Licensure Exams		
PLT		
Praxis II History and Math Content Knowledge Tests		
Total Credit Hours		44

[2] Must have *B-* or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
PSY 111	General Psychology	3
Total Credit Hours		9

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B*- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - History Comprehensive/Science (Middle)

General requirements for Bachelor's degree: 131 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - history comprehensive/science (middle) must take the following courses:

Course	Title	Hours
History Comprehensive		
Content Prerequisites in General Education		
HIST 100	The Human Adventure: World Civilization Since 1500	3
POLS 121	American Politics	3
HIST 535	History of Kansas	3
Content Courses Required for Middle Level History		
HIST 101	World Civilization to 1500	3
HIST 131	History of the United States: Colonial to 1865	3
HIST 132	History of the United States Since 1865	3
ECON 400	Economics in the Classroom Part I	3
ANTH 303	World Cultures	3
GEOG 125	Principles of Human Geography	3
Science		
Content Prerequisites in General Education		
PHYS 111	Introductory Physics	4
PHYS 395	Solar System Astronomy	3
Content Courses Required for Middle Level Content Area II		
CHEM 103	Introductory General, Organic and Biochemistry	5
PHYS 502	Science Investigations: Physics	5
GEOL 102	Earth Science and the Environment	4
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
CI 505	Science Technology and Society	1
Total Credit Hours		57

Course	Title	Hours
CI 270	Introduction to the Education Profession [1]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [2]	3
CI 425J	ISAM: Middle/Secondary Level Content-Specific Methods I - History/ Government	2
or CI 425S	ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences	
CI 426J	Core II Practicum - History/ Government	1
or CI 426S	Core II Practicum - Science	
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 412S	Teaching Internship I: Middle Level Sciences	2
CI 412J	Teaching Internship I: Middle Level History/ Government	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2

CI 435S	ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences	3
CI 435J	ISAM: Middle/Secondary Level Content Specific Methods II - History/ Government	3
Core IV - Spring Only		
CI 436S	ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences	2
CI 436J	ISAM: Middle/Secondary Level Content-Specific Methods III - History/ Government	2
CI 461S	Teaching Internship II: Middle Level Sciences	5
CI 461J	Teaching Internship II: Middle Level History/ Government	5
Licensure Exams		
PLT		
Praxis II History and Science Content Knowledge Tests		
Total Credit Hours		44

[1] Must have *B-* or better.

[2] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		12

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - History, Government and Social Studies (Secondary)

General requirements for a bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - history, government and social studies (secondary) must take the following courses:

Course	Title	Hours
Requirements for a Major		
HIST 100	The Human Adventure: World Civilization Since 1500 [1]	3
HIST 535	History of Kansas [1]	3
POLS 121	American Politics [1]	3
GEOL 300	Energy, Resources and Environment [1]	3
HIST 101	World Civilization to 1500	3
HIST 131	History of the United States: Colonial to 1865	3
HIST 132	History of the United States Since 1865	3
POLS 220	Introduction to International Relations	3
POLS 226	Comparative Politics	3
GEOG 210	Introduction to World Geography	3
ECON 400	Economics in the Classroom Part I	3
ANTH 200	Intercultural Relations [1]	3
ANTH 303	World Cultures	3
Total Credit Hours		39

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3

CI 425J	ISAM: Middle/Secondary Level Content-Specific Methods I - History/ Government	2
CI 426J	Core II Practicum - History/ Government	1
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 413J	Teaching Internship I: Secondary Level History/ Government	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435J	ISAM: Middle/Secondary Level Content Specific Methods II - History/ Government	3
Core IV - Spring Only		
CI 436J	ISAM: Middle/Secondary Level Content-Specific Methods III - History/ Government	2
CI 471J	Teaching Internship II: Secondary Level History/ Government	10
Licensure Exams		
PLT		
Praxis II History/Government Content Knowledge Test		
Total Credit Hours		37

[1] General education course.

[2] *B-* or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		12

Course	Title	Hours
Elective		
Select 15 credit hours of elective (to complete 120 credit hours)		15
Total Credit Hours		15

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - History/English (Middle)

General requirements for Bachelor's degree: 122 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - history/English (middle) must take the following courses:

Course	Title	Hours
History Comprehensive		
Content Prerequisites in General Education		
HIST 100	The Human Adventure: World Civilization Since 1500	3
POLS 121	American Politics	3
HIST 535	History of Kansas	3
ANTH 303	World Cultures	3
Content Courses Required for Middle Level Content Area		
HIST 101	World Civilization to 1500	3
HIST 131	History of the United States: Colonial to 1865	3
HIST 132	History of the United States Since 1865	3
ECON 400	Economics in the Classroom Part I	3
GEOG 125	Principles of Human Geography	3
English		
Content Prerequisites in General Education		
ENGL 101	College English I	3
ENGL 102	College English II	3
COMM 111	Public Speaking	3
ENGL 315	Introduction to English Linguistics [1]	3
Content Courses Required for Middle Level Content Area		
ENGL 317	History of the English Language	3
or ENGL 665	History of the English Language	
ENGL 322	Origins of Western Literature	3
or ENGL 323	World Literature	

ENGL 330	The Nature of Fiction	3
ENGL 346	American Multicultural Literature	3
or ENGL 365	African-American Literature	
or ENGL 546	Studies in Ethnic Literature	
ENGL 680	Theory and Practice in Composition	3
CI 616	Literature for Adolescents	3
Total Credit Hours		57

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425E	ISAM: Middle/Secondary Level Content-Specific Methods I - English	2
or CI 425J	ISAM: Middle/Secondary Level Content-Specific Methods I - History/Government	
CI 426E	Core II Practicum - English/ Language Arts	1
or CI 426J	Core II Practicum - History/Government	
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 412E	Teaching Internship I: Middle Level English	2
CI 412J	Teaching Internship I: Middle Level History/ Government	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435E	ISAM: Middle/Secondary Level Content-Specific Methods II - English/ Language Arts	3
CI 435J	ISAM: Middle/Secondary Level Content Specific Methods II - History/ Government	3
Core IV - Spring Only		
CI 436E	ISAM: Middle/Secondary Level Content-Specific Methods III - English	2
CI 436J	ISAM: Middle/Secondary Level Content-Specific Methods III - History/ Government	2
CI 461E	Teaching Internship II: Middle Level English/ Language Arts	5
CI 461J	Teaching Internship II: Middle Level History/ Government	5
Licensure Exams		
PLT		
Praxis II English/Language Arts and History Content Knowledge Tests		
Total Credit Hours		44

[1] Prerequisite for ENGL 317.

[2] Needs a *B-* or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		9

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Mathematics (Middle)

General requirements for Bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - mathematics (middle) must take the following courses:

Course	Title	Hours
Mathematics		
STAT 370	Elementary Statistics [1]	3
MATH 121	Geometry for College Students (offered summer only) [1]	3
MATH 123	College Trigonometry [1]	3
MATH 144	Business Calculus [1]	3
MATH 300	Evolution of Mathematics (offered summer only)	3
MATH 501	Elementary Mathematics [1]	5
MATH 502	Mathematics for Middle School Teachers (offered fall only)	5
Math Applications. Select one 5-credit-hour, or two 3-credit-hour courses. (Selected with faculty advisor approval.)		5-6
Total Credit Hours		30-31

[1] Needs 2.000 or better as prerequisite for MATH 502.

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425M	ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics	2
CI 426M	Core II Practicum - Mathematics	1
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 412M	Teaching Internship I: Middle Level Mathematics	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435M	ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics	3
Core IV - Spring Only		
CI 436M	ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics	2
CI 461M	Teaching Internship II: Middle Level Mathematics	10
Licensure Exams		
PLT		
Praxis II Math Content Knowledge Test		
Total Credit Hours		37

[2] Must have *B-* or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
or ANTH 352	Linguistic Anthropology	
PSY 111	General Psychology	3
Total Credit Hours		9

Course	Title	Hours
Electives		
Select 14 credit hours (for 120 credit hour total)		14
Total Credit Hours		14

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Mathematics (Secondary)

General requirements for a bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students

in the BAED - mathematics (secondary) must take the following courses:

Course	Title	Hours
Prerequisites to the Major		
MATH 242	Calculus I [1]	5
MATH 243	Calculus II [1]	5
Requirements for a Major		
MATH 344	Calculus III	3
MATH 321	Discrete Structures I	3
MATH 415	An Introduction to Advanced Mathematics	3
MATH 511	Linear Algebra	3
MATH 531	Introduction to the History of Mathematics [1]	3
MATH 615	Elementary Number Theory	3
MATH 621	Elementary Geometry	3
STAT 460	Elementary Probability and Mathematical Statistics	3
Select one of the following:		3
CI 503	Mathematics for High School Teachers	
MATH 451	Computational Mathematics Using MATLAB	
MATH 513	Fundamental Concepts of Algebra	
MATH 545	Integration Techniques and Applications	
MATH 547	Advanced Calculus I	
MATH 553	Mathematical Models	
MATH 555	Differential Equations I	
Math Applications		
From the list below, select two different divisions of study. At least one must be a laboratory course from a physical science area such as physics, chemistry or astronomy. Other options need to be approved by an advisor.		6-10
ECON 201	Principles of Macroeconomics	
PHYS 195 & PHYS 196	Introduction to Modern Astronomy and Laboratory in Modern Astronomy	
CHEM 211	General Chemistry I	
PHYS 213	General College Physics I	
PHYS 313	Physics for Scientists I	
CS 211	Introduction to Programming	
Total Credit Hours		43-47

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425M	ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics	2
CI 426M	Core II Practicum - Mathematics	1
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 413M	Teaching Internship I: Secondary Level Mathematics	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435M	ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics	3
Core IV - Spring Only		
CI 436M	ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics	2
CI 471M	Teaching Internship II: Secondary Level Mathematics	10
Licensure Exams		
PLT		
Praxis II Mathematics Content Knowledge Test		
Total Credit Hours		37

[1] General education course.

[2] *B-* or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
or ANTH 352	Linguistic Anthropology	
PSY 111	General Psychology	3
Select one of the choices below		4-5
PHYS 195 & PHYS 196	Introduction to Modern Astronomy and Laboratory in Modern Astronomy	
CHEM 211	General Chemistry I	
PHYS 213	General College Physics I	
PHYS 313	Physics for Scientists I	
Total Credit Hours		13-14

Course	Title	Hours
Elective		
Select 10 credit hours of electives (to complete 120 credit hours)		10
Total Credit Hours		10

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Sciences - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,

b. *B*- or better in all professional teacher education courses,
c. 2.500 GPA (overall, WSU and content), and
d. Completed teacher intern application.

3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Mathematics/English (Middle)

General requirements for Bachelor's degree: 123 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - mathematics/English (middle) must take the following courses:

Course	Title	Hours
Content Prerequisites in General Education		
MATH 111	College Algebra [1]	3
STAT 370	Elementary Statistics [1]	3
ENGL 101	College English I	3
ENGL 102	College English II	3
COMM 111	Public Speaking	3
ENGL 315	Introduction to English Linguistics [2]	3
ENGL 322	Origins of Western Literature	3
or ENGL 323	World Literature	
Content Courses Required for Middle Level Content Area I		
MATH 121	Geometry for College Students (offered summer only) [1]	3
MATH 123	College Trigonometry [1]	3
MATH 144	Business Calculus [1]	3
MATH 300	Evolution of Mathematics (offered summer only) [1]	3
MATH 501	Elementary Mathematics [1]	5
MATH 502	Mathematics for Middle School Teachers (offered fall only)	5
Content Courses Required for Middle Level Content Area II		
ENGL 317	History of the English Language	3
or ENGL 665	History of the English Language	
ENGL 330	The Nature of Fiction	3
ENGL 346	American Multicultural Literature	3
or ENGL 365	African-American Literature	
or ENGL 546	Studies in Ethnic Literature	
ENGL 680	Theory and Practice in Composition	3
CI 616	Literature for Adolescents	3
Total Credit Hours		58

Course	Title	Hours
CI 270	Introduction to the Education Profession [3]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [4]	3
CI 425E	ISAM: Middle/Secondary Level Content-Specific Methods I - English	2
or CI 425M	ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics	
CI 426E	Core II Practicum - English/ Language Arts	1
or CI 426M	Core II Practicum - Mathematics	
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 412E	Teaching Internship I: Middle Level English	2
CI 412M	Teaching Internship I: Middle Level Mathematics	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2
CI 435E	ISAM: Middle/Secondary Level Content-Specific Methods II - English/ Language Arts	3
CI 435M	ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics	3
Core IV - Spring Only		
CI 436E	ISAM: Middle/Secondary Level Content-Specific Methods III - English	2
CI 436M	ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics	2
CI 461E	Teaching Internship II: Middle Level English/ Language Arts	5
CI 461M	Teaching Internship II: Middle Level Mathematics	5
Licensure Exams		
PLT		

Praxis II English/Language Arts and Math Content Knowledge Tests	
Total Credit Hours	44

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development [3]	3
PSY 111	General Psychology	3
Total Credit Hours		6

[1] Needs 2.000 or better as prerequisite for MATH 502.

[2] Prerequisite for ENGL 317.

[3] Must have *B*- or better.

[4] If preferred, this class can be taken with Core III.

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B*- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B*- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Mathematics/Science (Middle)

General requirements for Bachelor's degree: 132 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - mathematics/science (middle) must take the following courses:

Course	Title	Hours
Requirements for Middle School Majors		
Mathematics		
Content Prerequisites in General Education		
MATH 111	College Algebra [1]	3
STAT 370	Elementary Statistics [1]	3
Content Courses Required for Middle Level Content Area		
MATH 121	Geometry for College Students (offered summer only) [1]	3
MATH 123	College Trigonometry [1]	3
MATH 144	Business Calculus [1]	3
MATH 300	Evolution of Mathematics (offered summer only) [1]	3
MATH 501	Elementary Mathematics [1]	5
MATH 502	Mathematics for Middle School Teachers (offered fall only)	5
Science		
Content Prerequisites in General Education		
PHYS 111	Introductory Physics	4
PHYS 395	Solar System Astronomy	3
Content Courses Required for Middle Level Content Area		
CHEM 103	Introductory General, Organic and Biochemistry	5
PHYS 502	Science Investigations: Physics	5
GEOL 102	Earth Science and the Environment	4
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
CI 505	Science Technology and Society	1
Total Credit Hours		58

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425S	ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences	2
or CI 425M	ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics	
CI 426S	Core II Practicum - Science	1
or CI 426M	Core II Practicum - Mathematics	
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 412S	Teaching Internship I: Middle Level Sciences	2
CI 412M	Teaching Internship I: Middle Level Mathematics	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2

CI 435S	ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences	3
CI 435M	ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics	3
Core IV - Spring Only		
CI 436S	ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences	2
CI 436M	ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics	2
CI 461S	Teaching Internship II: Middle Level Sciences	5
CI 461M	Teaching Internship II: Middle Level Mathematics	5
Licensure Exams		
PLT		
Praxis II Science and Math Content Knowledge Test		
Total Credit Hours		44

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
or ANTH 352	Linguistic Anthropology	
PSY 111	General Psychology	3
Total Credit Hours		9

[1] 2.000 or better required as prerequisite for MATH 502.

[2] *B-* or better.

[3] If preferred, this class can be taken with Core III.

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Physics (Secondary)

General requirements for a Bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major content GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - physics (secondary) must take the following courses:

Course	Title	Hours
Requirements for a Major		
PHYS 213	General College Physics I	5
PHYS 214	General College Physics II	5
PHYS 195	Introduction to Modern Astronomy	3
PHYS 501	Special Studies in Physics for Educators	3
or PHYS 551	Topics in Modern Physics	
MATH 123	College Trigonometry	3
MATH 242	Calculus I	5
CHEM 211	General Chemistry I [1]	5
CHEM 212	General Chemistry II [1]	5
BIOL 210	General Biology I	4
GEOL 300	Energy, Resources and Environment [1]	3
Total Credit Hours		41

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods	1
CI 315	Core I Practicum	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3
CI 425S	ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences	2
CI 426S	Core II Practicum - Science	1
CI 427	Philosophy, History and Ethics of Education	3
Core III - Fall Only		
CI 413S	Teaching Internship I: Secondary Level Sciences	2
CI 417	ISAM: Literacy Strategies in the Content Areas	2

CI 435S	ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences	3
CI 505	Science Technology and Society	1
CI 780S	Technology in the Classroom: Science	2
Core IV - Spring Only		
CI 436S	ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences	2
CI 471S	Teaching Internship II: Secondary Level Sciences	10
Licensure Exams		
PLT		
Praxis II Science Content Knowledge Test		
Total Credit Hours		40

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
ENGL 315	Introduction to English Linguistics	3
or LING 315	Introduction to English Linguistics	
or ANTH 352	Linguistic Anthropology	
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		12

Course	Title	Hours
Electives		
Select 6 credit hours of electives (to complete 120 credit hours)		6
Total Credit Hours		6

[1] General education course.

[2] *B-* or better.

[3] If preferred, this class can be taken with Core III.

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

BAED - Spanish (PreK-12)

General requirements for Bachelor's degree: 120 minimum credit hours; overall GPA 2.500; major GPA 2.500. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAED - Spanish (PreK-12) must take the following courses:

Course	Title	Hours
Requirements for a Major: 33 credit hours beyond the SPAN 112 level		
SPAN 220	Intermediate Spanish Grammar and Composition	3
SPAN 223	Selected Spanish Readings [1]	3
SPAN 300	Intermediate Spanish Readings	3
SPAN 325	Intermediate Spanish Conversation	3
MCLL 351	Linguistics and Foreign Languages	3
SPAN 505	Spanish Phonetics	3
SPAN 525	Advanced Spanish Conversation	3
SPAN 526	Advanced Spanish Grammar and Composition	3
SPAN 611	Survey of Spanish Modern Literature	3
or SPAN 621	Survey of Contemporary Latin-American Literature	
SPAN 626	Spanish Civilization	3
or SPAN 627	Latin-American Civilization	
Select 3 additional credit hours of upper-division Spanish		3
Total Credit Hours		33

[1] General Education course.

Course	Title	Hours
CI 270	Introduction to the Education Profession [2]	3
Teacher Education		
Core I - Fall Only		
CI 320	Introduction to Diversity: Exceptionalities	2
CI 321	Introduction to Diversity: Cultural Issues	2
CI 325	ISAM: Middle/Secondary General Methods [2]	1
CI 315	Core I Practicum [2]	1
Core II - Spring Only		
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction [3]	3

CI 425E	ISAM: Middle/Secondary Level Content-Specific Methods I - English [2]	2
CI 426E	Core II Practicum - English/ Language Arts [2]	1
CI 427	Philosophy, History and Ethics of Education	3
Core III - Concurrent Enrollment - Fall Only		
MCLL 411F	Preteaching Internship PreK-6 [2]	1
MCLL 413F	Preteaching Internship 6-12 [2]	1
MCLL 454F	ISAM: PreK-12 World Languages [2]	3
CI 417	ISAM: Literacy Strategies in the Content Areas [2]	2
Core IV - Teaching Internship - Spring Only		
MCLL 466	Teaching Internship PreK-12 in World Languages [2]	12
MCLL 455F	Teaching Internship Seminar in World Languages [2]	1
Licensure Exams		
PLT		
ACTFL Advisory Oral Proficiency Interview (OPI) - "Advanced Low" level or higher		
Praxis Content Knowledge Test		
Total Credit Hours		38

[2] *B-* or better.

[3] If preferred, this class can be taken with Core III.

Course	Title	Hours
Additional College Requirements - counted as General Education		
CESP 334	Introduction to Diversity: Human Growth and Development	3
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
Total Credit Hours		9

Course	Title	Hours
Electives		
Select 10 credit hours of electives (to complete program of 120 credit hours)		10
Total Credit Hours		10

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Applied Studies - Policies (p. 67).
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. *B-* or better in all methods, practicum and internship courses.
   c. 2.500 GPA (overall and WSU), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. *B-* or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements, and
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments, including an Advanced Low or higher rating on the Oral Proficiency Interview,
   b. Passing score on teacher work sample,
   c. PLT passed,
   d. Praxis II content test(s) passed
   e. Licensure application, and
   f. ACTFL Advisory OPI passed.

Applied Learning

Students are required to complete an applied learning or research experience to graduate from programs in the School of Education. The requirements can be met by the following:

Students who graduate from a teacher education program must successfully complete an assigned field experience in an educational setting.

Sport Management

The Department of Sport Management houses two different undergraduate degrees focusing on applied learning, including a Bachelor of Arts in sport management and a Bachelor of Applied Sciences in workforce leadership and applied learning.

Sport Management (BA)

Wichita State's Bachelor of Arts in sport management degree provides students with a quality curriculum including courses such as sport marketing, sport law, sport governance and sport facility management. Students pursuing the sport management degree program complete an internship requirement (or its equivalent). Graduates of this program work in a variety of sport settings including intercollegiate sports, minor league professional sports, major league professional sports, park and recreation departments, and in the health club/fitness industry.

The sport management program is accredited by the Commission on Sport Management Accreditation.

Workforce Leadership and Applied Learning (BAS)

Wichita State's Bachelor of Applied Sciences (BAS) in workforce leadership and applied learning degree is a flexible program focused on applied learning and workforce education integration. It features a choice of concentrations, including education and innovation, emergency and public service leadership, hospitality management, and an individualized plan of study.

Foundational to this degree are in-depth applied learning experiences, which may include paid apprenticeships, internships, clinical rotations and/or practicums and focus on occupational outcomes, such as job and degree integration responding to industry and workforce demands. These applied learning experiences are connected to courses designed to meet core competencies.

Majors in Sport Management

- BA in Sport Management (p. 99)
- BAS in Workforce Leadership and Applied Learning (p. 99)

Minors in Sport Management

- Minor in Esports Management (p. 101)
- Minor in Sport Management (p. 101)
- Minor in Workforce Leadership (p. 101)

Courses in Sport Management

- Sport Management (SMGT) (p. 499)

BA in Sport Management

Admission

Prospective students interested in pursuing the Bachelor of Arts in sport management degree must meet all admission requirements by the WSU College of Applied Studies. In addition, they must be aware of program content embedded in SMGT 112.

Program Requirements

A minimum total of 120 credit hours is required for the BA in sport management and includes the 55 credit hours of major courses that must be completed with a minimum grade point average of 2.000. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BA in sport management degree must take the following courses:

Course	Title	Hours
Required Major Courses		
SMGT 112	Introduction to Sport Management	3
SMGT 210	Practicum in Sport Management [1]	3
SMGT 300	Technology in Sport Management	3
SMGT 426	Sport Public Relations	3
SMGT 428	Revenue Management in Sport	3
SMGT 444	Human Resource Management in Sport	3
SMGT 446	Preinternship Seminar	1
SMGT 447A	Internship Sport Management	12
SMGT 461	Legal Aspects of Sport and Physical Activity I	3
SMGT 465	Psychology of Sport and Physical Activity	3
SMGT 466	Sport Marketing and Promotion	3
SMGT 475	Diversity in Sport Management	3
SMGT 511	Selling in the Sport Industry	3
SMGT 520	Sport Tournament and Event Management	3
SMGT 525	Sport Facility Management	3
SMGT 545	Sport Governance and Policy	3
Electives		
Students may satisfy elective requirements by selecting courses with the consent of the program advisor and/or by pursuing a minor in workforce leadership, exercise science, communication or one of the multiple minors available at WSU.		29
Total Credit Hours		84

[1] SMGT 447B (12 credit hours) may be taken in place of SMGT 210, with a corresponding 9 credit hour adjustment in electives.

All students are required to take 45 credit hours of courses numbered 300 or above.

Applied Learning

Students in the Bachelor of Arts in sport management program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by successfully completing SMGT 447A Internship Sport Management.

BAS in Workforce Leadership and Applied Learning

Admission

Prospective students interested in pursuing the BAS in workforce leadership and applied learning degree must meet all admission requirements by the WSU College of Applied Studies.

Program Requirements

A minimum total of 120 credit hours is required for the BAS in workforce leadership and applied learning degree and includes the 78 credit hours of major courses that must be completed with a minimum grade point average of 2.000. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Applied Studies, students in the BAS in workforce leadership and applied learning degree choose from the following courses:

The WLAL degree is broken down into the following components:

Course	Title	Hours
General Education courses		36
Electives		6
Applied Learning and Experiential Learning		21
Understanding Foundations of Workforce Leadership		3
Inclusive Excellence		6
Creativity and Development		6
Leadership Communication		6
Concentration		36
Total Credit Hours		120

A particular course, even though it is listed as applying to multiple areas of the degree, can be taken to satisfy only one WLAL requirement.

Curriculum

In addition to meeting WSU's general education requirements (p. 57), the following courses are required for the program:

Course	Title	Hours
Applied Learning and Experiential Learning		
Select 21 credit hours from the following		21
EDUC 400	Applied Studies Practicum	
EDUC 450	Applied Studies Internship	
EDUC 550	Applied Studies Apprenticeship I	
EDUC 600	Applied Studies Apprenticeship II	
Foundations of Workforce Leadership		
Select 3 credit hours from the following		3
EDUC 310	Principles of Leadership	
EDUC 500	Dimensions of Wellness	
Inclusive Excellence		
Select 6 credit hours from courses applying to the WSU Tilford Diversity Studies Certificate or from the following		6
EDUC 325	Social Justice in the Workplace	
SMGT 465	Psychology of Sport and Physical Activity	
SMGT 475	Diversity in Sport Management	

SMGT 552	Study Abroad in Sport and Entertainment	
SMGT 750N	Social Psychological Foundations of Sport	
SOC 306	Introduction to Gender Studies	
SOC 320	Contemporary Social Problems	
SOC 326	Sociology of Race & Ethnicity	
SOC 330	Social Inequality	
SOC 346	Sociology of Globalization	
SOC 405	Sociology of Aging	
POLS 305	Environmental Politics	
POLS 310	Latin American Politics	
POLS 320	Developing World	
POLS 336	International Organizations	
POLS 340	Global Challenges	
POLS 385	Democracy and Authoritarianism	
POLS 399	Travel Seminar	
Creativity and Development		
Select 6 credit hours from the following		6
EDUC 421	Organizational Design and Engagement I	
EDUC 422	Organizational Design and Engagement II	
EDUC 435	Developing Innovative Mindsets	
EDUC 440	Interviewing Principles and Techniques	
EDUC 500	Dimensions of Wellness	
EDUC 540	Leading for Creativity	
CI 326	Engaging and Motivating the Learner	
CI 415	Differentiated Instruction for Diverse Learners	
SMGT 300	Technology in Sport Management	
CESP 334	Introduction to Diversity: Human Growth and Development	
HPS 460 & 460L	Motor Learning and Motor Learning Lab	
ID 300	Design Thinking & Innovation	
Leadership Communication		
Select 6 credit hours from the following		6
EDUC 421	Organizational Design and Engagement I	
EDUC 422	Organizational Design and Engagement II	
EDUC 507	Managerial Leadership	
EDUC 610	Collaboration and Leadership	
EDUC 625	Interpersonal Communication in the Workplace	
SMGT 330	Applied Leadership Experience in Sport and Entertainment	
SMGT 750D	Sociology of Coaching	
SMGT 444	Human Resource Management in Sport	
HPS 302	Administration in Exercise Science	
HPS 750L	Motivation	
ID 506	Leadership Development for Innovation	
Concentration		
Select one of the concentrations below, then select 36 credit hours from the courses listed for that concentration		36
Concentration: Education and Innovation		
EDUC 405	Service Learning & Community Engagement	
EDUC 421	Organizational Design and Engagement I	
EDUC 422	Organizational Design and Engagement II	
EDUC 435	Developing Innovative Mindsets	
EDUC 440	Interviewing Principles and Techniques	
EDUC 485	Critical Organizational Studies	
EDUC 499	Cultivating Culture and Inspiring Change in Organizations	
EDUC 520	Principles of Learning Environments	
EDUC 540	Leading for Creativity	
EDUC 602	Human-Centered Service and Design	
EDUC 618	Education and Workplace Training	
EDUC 625	Interpersonal Communication in the Workplace	
EDUC 751A	Talent Development and the Workplace	
EDUC 751B	Teaching as Leadership	
EDUC 751C	Organizational History and Leadership	
EDUC 751D	Organizational Ethics and Decision-Making	
EDUC 300	Industry for Prior Learning I	
EDUC 301	Industry for Prior Learning II	
EDUC 302	Industry for Prior Learning III	
Concentration: Emergency and Public Service Leadership		
EDUC 305	Emergency and Public Service Industry for Prior Learning I	
EDUC 405	Service Learning & Community Engagement	
EDUC 505	Emergency and Public Service Industry for Prior Learning III	
Concentration: Hospitality Management		
EDUC 300	Industry for Prior Learning I	
EDUC 301	Industry for Prior Learning II	
EDUC 302	Industry for Prior Learning III	
Electives		
With the assistance of an advisor, select sufficient general education and elective courses to meet the required 120 credit hours.		
Total Credit Hours		78

Applied Learning

Students in the BAS in workforce leadership and applied learning program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met

by completing EDUC 600 Applied Studies Apprenticeship II. This culminating activity requires students to spend the equivalent of full-time employment in an appropriate organization where they document at least 640 hours.

Minor in Esports Management

The Minor in esports management provides basic sport management best-practices in order to prepare students from other majors the foundational skills to develop event or other forms of esports-centric programming. The minor consists of 12 credit hours of sport management courses.

Course	Title	Hours
Required Course		
SMGT 450A	Overview of Esports	3
Electives		
Select 9 credit hours from the following:		9
SMGT 112	Introduction to Sport Management	
SMGT 210	Practicum in Sport Management	
SMGT 426	Sport Public Relations	
SMGT 466	Sport Marketing and Promotion	
SMGT 511	Selling in the Sport Industry	
SMGT 520	Sport Tournament and Event Management	
SMGT 525	Sport Facility Management	
Total Credit Hours		12

At least 9 credit hours must be taken at WSU. A minimum GPA of 2.000 in the minor courses is required.

Minor in Sport Management

The sport management minor provides minimum knowledge for careers in the sport industry. It consists of 15 credit hours including:

Course	Title	Hours
SMGT 112	Introduction to Sport Management	3
Select four of the following:		12
SMGT 330	Applied Leadership Experience in Sport and Entertainment	
SMGT 426	Sport Public Relations	
SMGT 461	Legal Aspects of Sport and Physical Activity I	
SMGT 465	Psychology of Sport and Physical Activity	
SMGT 466	Sport Marketing and Promotion	
SMGT 475	Diversity in Sport Management	
SMGT 520	Sport Tournament and Event Management	
SMGT 525	Sport Facility Management	
SMGT 545	Sport Governance and Policy	
Total Credit Hours		15

At least 9 credit hours must be taken at WSU. A minimum GPA of 2.000 in the minor courses is required.

Minor in Workforce Leadership

The Minor in workforce leadership provides foundational knowledge for working with employees. It consists of 12 credit hours.

Course	Title	Hours
Required Course		
EDUC 310	Principles of Leadership	3
Electives		
Select 9 credit hours from the following		9
EDUC 400	Applied Studies Practicum	
EDUC 405	Service Learning & Community Engagement	
EDUC 421	Organizational Design and Engagement I	
EDUC 422	Organizational Design and Engagement II	
EDUC 440	Interviewing Principles and Techniques	
EDUC 540	Leading for Creativity	
EDUC 602	Human-Centered Service and Design	
EDUC 610	Collaboration and Leadership	
EDUC 618	Education and Workplace Training	
Total Credit Hours		12

At least 9 credit hours must be taken at WSU. A minimum GPA of 2.000 in the minor courses is required.

Business, W. Frank Barton School of

Larisa Genin, dean
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W. Frank Barton School of Business Website **(**http://wichita.edu/business/**)**[1]
John Perry, *associate dean*
Khawaja Asjad Saeed, *associate dean, graduate studies in business*

Mission

The Barton School prepares students for lifelong learning and success in the global marketplace, advances the knowledge and practice of business, and supports economic growth through research, outreach and knowledge transfer.

Vision

The Barton School strives to be internationally recognized as a model of research, knowledge transfer and applied business learning.

Core Values

- Being student centered and business driven
- Fostering integrity and intellectual curiosity
- Celebrating the development of critical thinking, innovation and an entrepreneurial mindset
- Honoring diversity of culture, thought and experience

Centers sponsored by the Barton School

The ***Business Operations and Analytics Lab*** **(BOAL)** helps manufacturing and service companies apply proven tools and techniques to improve the efficiency and quality of its operation's function. Its focus is on improving the processes used to conduct business regardless of the product or service being provided. The lab can also help companies build decision making models using analytics to gain a new competitive advantage.

The ***Center for Economic Development and Business Research (CEDBR)*** engages in business and economic research for a wide variety of clients in both private and public sectors. The center collects, analyzes and disseminates information to support activities in government, education, business and economic development organizations. The CEDBR maintains a comprehensive database of economic indicators including population, personal income, employment, construction and census data. Activities focus on issues related to the economic health of the region. The center publishes the Kansas Economic Report and a supplemental monthly, Kansas Economic Indicators.

The ***Center for Economic Education*** works with K-12 education to improve the teaching of economic concepts in primary and secondary schools. The center offers courses for preservice teachers at WSU who want to become social studies teachers, offers both credit and noncredit workshops for inservice teachers, and provides consulting services to school administrators in the south-central area.

The ***Center for International Business Advancement (***World Trade Council of Wichita ***(***http://www.wtcouncil.wichita.edu/***)***[1]***)*** works closely with the World Trade Council of Wichita to enhance international business in Wichita, benefiting both students and the local business community. CIBA sponsors an active chapter of AIESEC, and along with the World Trade Council, sponsors very popular monthly meetings that bring trade officials from other countries to Wichita.

The ***Center for Management Development (CMD)*** offers noncredit management development seminars to Wichita and the surrounding area. The CMD seminars and workshops have been acclaimed for their usefulness to practicing business people and other professionals in a wide variety of organizations.

The ***Center for Real Estate (CRE)*** enhances the business environment and quality of life in Kansas communities through research and analysis of real estate markets and related policy issues. By providing the depth of information expected by investors in a competitive global economy, the CRE elevates and promotes Kansas real estate markets. In addition, the CRE serves as a bridge between the professional real estate community and the academic programs at Wichita State, helping WSU students and faculty connect with real estate professionals throughout the region.

The ***Institute for the Study of Economic Growth (ISEG)*** was established in 2018 to advance the teaching, research and application of innovative and entrepreneurial activities in a free enterprise economy to enhance societal prosperity through economic growth.

[1] Link opens new window.

W. Frank Barton School of Business Policies

Admission

Degree-bound students who select a business major are admitted to the Barton School of Business in program status. All students in the Barton School of Business must maintain a 2.250 grade point average. Students must complete 6 credit hours of English composition, 3 credit hours of communication, and 3 credit hours of college algebra with a grade of *C*- or better in each within their first 48 college credit hours. Failure to complete this requirement will bar a student from enrolling in upper-division business courses.

Advanced Standing

Students who qualify for advanced standing have:

1. An overall and WSU institutional grade point average of 2.250;
2. Completed the following courses:
   a.

Course	Title	Hours
ACCT 210	Financial Accounting	3
ACCT 220	Managerial Accounting	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
ECON 231	Introductory Business Statistics	3
ECON 232	Statistical Software Applications for Business	1
MATH 144	Business Calculus	3
BADM 161	Business Software: Word	1
BADM 162	Business Software: Excel	1
BADM 163	Business Software: Access and PowerPoint	1

   b. or equivalent courses, and;
3. Completed all parts of the Barton School Advanced Standing Assessment.

For degree-seeking students in the Barton School of Business, advanced standing is a prerequisite for all upper-division courses in the school.

Transfer Students

Students planning to transfer into the Barton School of Business from another institution to obtain the BBA must complete BADM 301, in

their first semester at WSU. Transfer students should be aware that 50 percent of their business coursework must be taken at Wichita State University.

Date of Catalog Requirements

Students entering or transferring into the Barton School of Business are placed on the most current catalog based on the semester they begin at the Barton School of Business and must complete the degree requirements of that catalog. Students who have been out of the university for two consecutive years or more must complete the most current catalog requirements.

Second Business Degree

Graduation requirements are determined by the catalog degree requirements in place at the time of the student's first enrollment term for the second degree. This ensures that the knowledge and skills acquired by students will be current with the state of knowledge in the field of business.

Probation and Dismissal

Students are expected to make satisfactory progress in their studies. The W. Frank Barton School of Business adheres to current WSU probation and dismissal policies found in the Academic Probation and Dismissal (p. 33) section of the Undergraduate Catalog with the following exceptions: Barton School students must maintain a GPA of 2.250 to remain in good standing.

In addition to meeting academic standards, students are expected to follow the Student Code of Conduct which can be found online in section 8.05 of the WSU Policies and Procedures Manual *(*http://wichita.edu/policiesprocedures/*)*[1], and to meet the professional standards governing any organization in which the student is participating as an intern, exchange student or other capacity.

Students who fail to meet these standards are required to work closely with an advisor to explore options and conditions for future readmission.

Limitations on Student Load

Initially admitted Barton School of Business students are limited to a maximum of 16 credit hours, to which may be added 1 credit hour of elective. Students admitted to advanced standing in the college are limited to a maximum of 18 credit hours, to which may be added 1 credit hour of elective.

All Barton School of Business students are limited to enrollment in one course during a summer pre-session, one course in any four-week summer session and two courses in any eight-week summer session. If a student is enrolled in both an eight-week and a four-week summer session, the maximum enrollment is two courses. Students on probation may not enroll in two-week courses.

Cooperative Education (Co-op)

The Barton School of Business participates in the university's cooperative education program. The program is designed to provide relevant paid employment experiences that integrate, complement and enhance the student's academic program. Students are placed in co-op positions in a variety of business settings, including government agencies, financial institutions, social agencies, accounting firms, entrepreneurial companies and many others. Individual academic projects are formulated in consultation with the student's faculty advisor.

Business students may enroll in 1 credit hour of co-op per semester with a 2.250 overall and WSU institutional grade point average as early as their sophomore year. Students enrolling in 2 or 3 credit hours of co-op during a single semester must have junior standing and at least an overall and WSU institutional GPA of 2.250. (A higher GPA may be required by their major area.) The number of hours of co-op credit that can be applied to different majors is explicitly stated in each area.

Co-op placements must be approved by the student's faculty advisor. See the business coordinator in the cooperative education office for more information.

Advising

The Business Advising Center provides academic advising to support students in finding their way through the Barton School of Business. The advisor is the link between the student and the university — with its faculty, policies and procedures. The focus of advising in the Barton School of Business is to help students progress toward their educational objectives and career goals.

Types of Advising Assistance Available

Program Planning

Students are encouraged to outline an entire plan of study early in their academic career by using the suggested degree completion plans for each of the majors and consulting with their advisors.

Schedule Building

Schedule building is the determination of specific courses a student should take in a given semester. Students should refer to the schedule of courses and catalog in consultation with a business advisor to determine a specific course of study. Selection of specific sections and of times for courses is the student's responsibility.

Transcript Evaluation

Two aspects of transcript evaluation are:

1. The evaluation of coursework to be transferred to Wichita State University for a degree, and
2. The continuing evaluation of completion of graduation requirements.

Evaluation of transfer work is accomplished by a business advisor, working in conjunction with the Office of the Registrar and the various departments within the school.

Counseling

Students seeking career guidance, personal counseling or other types of assistance will be directed to the appropriate university office by the staff of the advising center.

Academic Honesty

The faculty of the Barton School of Business strongly endorse the statement on academic honesty appearing in the Student Code of Conduct. (See Student Code of Conduct and Student Academic Honesty for excerpts (p. 37).)

Students accused of academic misconduct may appeal through the appeals process found in policy 2.17/Student Academic Honesty of the WSU Policies and Procedures Manual *(*https://wichita.edu/policiesprocedures/*)*[1].

[1] Link opens new window.

Undergraduate Degrees

Bachelor of Business Administration

The undergraduate curriculum of the Barton School of Business leads to the Bachelor of Business Administration (BBA). Areas of emphasis or majors are offered in several fields within the School of Accountancy and the following departments: economics; finance, real estate and decision sciences; management and marketing.

Students may obtain a second bachelor's degree in the Barton School of Business if they:

1. Complete a minimum of 30 credit hours in residence in the Barton School of Business (in addition to the work required for the first bachelor's degree); and
2. Satisfy the school's general requirements and emphasis/major requirements in effect at the time they embark on the program leading to a second bachelor's degree.

Bachelor of Business Administration – Undecided

Students who need help in choosing a Barton School major may temporarily choose the BBA — undecided business major. These students receive targeted assistance from the Barton School Advising Center. Students must transfer to a regular major before reaching 60 earned credit hours.

Students will pursue the Barton School's orientation, advanced standing and other lower-division requirements, and WSU's general education requirements (p. 57) while in the undecided business major. Students must choose an actual major before reaching 60 earned credit hours.

Graduate Degrees

Master's degree programs in the school lead to the Executive Master of Business Administration (EMBA), Master of Business Administration (MBA), Master of Accountancy (MACC), and the Master of Arts (MA) in economics.

For additional information on graduate programs, see the Wichita State University Graduate Catalog.

Certificates

A graduate certificate in enterprise systems and supply chain management is offered jointly with the College of Engineering. The Barton School also offers a graduate certificate in entrepreneurship and innovation.

Business Emphases in Other University Programs

Students in Fairmount College of Liberal Arts and Sciences may major in economics. Students from all colleges may minor in accounting, economics, entrepreneurship, finance, general business, information technology and management information systems, international business, management, marketing, operations management, and personal selling. A minor in general business is not available to students pursuing a degree in the Barton School of Business.

A field major in international studies is offered in cooperation with Fairmount College of Liberal Arts and Sciences for students interested in specializing in a foreign area of the world or in international business, economics or public affairs. The major prepares students for careers in international organizations, within the U.S. government and in business firms. Additionally, a cooperative chemistry/business program is offered in the department of chemistry.

Inter-College Double Major

An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Applied Studies, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 35).

Majors in the W. Frank Barton School of Business

- Bachelor of Business Administration (BBA) (p. 106)
  - Dual/Accelerated BBA to Master of Human Resource Management (p. 107)
  - BBA - Accounting (p. 107)
  - BBA - Economics (p. 107)
  - BBA - Entrepreneurship (p. 108)
  - BBA - Finance (p. 108)
  - BBA - General Business (p. 109)
  - BBA - Human Resource Management (p. 109)
  - BBA - International Business (p. 110)
  - BBA - Management (p. 110)
  - BBA - Information Technology and Management Information Systems (p. 111)
  - BBA - Marketing (p. 111)

Real Estate Emphasis

An emphasis in real estate is available to students majoring in economics, entrepreneurship, finance or marketing. See those majors for details.

Minors in the W. Frank Barton School of Business:

- Minor in Accounting (p. 112)
- Minor in Business Analytics (p. 112)
- Minor in Economics (p. 112)
- Minor in Entrepreneurship (p. 112)
- Minor in Finance (p. 113)
- Minor in General Business (p. 113)
- Minor in Human Resource Management (p. 113)
- Minor in Information Technology and Management Information Systems (p. 113)
- Minor in International Business (p. 114)
- Minor in Management (p. 114)
- Minor in Marketing (p. 114)
- Minor in Operations Management (p. 115)
- Minor in Personal Selling (p. 115)
- Minor in Supply Chain Management (p. 115)

Certificates in the W. Frank Barton School of Business

- Certificate in Business Analytics (p. 115)

Courses in the W. Frank Barton School of Business

- Accounting (ACCT) (p. 295)
- Business Administration - General (BADM) (p. 316)
- Business Law (BLAW) (p. 322)
- Decision Sciences (DS) (p. 369)
- Economics (ECON) (p. 370)
- Entrepreneurship (ENTR) (p. 389)
- Finance (FIN) (p. 392)
- Human Resource Management (HRM) (p. 425)
- International Business (IB) (p. 427)
- Management (MGMT) (p. 451)
- Management Information Systems (MIS) (p. 453)
- Marketing (MKT) (p. 454)
- Real Estate (RE) (p. 493)
- WSU First-Year Seminar: Business (WSUB) (p. 518)

Course Descriptions

Business courses numbered 100 to 299 are designed primarily for freshmen and sophomores, but students from other classes may be admitted for lower-division credit.

Business courses numbered 300 to 499 are available only to juniors and seniors. Graduate students may not take these courses for graduate credit.

Business courses numbered 500 to 699 are available to juniors and seniors, but graduate students may also receive graduate credit for these courses.

Business courses numbered 700 to 799 are structured primarily for graduate students, but undergraduate, upper-division students may be admitted if they meet course prerequisites.

Courses numbered 800 to 899 are designed for graduate students only, and students may not be admitted to these courses unless they have been admitted to the Graduate School. (See the Academics section of the catalog for special conditions under which seniors may be admitted to graduate courses.)

Cross-listed Courses

Selected courses in the Barton School of Business are cross-listed because course content is suitable to more than one discipline. Every department or program which offers cross-listed courses provides a separate catalog description. Students may enroll in cross-listed courses to meet major and minor requirements, but credit may be earned under only one of the course listings.

Bachelor of Business Administration

Candidates for the Bachelor of Business Administration degree must satisfy the following Barton School of Business requirements:

Note: If a minimum grade is required, it is listed after the course, example: (C-)

1. Complete the Barton School of Business orientation requirement:
   a. *For incoming freshmen:*

Course	Title	Hours
BADM 101 & BADM 102	Becoming a Business Student I and Becoming a Business Student II	2

   b. *For transfer students:*

Course	Title	Hours
BADM 301	Transferring to the Barton School of Business	1

2. Complete WSU foundation, general education and any additional university graduation requirements (p. 57). Business majors need either:

Course	Title	Hours
Select one of the following:		3-5
MATH 111	College Algebra (C-) [1]	
MATH 112	Precalculus Mathematics (C-) [1]	

3. Complete advanced standing requirements and exams:

Course	Title	Hours
Select one of the following:		3-5
MATH 144	Business Calculus [1]	
MATH 242	Calculus I [1]	
ECON 231	Introductory Business Statistics	3
ECON 232	Statistical Software Applications for Business	1
BADM 161	Business Software: Word (C-)	1
BADM 162	Business Software: Excel (C-)	1
BADM 163	Business Software: Access and PowerPoint (C-)	1
ACCT 210	Financial Accounting	3
ACCT 220	Managerial Accounting [2]	3
ECON 201	Principles of Macroeconomics [1]	3
ECON 202	Principles of Microeconomics [1]	3

4. Complete the college requirements for a major in the Barton School of Business.

Course	Title	Hours
Select one of the following:		3
PSY 111	General Psychology [1]	
SOC 111	Introduction to Sociology [1]	
PHIL 105	Critical Reasoning [1]	3
PHIL 306	Business Ethics [1]	3

5. Complete business core requirements for the Bachelor of Business Administration degree:

Course	Title	Hours
MKT 300	Marketing [2]	3
ENTR 310	The Entrepreneurial Experience	3
IB 333	International Business [1]	3
FIN 340	Financial Management I [2]	3
DS 350	Introduction to Production and Operations Management	3
MGMT 360	Principles of Management	3
MIS 395	Management Information Systems (MIS majors are not required to complete MIS 395)	3
BLAW 431	Legal Environment of Business (For accounting majors: BLAW 635 or BLAW 636)	3
MGMT 681	Strategic Management (capstone)	3

6. Complete at least 50 percent of the total upper-division business credit hours at Wichita State University (excluding BADM 301).
7. Achieve a grade point average of 2.250 or better on:
   a. All college work,
   b. All work taken at Wichita State, and
   c. All business core and current major(s) courses taken at Wichita State (excluding BADM 301).
8. **Submit an application for degree through the *my*WSU portal before the deadline: October 1 for fall graduates, March 1 for spring and summer graduates.** See — Business Advising Center website (http://wichita.edu/businessadvising/)[3].
9. Complete the Barton School exit survey (in the final semester at WSU).

[1] *Note:* These courses may count towards the general education requirements. ECON majors may not use ECON 201 and ECON 202 for general education requirements. IB majors may not use IB 333 for general education requirements.

[2] Some majors may have minimum grade requirements — see specific major courses.

[3] Link opens new window.

Dual/Accelerated BBA to Master of Human Resource Management

The dual/accelerated Bachelor of Business Administration to Master of Human Resource Management program is designed to prepare qualified students for graduate work in human resource management at WSU through a coordinated program leading to both degrees. A student in the program is allowed to enroll in courses for graduate credit while completing the requirements for a BBA in human resource management (BBA-HRM).

Admission

To be considered for admission to the program, the following must be satisfied:

1. An undergraduate GPA of 3.000 overall;
2. Completion of at least 60 credit hours of undergraduate study;
3. Completion of four HRM and/or MGMT classes at the 300 level or above; and
4. Admission recommendation from a member of the HRM or MGMT graduate faculty.

Once a student meets the admission criteria, that student can apply for admission to the program.

The student should apply for admission to the program during the semester prior to the first semester in which they intend to enroll in a course for graduate credit. Students admitted to the dual/accelerated program are allowed to enroll in courses for graduate credit, including 800-level courses, prior to completing undergraduate degree requirements.

Upon admission to the dual/accelerated program the student is granted tentative admission to the Master of Human Resource Management (MHRM) program, pending award of the BBA degree.

Note: A student who has previously been admitted to a graduate degree program at Wichita State may not be admitted to the dual/accelerated program.

Program Requirements

Following admission to the MHRM program, the student should outline a tentative plan of study in consultation with the MHRM program director. Continuation in the program requires a continuing WSU undergraduate cumulative GPA of at least 3.000 and a GPA of at least 3.000 in courses taken for graduate credit.

At most, 9 credit hours may be joint degree hours — hours taken for graduate credit at the 700 level or above that are also applied to the bachelor's degree. If this deviation is requested, joint-degree hours many not include workshop courses, undergraduate core curriculum courses, cooperative education courses, or courses that are prerequisite for the graduate program. A course taken for joint credit must be so identified at the time of enrollment in that course. Where courses specify different requirements for graduate and undergraduate students (500–799), the student must meet the requirements for graduate students to apply the course to graduate credit.

BBA - Accounting

School of Accountancy

Candidates for the Bachelor of Business Administration (BBA) degree in accounting must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Course	Title	Hours
Accounting Major		
ACCT 310	Financial Accounting and Reporting: Assets	3
ACCT 360	Accounting Information Systems	3
ACCT 410	Financial Accounting and Reporting: Equities	3
ACCT 420	Intermediate Cost Accounting	3
ACCT 430	Introduction to Federal Income Tax	3
ACCT 580	Data Analytics for Accountants	3
ACCT 610	Financial Accounting and Reporting: Special Entities and Complex Issues	3
ACCT 630	Taxation of Business Entities	3
ACCT 640	Principles of Auditing	3
College Requirement for ACCT Majors		
ENGL 210	Composition: Business, Professional and Technical Writing	
Total Credit Hours		27

Credit hours in ACCT 481 cannot be included in the accounting major. All accounting courses must be completed with a grade of *C* (2.000) or better.

Accounting Majors may NOT enroll in ACCT 210 online or ACCT 220 online at Wichita State University.

External Link - How to contact the Kansas Board of Accountancy for questions relative to the CPA Exam requirements in the State of Kansas: Kansas Board of Accountancy website (http://ksboa.org/)[1].

[1] Link opens new window.

Applied Learning

Students in the BBA in accounting program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by taking ACCT 610 Financial Accounting and Reporting: Special Entities and Complex Issues.

As part of this course, students are required to complete a semester-long nonprofit project using Premium Access Tools, Data, Analyses and Tax Returns from Guidestar.org. This Premium Access, provided free to students, normally costs $1,500 annually per person.

BBA - Economics

Department of Economics

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Course	Title	Hours
Required Courses		
ECON 301	Intermediate Macroeconomics	3
ECON 302	Intermediate Microeconomics	3
Upper-Division Electives		
Select 15 credit hours with at least 9 credit hours in economics, another 6 with advisor consent		15
Total Credit Hours		21

Credit hours in co-op may not be counted toward the economics major.

Note: ECON 201 and ECON 202 cannot be used to meet general education requirements for ECON majors.

Economics Emphasis in Real Estate

Course	Title	Hours
Required Courses		
ECON 301	Intermediate Macroeconomics	3
ECON 302	Intermediate Microeconomics	3
RE 310	Principles of Real Estate	3
Select one of the following:		3
ECON 340	Money and Banking	
or ECON 709	Urban Economics	
or RE 709	Urban Economics	
Electives		
Select 12 credit hours of upper-division (300 or above) economics or real estate courses [1]		12
Total Credit Hours		24

[1] No more than 3 credit hours of RE 481 may be used to satisfy the elective component of this degree.

Of the 24 credit hours required for the economics emphasis in real estate major, 12 credit hours must come from ECON courses and 12 credit hours must come from RE courses. Urban Economics (RE 709/ECON 709) may be counted as either an ECON or RE class.

Applied Learning

Students in the BBA in economics program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by completing ECON 301 Intermediate Macroeconomics, which includes an applied research project.

BBA - Entrepreneurship

Department of Management

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Course	Title	Hours
Required Courses		
ENTR 440	New Venture Feasibility Analysis	3
ENTR 455	Entrepreneurial Finance	3
ENTR 620	Growing and Managing an Entrepreneurial Firm	3
ENTR 668	New Venture Development	3
Electives		
Select 9 credit hours from the following:		9
ENTR 403	Marketing Research	
ENTR 481	Cooperative Education	
ENTR 491	Independent Study/Project	
ENTR 605	Technology Entrepreneurship	
ENTR 608	Selling and Sales Force Management	
ENTR 690	Special Topics in Entrepreneurship	
ENTR 706	Seminar in New Product and Technology Development	
HRM 466	Fundamentals of Human Resource Management	
MKT 404	Retail Management	
MKT 601	International Marketing	
RE 310	Principles of Real Estate	
Total Credit Hours		21

Entrepreneurship Emphasis in Real Estate

Course	Title	Hours
Required Courses		
ENTR 440	New Venture Feasibility Analysis	3
ENTR 455	Entrepreneurial Finance	3
ENTR 620	Growing and Managing an Entrepreneurial Firm	3
ENTR 668	New Venture Development	3
RE 310	Principles of Real Estate	3
RE 619	Urban Land Development	3
Electives		
Select 6 credit hours of upper-division (300 or above) real estate courses [1]		6
Total Credit Hours		24

[1] No more than 3 credit hours of RE 481 may be used to satisfy the elective component of this degree.

Applied Learning

Students in the BBA - entrepreneurship program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by taking ENTR 668 New Venture Development.

This course is taught in combination with one or more engineering senior design capstone course(s). As part of this course, entrepreneurship students are placed on a team with engineering students and are required to co-create a new product idea and business venture. Each multidisciplinary student team must interview at least 50 potential customers and/or industry experts to test the product idea, create an original business model and plan, and participate in the Shocker New Venture Competition.

BBA - Finance

Department of Finance, Real Estate & Decision Sciences

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Course	Title	Hours
Required Courses		
ACCT 310	Financial Accounting and Reporting: Assets	3
ECON 340	Money and Banking	3
FIN 440	Financial Management II	3
FIN 620	Investments	3
Electives		
Select 15 credit hours of upper-division (300 or above) finance courses [1]		15
Total Credit Hours		27

[1] FIN 340 is a part of the business core requirements and cannot be used as an upper-division finance elective.

Finance Emphasis in Real Estate

Course	Title	Hours
Required Courses		
FIN 440	Financial Management II	3
FIN 450	Applied Financial Analysis	3
RE 310	Principles of Real Estate	3
Select one of the following:		3
RE 611	Real Estate Finance	
or RE 618	Real Estate Investment Analysis	
Electives		
Select 9 credit hours of upper-division (300 or above) real estate courses [1]		9
Select 3 credit hours of upper-division (300 or above) finance courses [1]		3
Total Credit Hours		24

[1] No more than 3 credit hours of FIN 481 or RE 481 may be used to satisfy the elective component of this degree.

Majors in finance or finance emphasis in real estate must complete FIN 340 with a *C+* or better to continue in the major.

Applied Learning

Students in the BBA - finance program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completion of FIN 620 Investments.

BBA - General Business

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Course	Title	Hours
Required Courses		
MKT 405	Consumer Behavior	3
MGMT 463	Building Effective Work Teams	3
HRM 466	Fundamentals of Human Resource Management	3
or ECON 660	Labor Economics	
IB Elective		
Select one of the following		3
IB 450	Negotiating Across Cultures	
IB 561	International Economics and Business	
IB 600	International Management	
IB 601	International Marketing	
IB 625	International Financial Management	
Directed Electives		
Select 9 credit hours of directed electives	Upper division business electives from the following business disciplines (must be spread over at least two disciplines): decision sciences, economics, entrepreneurship, finance, management information systems, or real estate.	9
Total Credit Hours		21

Credit hours in co-op may not be counted toward the general business major.

Note: Other courses may be used as directed electives with a business advisor's consent.

Applied Learning

Students in the BBA - general business program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing MGMT 463. This course contains an applied learning experience and is a required course for the BBA - general business program.

BBA - Human Resource Management

Department of Management

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Course	Title	Hours
Required Courses		
HRM 466	Fundamentals of Human Resource Management	3
HRM 665	Employment Law	3
HRM 666	Human Resource Staffing	3
HRM 668	Compensation	3
HRM 669	Training and Development	3
Electives		
Select 6 credit hours from the following:		6
MGMT 462	Leading and Motivating	
MGMT 460	Designing Effective Organizations	
MGMT 463	Building Effective Work Teams	
MGMT 464	Communicating Effectively in Organizations	
MGMT 662	Managing in Diverse Organizations	
Other courses may be used as electives with advisor consent, including:		
HRM 481	Cooperative Education	
HRM 491	Independent Study/Project	
HRM 690	Seminar in Selected Topics	
Total Credit Hours		21

A maximum of 3 credit hours of co-op may be used in the major.

Applied Learning

Students in the BBA - human resource management program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by taking HRM 669 Training and Development.

In this course, students are required to complete a semester-long training project for real existing businesses or designated group of trainees. The project allows students to apply the course concepts in a real, practical situations. Students can choose their target population or organization.

BBA - International Business

Department of Management

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Students majoring in international business must make three choices early in their program:

1. ***Language.*** A minimum of 10 credit hours of foreign language is required. Students who already have foreign language skills beyond the elementary level should consult with a business advisor or academic advisor. The language credit hours are not part of the 21 credit hours required for the international business major.
2. ***Minor.*** International business majors must choose a functional area of business as a minor: accounting, economics, entrepreneurship, finance, human resource management, management, management information systems, marketing, operations management or personal selling. The minor credit hours are not part of the 21 credit hours required for the international business major. A major in these functional areas of business would also meet this requirement.
3. ***International Experience.*** International business majors are required to participate in an academic international experience. The preferred option is to study abroad at least one semester at a university. An alternative is a short-term academic international study tour. Nine international experience credit hours can be applied toward the 21 credit hours required for the international business major.

Course	Title	Hours
Required Courses		
IB 561	International Economics and Business	3
IB 600	International Management	3
IB 601	International Marketing	3
Directed Electives		
Select 12 credit hours from the following:		12
IB 400	Principles of Global Supply Chain Management and Logistics	
IB 450	Negotiating Across Cultures	
IB 481	Cooperative Education	
IB 491	Independent Study/Project	
IB 625	International Financial Management	
IB 690	Special Topics in International Business	
POLS 220	Introduction to International Relations	
POLS 226	Comparative Politics	
POLS 336	International Organizations	
POLS 395	U.S. Foreign Policy	
POLS 570	International Political Economy	
or ECON 570	International Political Economy	
MKT 403	Marketing Research	
or MKT 405	Consumer Behavior	
History: History courses approved by an academic advisor		
Language courses: 200-level and above		
International experience: Students may count up to 9 credit hours of international experience toward their directed electives		
Total Credit Hours		21

Note for international students: International students who are already studying abroad at WSU or who have transferred to WSU from another country may be deemed to have met the international experience requirement. International students who choose their home region need to work with an advisor to plan their courses to fulfill the language and cultural/area studies requirements. It is recommended that non-English speakers choose English language courses and courses on U.S. culture, history and/or political systems to fulfill these requirements. International students who choose a regional emphasis outside their home region are required to fulfill the same language and cultural/area studies requirements as domestic students.

Applied Learning

Students in the BBA - international business program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by taking IB 333 International Business.

As part of this course, students must complete a "Family Vacation Assignment". In this assignment, each student is required to collect data on current events that affect international business, and demonstrate their ability to engage with and put that data in a usable format. They are further required to to interview two people who have worked, lived or are from two different countries, identified from the family vacation project.

BBA - Management

Department of Management

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Course	Title	Hours
Required Courses		
HRM 466	Fundamentals of Human Resource Management	3
MGMT 460	Designing Effective Organizations	3
MGMT 462	Leading and Motivating	3
MGMT 463	Building Effective Work Teams	3
Electives		
Select three of the following: [1]		9
MGMT 430	Business, Government and Society	
MGMT 450	Negotiating Across Cultures	

MGMT 464	Communicating Effectively in Organizations	
MGMT 662	Managing in Diverse Organizations	
MGMT 680	Making Effective Decisions	
DS/IB 400	Principles of Global Supply Chain Management and Logistics	
ENTR 440	New Venture Feasibility Analysis	
ENTR 620	Growing and Managing an Entrepreneurial Firm	
HRM 666	Human Resource Staffing	
HRM 669	Training and Development	
IB 561	International Economics and Business	
IB 600	International Management	
IB 601	International Marketing	
IB 625	International Financial Management	
Total Credit Hours		21

[1] Up to 3 credit hours may be substituted from upper-level courses in business administration with advisor's consent, including MGMT 481, MGMT 491 and MGMT 690.

A maximum of 3 credit hours of co-op may be used in the major.

Applied Learning

Students in the BBA - management program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by taking MGMT 463 Building Effective Work Teams.

As part of this course, students are required to work in teams to complete a service learning project. Each student team selects an organization and works with it throughout the semester to complete a preselected project.

BBA - Information Technology and Management Information Systems

Department of Finance, Real Estate & Decision Sciences

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Note: Information Technology and Management Information Systems (ITMIS) majors are not required to complete MIS 395 in the business core. Up to two non-ITMIS courses can be used toward the ITMIS major. Co-op credits may not be counted toward the major.

Course	Title	Hours
Required Courses		
MIS 310	Fundamentals of Business Application Development	3
MIS 325	Data Communications and Computer Networks	3
MIS 600	Database Management Systems	3
MIS 605	Systems Analysis and Design	3
MIS 610	Dynamic Web Programming	3
or MIS 615	Advanced Business Application Development	
MIS 696	Management of the IS Function	3
or DS 755	Project Management	
Electives		
Select 6 credit hours from the following:		6
MIS 610	Dynamic Web Programming	
MIS 611	Topics in Computer Networking	
MIS 615	Advanced Business Application Development	
MIS 690	Seminar in Selected Topics	
MIS 750	Business Intelligence and Analytics	
DS 675	Analytics Decision Modeling With Spreadsheets	
Total Credit Hours		24

Applied Learning

Students in the BBA - information technology and management information systems program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by taking MIS 325 Data Communications and Computer Networks.

As part of this course, students are required to troubleshoot a network problem. The problem is one which is presented by NetApp (a leading-edge Fortune 500 IT company) for one of its clients. Student troubleshooting analyses cover understanding the problem, finding root cause, fixing the problem and keeping the problem from recurring.

BBA - Marketing

Department of Marketing

Course	Title	Hours
Required Courses		
MKT 403	Marketing Research	3
MKT 405	Consumer Behavior	3
MKT 609	Marketing Programs	3
Directed Electives		
Select 6 credit hours from the following:		6
MKT 404	Retail Management	
MKT 407	Marketing for Service and Nonprofit Organizations	
MKT 601	International Marketing	
MKT 607	Promotion Management	
MKT 608	Selling and Sales Force Management	
Approved Electives		
Electives — 6 credit hours from the following:		6
COMM 312	Nonverbal Communication	
COMM 325	Speaking in Business and the Professions	
ENTR 620	Growing and Managing an Entrepreneurial Firm	
ENTR 668	New Venture Development	
ENTR 706	Seminar in New Product and Technology Development	
HRM 466	Fundamentals of Human Resource Management	
MGMT 462	Leading and Motivating	
MGMT 463	Building Effective Work Teams	

MGMT 680	Making Effective Decisions	
MKT 481	Cooperative Education	
Total Credit Hours		21

Marketing Emphasis in Real Estate

Course	Title	Hours
Required Courses		
MKT 403	Marketing Research	3
MKT 405	Consumer Behavior	3
MKT 609	Marketing Programs	3
RE 310	Principles of Real Estate	3
Select one of the following:		
MKT 607	Promotion Management	3
or MKT 608	Selling and Sales Force Management	
Electives		
Select 9 credit hours of upper-division (300 or above) real estate courses [1]		9
Total Credit Hours		24

[1] No more than 3 credit hours of RE 481 may be used to satisfy the elective component of this degree.

Majors in marketing or marketing emphasis in real estate must complete MKT 300 with a *C+* or better to continue in the major.

Applied Learning

Students in the BBA - marketing program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the coursework and the applied research project assigned in MKT 403 Marketing Research or MKT 481 Cooperative Education.

Minor in Accounting

All minors must contain at least 3 unduplicated credit hours.

A minor in accounting is available to any student whose major field or area of emphasis is outside of accounting. A minor in accounting consists of:

Course	Title	Hours
BADM 161	Business Software: Word	1
BADM 162	Business Software: Excel	1
BADM 163	Business Software: Access and PowerPoint	1
ACCT 210	Financial Accounting	3
ACCT 220	Managerial Accounting	3
9 credit hours of upper-division accounting		9
Total Credit Hours		18

Credit hours in co-op may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better. Accounting coursework must be completed with a grade of *C* (2.000) or better.

Minor in Business Analytics

Business analytics uses tools and models to analyze past data, visualize it, predict future performance and gain insight into developing business strategies for the future. A business analytics minor will give students an overview of descriptive, predictive and prescriptive models using advanced Excel and other tools.

Course	Title	Hours
Required Courses		
DS 350	Introduction to Production and Operations Management	3
FIN 340	Financial Management I	3
DS/FIN 675	Analytics Decision Modeling With Spreadsheets [1]	3
Elective Courses		
Select 6 credit hours of electives from the following		6
ECON 403	Business and Economics Forecasting	
MKT 403	Marketing Research	
FIN 450	Applied Financial Analysis	
ACCT 360	Accounting Information Systems	
MIS 600	Database Management Systems	
ECON 731	Applied Econometrics	
MIS 750	Business Intelligence and Analytics	
Total Credit Hours		15

[1] Prerequisites for DS 675/FIN 675: DS 350 and FIN 340 each with a grade of *C+* (2.300) or better, junior standing, advanced standing.

Note: Students must take at least 3 credit hours of unduplicated courses across all courses used toward their major or minor, and maintain an average of at least 2.300 (and no grade below *C*) for all courses comprising the minor.

Minor in Economics

All minors must contain at least 3 unduplicated credit hours.

A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor in economics consists of a minimum of:

Course	Title	Hours
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
9 credit hours of upper-division economics		9
Total Credit Hours		15

Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Minor in Entrepreneurship

All minors must contain at least 3 unduplicated credit hours.

This minor is open to WSU undergraduate students from all colleges who meet the following criteria.

- Overall GPA for minor must be 2.250 or better;
- Students must be a junior in good standing in their major (college); and
- Students must have completed 12 credit hours at WSU.

Course	Title	Hours
Required Courses (12 credit hours)		
ENTR 310	The Entrepreneurial Experience	3
ENTR 440	New Venture Feasibility Analysis	3

ENTR 455	Entrepreneurial Finance	3
ENTR 668	New Venture Development	3
Electives		
Select 3 credit hours from the following:		3
ENTR 605	Technology Entrepreneurship	
ENTR 608	Selling and Sales Force Management	
ENTR 620	Growing and Managing an Entrepreneurial Firm	
Total Credit Hours		15

Minor in Finance

All minors must contain at least 3 unduplicated credit hours.

A minor in finance is available to any student whose major field or area of emphasis is outside of finance. A minor in finance consists of:

Course	Title	Hours
ACCT 310	Financial Accounting and Reporting: Assets	3
FIN 340	Financial Management I	3
FIN 440	Financial Management II	3
6 additional credit hours of upper-division finance courses		6
Total Credit Hours		15

Minors in finance must complete FIN 340 with a *C+* or better to continue in the minor. Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Minor in General Business

All minors must contain at least 3 unduplicated credit hours.

A minor in general business is available to any student who is not pursuing a degree in the Barton School of Business. A minor in general business consists of:

Course	Title	Hours
ACCT 210	Financial Accounting	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
BLAW 431	Legal Environment of Business	3
FIN 340	Financial Management I	3
MGMT 360	Principles of Management	3
MKT 300	Marketing	3
Total Credit Hours		21

At least 15 credit hours must be taken at WSU with a minor GPA of at least 2.250.

Minor in Human Resource Management

In addition to the major, there are two options for a minor in human resource management: a minor that requires advanced standing in the Barton School, and a minor for nonbusiness majors that does not require advanced standing. Students in the Barton School are not eligible for the nonbusiness minor.

Human Resource Management Minor - Business Students

Course	Title	Hours
HRM 466	Fundamentals of Human Resource Management	3
Select at least two of the following:		6-12
HRM 665	Employment Law	
HRM 666	Human Resource Staffing	
HRM 668	Compensation	
HRM 669	Training and Development	
Other courses that may be used to complete the minor include:		
MGMT 450	Negotiating Across Cultures	
MGMT 463	Building Effective Work Teams	
MGMT 662	Managing in Diverse Organizations	
ECON 660	Labor Economics	
Total Credit Hours		9-15

All of the courses must be completed at WSU with a minor GPA of 2.250 or better. Students in this minor must have advanced standing in the Barton School of Business.

Human Resource Management Minor - Nonbusiness Students

Only WSU students who are not business students are eligible for this minor. Other requirements include the following:

- Overall GPA for minor must be 2.250 or better;
- Students must be a junior in good standing in their major (college); and
- Students must have completed 12 credit hours at WSU.

This minor consists of 15 upper-division hours of courses.

Course	Title	Hours
HRM 466	Fundamentals of Human Resource Management	3
Select at least two of the following:		6-12
HRM 665	Employment Law	
HRM 666	Human Resource Staffing	
HRM 668	Compensation	
HRM 669	Training and Development	
Other courses that may be used to complete the minor include:		
MGMT 450	Negotiating Across Cultures	
MGMT 463	Building Effective Work Teams	
MGMT 662	Managing in Diverse Organizations	
ECON 660	Labor Economics	
Total Credit Hours		9-15

Minor in Information Technology and Management Information Systems

All minors must contain at least 3 unduplicated credit hours.

A minor in information technology and management information systems (ITMIS) is available to any student whose major field or area of emphasis is outside of information technology and management information systems. A minor in ITMIS consists of:

Course	Title	Hours
MIS 310	Fundamentals of Business Application Development	3

MIS 325	Data Communications and Computer Networks	3
MIS 395	Management Information Systems	3
MIS 600	Database Management Systems	3
Select one of the following:		3
MIS 605	Systems Analysis and Design	
MIS 610	Dynamic Web Programming	
MIS 611	Topics in Computer Networking	
MIS 615	Advanced Business Application Development	
MIS 690	Seminar in Selected Topics	
MIS 750	Business Intelligence and Analytics	
DS 675	Analytics Decision Modeling With Spreadsheets	
DS 755	Project Management	
Total Credit Hours		15

Co-op credits may not be counted toward the major or minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Minor in International Business

All minors must contain at least 3 unduplicated credit hours.

This minor is open to WSU undergraduate students from all colleges who meet the following criteria:

- Overall GPA for minor must be 2.250 or better;
- Student must be a junior in good standing in their major (college); and
- Student must have completed 12 credit hours at WSU.

Course	Title	Hours
Required Courses (12 credit hours)		
MKT 300	Marketing (with a minimum grade of C+)	3
IB 333	International Business	3
IB 600	International Management	3
IB 601	International Marketing	3
Electives (3 credit hours)		
Select 3 credit hours from the following		3
IB 400	Principles of Global Supply Chain Management and Logistics	
IB 450	Negotiating Across Cultures	
IB 491	Independent Study/Project	
IB 561	International Economics and Business	
IB 625	International Financial Management	
POLS 220	Introduction to International Relations	
3 credit hours of another upper-division international business elective approved by a business advisor, or study abroad, or an international study tour		
Total Credit Hours		15

Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Minor in Management

All minors must contain at least 3 unduplicated credit hours.

A minor in management is available to any student whose major field or area of emphasis is outside of management. A minor in management consists of:

Course	Title	Hours
MGMT 360	Principles of Management	3
12 credit hours of upper-division management courses selected from the following:		12
MGMT 430	Business, Government and Society	
MGMT 450	Negotiating Across Cultures	
MGMT 460	Designing Effective Organizations	
MGMT 462	Leading and Motivating	
MGMT 463	Building Effective Work Teams	
MGMT 464	Communicating Effectively in Organizations	
MGMT 662	Managing in Diverse Organizations	
MGMT 680	Making Effective Decisions	
MGMT 681	Strategic Management	
IB 333	International Business	
IB 600	International Management	
HRM 466	Fundamentals of Human Resource Management	
HRM 665	Employment Law	
HRM 666	Human Resource Staffing	
HRM 669	Training and Development	
Total Credit Hours		15

Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Minor in Marketing

All minors must contain at least 3 unduplicated credit hours.

A minor in marketing is available to any student whose major field or area of emphasis is outside of marketing. A minor in marketing consists of:

Course	Title	Hours
MKT 300	Marketing	3
MKT 405	Consumer Behavior	3
MKT 609	Marketing Programs	3
Select 6 credit hours of upper-division marketing courses from the following:		6
MKT 403	Marketing Research	
MKT 404	Retail Management	
MKT 407	Marketing for Service and Nonprofit Organizations	
MKT 601	International Marketing	
MKT 607	Promotion Management	
MKT 608	Selling and Sales Force Management	
Total Credit Hours		15

Minors in marketing must complete MKT 300 with a *C+* or better to continue in the minor. Co-op credits may not be counted toward the

minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Minor in Operations Management

All minors must contain at least 3 unduplicated credit hours.

A minor in operations management is available to any student whose major field or area of emphasis is outside of operations management. A minor in operations management consists of:

Course	Title	Hours
Required Courses		
DS 350	Introduction to Production and Operations Management	3
DS 675	Analytics Decision Modeling With Spreadsheets	3
DS 755	Project Management	3
Upper-division Operations Management Courses		
Select 6 credit hours from the following:		6
DS 400	Principles of Global Supply Chain Management and Logistics	
DS 690	Seminar in Selected Topics	
MIS 600	Database Management Systems	
MIS 750	Business Intelligence and Analytics	
Total Credit Hours		15

At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Minor in Personal Selling

All minors must contain at least 3 unduplicated credit hours.

A minor in personal selling is available to any student whose major field or area of emphasis is outside of personal selling. A minor in personal selling consists of:

Course	Title	Hours
MKT 300	Marketing	3
MKT 405	Consumer Behavior	3
MKT 608	Selling and Sales Force Management	3
COMM 302	Interpersonal Communication	3
Select one upper-division communication course from the following:		3
COMM 312	Nonverbal Communication	
COMM 325	Speaking in Business and the Professions	
Total Credit Hours		15

At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Minor in Supply Chain Management

All minors must contain at least 3 unduplicated credit hours.

Course	Title	Hours
Required Courses (9 credit hours)		
DS 350	Introduction to Production and Operations Management	3
DS 400	Principles of Global Supply Chain Management and Logistics	3
DS 725	Global Procurement and Outsourcing	3
Upper Division Supply Chain Management Courses (6 credit hours)		
Select 6 credit hours from the following		6
DS 675	Analytics Decision Modeling With Spreadsheets	
DS 690	Seminar in Selected Topics	
DS 755	Project Management	
MIS 750	Business Intelligence and Analytics	
Total Credit Hours		15

At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Certificate in Business Analytics

A certificate in business analytics allows one to analyze data from any industry including manufacturing, service, health, government and nonprofit. INFORMS (Institute for Operations Research and the Management Sciences (https://informs.org)[1]) defines analytics as "the scientific process of transforming data into insight for making better decisions." With this certificate, students learn quantitative tools that help build descriptive, predictive and prescriptive models.

A student must complete 12 credit hours including the following:

Course	Title	Hours
DS/FIN 675	Analytics Decision Modeling With Spreadsheets	3
Select three of the following elective courses for a total of 9 credit hours		9
MIS 600	Database Management Systems	
MIS 750	Business Intelligence and Analytics	
MKT 403	Marketing Research	
FIN 450	Applied Financial Analysis	
ACCT 360	Accounting Information Systems	
ECON 403	Business and Economics Forecasting	
ECON 731	Applied Econometrics	
Total Credit Hours		12

[1] Link opens new window.

Engineering, College of

Dennis Livesay, ***dean***
A101 Partnership 2 • 316-WSU-3400
College of Engineering Webpage **(**http://wichita.edu/engineering/**)**[1]
Steven Skinner, *associate dean, undergraduate studies, finance and administration*
Janet Twomey, *associate dean, graduate studies, research and faculty success*

Modern technological developments in engineering have brought about considerable change in the College of Engineering's curriculum at Wichita State University. The curriculum provides graduates the skill-set, mindset and experience necessary to rapidly advance economic and technological prosperity, health and well-being. Consequently, WSU graduates are increasingly attractive to employers and graduate programs throughout the United States.

The College of Engineering is organized into six degree-granting departments: aerospace engineering; biomedical engineering; electrical engineering and computer science; engineering technology; industrial, systems and manufacturing engineering; and mechanical engineering.

[1] Link opens new window.

College of Engineering Policies

Admission

All entering students with a declared interest in engineering will be admitted to the College of Engineering in program status. Engineering students must complete:

ENGL 101/ENGL 100, ENGL 102 and COMM 111, each with a grade of *C-* or better, within the first 48 credit hours.

Transfer students admission criteria can be found on the Admission Requirements (p. 11) tab.

Probation

Students are placed on academic probation if any of the following grade point averages is less than 2.000 and if they have attempted at least six (6) cumulative credit hours at Wichita State University:

1. Overall grade point average of all college/university work,
2. Institutional grade point average, and
3. Engineering major grade point average.

An attempted course means that the student has officially enrolled in the course and either completed the course or was granted an incomplete. Attempts include courses receiving the grades (to include plus/minus grades) *A, B, C, D, F, Cr, NCr, Bg, NBg, S, U* and *I* but exclude *Au, CrE* and *W*. Academic probation is not removed until all grade point averages are at least 2.000. Transfer students admitted on probation must complete at least 12 hours of credit work at Wichita State before probation may be removed.

Students on academic probation may not enroll for more than 14 credit hours in a 16-week term, 6 credit hours in an eight-week term, or 3 credit hours in a four-week term. Exceptions may be made on the recommendation of the student's department advisor and the approval of the student's department chairperson.

Student resources are available in the Engineering Student Success Center, A119 P2, and through departmental academic advisors.

Academic Dismissal

Students are not academically dismissed at the end of a semester unless they began that semester on academic probation. Students will remain on probation as long as their overall, institutional or engineering major grade point average is below 2.000. Students on academic probation will be dismissed at the end of a semester if they fail to earn a semester grade point average at or above 2.000, and have an overall, institutional or engineering major grade point average below 2.000.

Dismissal from the college because of poor academic performance constitutes dismissal from the university. Dismissed students should immediately consult with their departmental academic or faculty advisor to explore options and conditions for future readmission.

Academic Advising and Enrollment

Students in the College of Engineering are required to receive academic advising from their academic or faculty advisor before enrolling each semester. Engineering students are strongly urged to register early for courses during published registration dates to avoid closed classes. Late registration or adding engineering courses will be allowed only during the first week of a regular semester or the first three days of a summer session.

Students in the College of Engineering may not enroll in more than 21 credit hours per semester during the academic year. Summer session enrollments are limited to a maximum of 5 credit hours for each four-week session or 10 credit hours during the eight-week session. Students who have completed at least 24 credit hours at WSU with a WSU grade point average of 3.000 or higher may petition their department chairperson for permission to enroll in additional hours.

Students who are employed full or part time should, in consultation with their academic advisor, reduce their enrollment to a level appropriate to their work load.

Only students admitted to the College of Engineering or the Graduate School will be allowed to enroll in engineering courses. The dean's office will consider petitions for exceptions to the preceding statement for qualified nonengineering students with legitimate reasons for enrolling in engineering courses.

Transfer Credit

Students transferring credits for engineering courses taken at other institutions must submit official transcripts to The Office of Undergraduate Admissions prior to being admitted to WSU. Transfer course evaluations may require the student to provide course descriptions and syllabi to the College of Engineering for evaluation.

Degree-bound WSU students should speak with a departmental academic or faculty advisor before enrolling in courses at another institution.

Degrees and Certificates Offered

Undergraduate

The Bachelor of Science degree programs in aerospace engineering, biomedical engineering, computer engineering, electrical engineering, industrial engineering, product design and manufacturing engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org)[1]. The Bachelor of Science degree program in computer science is accredited by the Computing Accreditation Commission of ABET (http://www.abet.org)[1]. The Bachelor of Science degree in engineering technology is accredited by the Engineering Technology Accreditation Commission of ABET (http://www.abet.org)[1]. The Bachelor of Science degree in applied computing is also offered.

Graduate

A Master of Science (MS) is offered in aerospace, biomedical, computer networking, computer science and electrical, industrial, and mechanical engineering. A Master of Engineering Management (MEM) program is offered in the industrial, systems and manufacturing engineering department. A Doctor of Philosophy (PhD) also is offered by the aerospace; biomedical; electrical and computer science; industrial, systems and manufacturing; and mechanical engineering departments.

Typical fields of specialization include: aerodynamics, fluid mechanics, propulsion, structures, solid mechanics, composites, dynamics and control; communication theory, computer networking, signal processing, software engineering, control theory, digital systems, energy and power systems; thermodynamics, heat transfer, engineering materials, engineering design and kinematics; and operations research, management science, manufacturing processes and human factors.

See the Wichita State University Graduate Catalog for more information about the graduate programs.

Certificates

The College of Engineering offers undergraduate certificates in sustainable materials and design, and assistive technology and accessible design.

See the graduate catalog for additional information regarding graduate certificates.

[1] Link opens new window.

Graduation Requirements

All engineering students who are pursuing bachelor's degrees must meet four sets of course requirements for graduation:

1. WSU general education requirements (p. 57),
2. College of Engineering requirements,
3. Departmental requirements, and
4. Graduation GPA requirements.

College of Engineering Requirements

1. Ethics: PHIL 385 is a required course for engineering students, while PHIL 354 is required for students in applied computing, computer engineering and computer science.

2. Engineering+: In response to the recommendation of the National Academy of Engineering report on the future needs for engineering graduates, the College of Engineering implemented the Engineering + program. All students must complete the Engineering+ program requirements including at least three of the following seven activities: undergraduate research, cooperative education or internship, global learning or study abroad, service learning, leadership, entrepreneurship and innovation, and multidisciplinary education. This program will make the educational experience more meaningful to the student and the student more desirable to local and national industries. More details about the program can be found on the College of Engineering website.

Departmental Requirements

1. Mathematics and natural sciences: Each program requires a minimum number of credit hours under the mathematics and natural sciences category. Refer to individual program requirements for more details.
2. Department requirements: Each department has specific courses that must be completed. These courses and their prerequisites are in the departmental sections of the catalog and are listed on the departmental check sheets.
3. Technical electives: Additional courses required, but not specified, by the department. Each should be chosen in consultation with a departmental academic or faculty advisor.

All programs are designed to meet ABET criteria and satisfy WSU general education requirements. All courses should be selected with the assistance of departmental academic or faculty advisors. The recommended sequence of courses for all departments is outlined later in this section. Each sequence has been planned so that students can complete the program and meet all requirements in the minimum time.

Graduation GPA Requirements

Students must file an online application for degree (AFD) card two semesters preceding their final semester.

Graduation grade point average requirements: The candidate for a degree must attain a 2.000 grade point average in each of the following categories:

1. All college and university work attempted (overall grade point average);
2. All work attempted at WSU (institutional grade point average); and
3. All work in the student's major, which includes technical electives.

Students are not allowed credit toward graduation for *D* grade work in excess of one-quarter of their total hours.

Inter-College Double Major

An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Applied Studies, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 35).

Cooperative Education Program

The College of Engineering offers a cooperative education program in conjunction with the Office of Applied and Experiential Learning.

The co-op plan is a voluntary program in which the student works part time (parallel program) or alternates paid preprofessional work periods with classroom periods during the junior and senior years.

To be eligible for the co-op program, a student must have completed 24 credit hours (9 within the College of Engineering) and be able to demonstrate by academic performance during the freshman year, the potential to complete the degree program satisfactorily. Generally, this means earning a grade point average of 2.500 or higher. Also the student's character and personality must be acceptable to the cooperating employer. Transfer students with the above qualifications should contact the engineering career specialist at the beginning of their first semester at WSU. To continue in the program, a student must maintain a satisfactory academic standing.

Students interested in participating in the program should contact the College of Engineering career specialist, who will provide the necessary information on what steps need to be taken to enroll.

Courses in the College of Engineering

- Aerospace Engineering (AE) (p. 296)
- Biomedical Engineering (BME) (p. 323)
- Computer Science (CS) (p. 359)
- Electrical Engineering (EE) (p. 374)
- Engineering (ENGR) (p. 385)
- Engineering Technology (ENGT) (p. 385)
- Industrial and Manufacturing Engineering (IME) (p. 431)
- Mechanical Engineering (ME) (p. 445)
- WSU First-Year Seminar: Engineering (WSUE) (p. 518)

Aerospace Engineering

The aerospace engineering program is accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org)[1].

To uphold the university and college missions, the aerospace engineering faculty, in consultation with its constituents, established the following program educational objectives:

1. Within a few years after graduation, program alumni are dependable, productive professionals using learned engineering principles to successfully satisfy employer needs in aerospace engineering or related fields in Wichita and the global community.
2. Within a few years after graduation, program alumni successfully complete advanced degrees in aerospace engineering or related fields.

Aerospace engineering students participate in an academic program of study in technical areas such as aerodynamics, performance, propulsion, flight mechanics and structures. After developing a background of skills in these technical areas, senior students complete a two course sequence in aerospace design.

The aerospace engineering curriculum also gives students the opportunity to develop a comprehensive foundation in mathematics, physics, general engineering, digital computations, written and oral communication, and humanities and social sciences.

Students have access to an excellent array of laboratory facilities including: an astronautics lab; four wind tunnels; a water tunnel; a flight simulation lab; a structural testing lab; a small-aircraft prototype lab; a propulsion lab; and a controls lab. These facilities and those shared with the National Institute of Aviation Research are among the finest found in academic institutions.

The aircraft industries in Wichita include Airbus, Bombardier Aerospace, Spirit AeroSystems, and Textron Aviation (including Beechcraft and Cessna). The presence of these companies has a strong positive influence on WSU's aerospace engineering program.

[1] Link opens new window.

Majors in Aerospace Engineering

- BS in Aerospace Engineering (p. 119)

Courses in Aerospace Engineering

- Aerospace Engineering (AE) (p. 296)

BS in Aerospace Engineering

Sequence of Courses

The undergraduate program requires the completion of 129 credit hours for graduation, and includes 33 credit hours of mathematics and natural sciences and 75 credit hours of major courses. In addition to meeting the requirements of the WSU General Education Program (p. 57), students majoring in aerospace engineering must take the following courses:

Course	Title	Hours
College/Program Requirements		
PHIL 385	Engineering Ethics [1]	3
ECON 201	Principles of Macroeconomics [1]	3
Mathematics/Natural Sciences		
MATH 242	Calculus I [1]	5
MATH 243	Calculus II [1]	5
MATH 344	Calculus III [1]	3
MATH 555	Differential Equations I	3
PHYS 313	Physics for Scientists I [1]	4
PHYS 314	Physics for Scientists II [1]	4
PHYS 315	University Physics Lab I [1]	1
CHEM 211	General Chemistry I [1]	5
Math or science elective [2]		3
Major Courses		
AE 223	Statics	3
EE 282	Circuits I	4
ME 398	Thermodynamics I	3
AE 227	Engineering Digital Computation	3
IME 222	Engineering Graphics [3]	2
IME 222L	Graphics Lab [3]	1
ME 250	Materials Engineering	3
AE 324	Fundamentals of Atmospheric Flight	3
AE 333	Mechanics of Materials	3
AE 373	Dynamics	3
AE 415	Introduction to Space Dynamics	3
AE 424	Aerodynamics I	3
AE 502	Aerospace Propulsion I	3
AE 512	Experimental Methods in Aerospace	3
AE 514	Flight Dynamics and Control	3
AE 524	Aerodynamics II	3
AE 525 & AE 625	Flight Structures I and Flight Structures II	6
AE 528 & AE 628	Aerospace Design I and Aerospace Design II	8
AE 607	Flight Control Systems	3
Technical electives [2]		12
Other general education courses [1, 4]		15
Total Credit Hours		129

[1] May count as a general education course.

[2] Must be chosen with advisor's approval or from a departmentally approved list.

[3] Aerospace engineering will allow students to substitute two ENGR 250 courses (one of which must be ENGR 250P) to satisfy program engineering drawing-related requirements.

[4] See the requirements of the WSU General Education program (p. 57). Starting in fall 2021, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences.

Applied Propulsion Track

The applied propulsion track requires four courses totaling 12 credit hours as follows:

Course	Title	Hours
AE 502	Aerospace Propulsion I (a required course for the BS in AE degree)	3
AE 742	Applied Jet Propulsion (taken as a BS in AE technical elective)	3
AE 743	Applied Jet Propulsion Subsystems (taken as a BS in AE technical elective)	3
An additional applied propulsion related course chosen from one of the following		3
AE 703	Rotor Aerodynamics	
AE 716	Compressible Fluid Flow	
AE 719	Introduction to Computational Fluid Dynamics	
AE 777	Vibration Analysis	
IME 258	Manufacturing Methods and Materials I [5]	
IME 676	Aircraft Manufacturing and Assembly [5]	
An aviation maintenance - powerplant course (not offered at WSU, typically transferred, which is approved by the track coordinator) [5]		
Total Credit Hours		12

[5] Does not count as a technical elective for the BS in aerospace engineering degree, but may be used to fulfill the applied propulsion track requirement.

Applied Learning

Students in the Bachelor of Science in aerospace engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the two-course capstone design sequence (8 credit hours) consisting of AE 528 and AE 628.

Biomedical Engineering

The biomedical engineering program is intended for students who want to pursue careers where engineering interfaces with the physical and biological sciences. Biomedical engineering integrates physical, chemical, mathematical sciences and engineering principles for the study of biology, medicine, behavior or health. Biomedical engineering advances fundamental concepts, and develops materials, processes, implants, devices and informatics approaches for the prevention, diagnosis and treatment of disease; for patient rehabilitation; and for improving health. Biomedical engineers develop devices and procedures that solve medical and health-related problems by combining their knowledge of biology and medicine with engineering principles and practices. Many do research, along with life scientists, chemists and medical scientists, to develop and evaluate systems and products such as artificial organs, prostheses, instrumentation, medical information systems, and health management and care delivery systems. Some specialties include biomaterials, biomechanics, medical imaging, rehabilitation engineering and orthopedic engineering. The biomedical engineering program is accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org)[1].

Biomedical Engineering Program Mission

The mission of the biomedical engineering program is to provide students a comprehensive education, including integration of the life sciences and engineering principles, to prepare the students to address health needs at the local, national and global levels.

Program Educational Objectives

The educational objectives of the biomedical engineering program are driven by WSU's mission to be an essential educational, cultural and economic driver for Kansas and the greater public good, as well as the biomedical engineering program mission to address health needs. Specifically, biomedical engineering program alumni, within a few years of receiving their baccalaureate degree, will be successful professionals as evidenced by having:

1. Addressed problems at the interface of engineering, biology and medicine;
2. Pursued professional development, including further study in graduate or professional schools; and
3. Served in leadership roles in addressing societal needs at the local, national and global levels.

[1] Link opens new window.

Majors in Biomedical Engineering

- Dual/Accelerated BS to MS in Biomedical Engineering (p. 120)
- BS in Biomedical Engineering (p. 121)

Courses in Biomedical Engineering

- Biomedical Engineering (BME) (p. 323)

Note: For a course to be used as a prerequisite to BME courses, it must have been passed with a grade of *C* or better (generating 2.000 grade points or better).

Dual/Accelerated BS to MS in Biomedical Engineering

The dual/accelerated bachelor's to master's degree program is designed to offer outstanding biomedical engineering students the opportunity for advancing their careers by pursuing the bachelor's and master's degree in a parallel program and accelerated time frame.

Admission

Undergraduate students apply for the accelerated bachelor's to master's program through the WSU Graduate School application and admission process. Tentative graduate admission does not guarantee final admission to the graduate program and final graduate admission is contingent upon the student meeting all the admission requirements for the BME master's program at the time the bachelor's degree is awarded.

To be considered for admission to the accelerated bachelor's to master's degree program, the following must be satisfied:

- Completion of at least 90 credit hours in the BME program;
- A cumulative undergraduate GPA of at least 3.000; and
- A letter of recommendation from a member of the BME faculty who also will serve as the student's advisor in the accelerated program.

Dual Credit Courses

A maximum of 9 credit hours can be taken for graduate credit that may also be applied to the bachelor's degree. Courses eligible for joint credit include:

Course	Title	Hours
BME 722	Introduction to Biorobotics	3
BME 735	Biocomputational Modeling	3

BME 738	Biomedical Imaging	3
BME 743	Mechanobiology of Cells and Tissue	3
BME 748	Biomolecular and Cellular Engineering	3
BME 752	Applied Human Biomechanics	3
BME 757	Clinical Biomechanics Instrumentation	3
BME 777	Biodegradable Materials	3
BME 779	Tissue Engineering	3
ME 709	Injury Biomechanics	3

A course taken for joint credit must be identified at the time of enrollment in that course.

BS in Biomedical Engineering

Sequence of Courses

A minimum total of 128-129 credit hours is required for the BS in biomedical engineering program and includes 55 credit hours of major courses that must be completed with a minimum grade point average of 2.000. Prerequisite courses to BME courses must have a grade point average of 2.000. In addition to meeting the requirements of the WSU General Education Program (p. 57)[1] and the requirements of the College of Engineering, students in the biomedical engineering program must take the following courses:

Program Requirements

Course	Title	Hours
College/Program Requirements		
PHIL 385	Engineering Ethics	3
Mathematics/Natural Sciences		
MATH 242 & MATH 243	Calculus I and Calculus II	10
MATH 555	Differential Equations I	3
IME 254	Engineering Probability and Statistics I	3
PHYS 313	Physics for Scientists I	4
PHYS 314	Physics for Scientists II	4
BIOL 210	General Biology I	4
BIOL 223	Human Anatomy and Physiology	5
BIOL 420	Molecular Cell Biology	3-4
or CHEM 661	Principles of Biochemistry	
CHEM 211 & CHEM 212	General Chemistry I and General Chemistry II	10
CHEM 533	Elementary Organic Chemistry	3
Major Courses		
AE 223	Statics	3
EE 282	Circuits I	4
ME 398	Thermodynamics I	3
IME 255	Engineering Economy	3
BME 115	Biomedical Engineering Seminar (taken in the first semester)	0
BME 335	Biomedical Computer Applications	3
BME 452	Biomechanics	3
BME 462	Introduction to Biofluids	3
BME 477	Introduction to Biomaterials	3
BME 480	Bioinstrumentation	3
BME 482	Design of Biodevices	3
BME 585	Capstone Design I	3
BME 595	Capstone Design II	3
Technical Electives [2]		
Engineering technical electives		18
Open technical electives		3
Other general education courses [1]		18
Total Credit Hours		128-129

[1] See the requirements of the WSU General Education program (p. 57). Starting in fall 2021, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences.

[2] Contact the biomedical engineering department for list of applicable technical elective courses.

Premed Students

Curriculum differences for premed students in the biomedical engineering program consist of the following:

1. BIOL 211 is required for premed students;
2. 1-credit-hour labs, PHYS 315 and PHYS 316, must be taken with the 4-credit-hour lecture courses of PHYS 313 and PHYS 314, respectively;
3. CHEM 531 and CHEM 532 are required for biomedical engineering students in the premed curriculum, and will satisfy the biomedical engineering curriculum's organic chemistry requirement.

Biomedical engineering students who are in the premedicine curriculum are encouraged to also meet frequently with the WSU premed advisors to learn about other premed requirements. WSU premed advisors are located in Fairmount College of Liberal Arts and Sciences Advising Center, 115 Grace Wilkie Hall 316-978-3700.

Applied Learning

Students in the BS in biomedical engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successfully completing BME 595 Capstone Design II.

Electrical Engineering and Computer Science

Students in the electrical engineering and computer science department have three degree programs from which to choose: electrical engineering, computer engineering and computer science. The electrical and computer engineering programs are accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org)[1]. The Bachelor of Science degree program in computer science is accredited by the Computing Accreditation Commission of ABET (http://www.abet.org)[1].

The programs are structured to assure that electrical engineering students are familiar with computers and computer hardware and computer engineers and scientists have a background in electrical engineering principles. Electrical engineering, computer engineering and computer science students should have a strong interest in mathematics and science. As part of the curriculum, senior-level students are required to take a two-semester senior project sequence. This project gives the student the opportunity to apply skills acquired during their coursework to real-world problems.

Electrical Engineering

The program educational objectives of the electrical engineering program are as follows:

1. The alumni, in the first several years after receiving their baccalaureate degree, will be productive and successful in the professional practice of electrical engineering as evidenced by:
   a. Job satisfaction and contributions toward the success of one's employers;
   b. Effective participation and leadership on engineering teams;
   c. Being effective in identifying and solving real-world problems;
   d. Being effective at handling increased responsibilities;
   e. Receipt of job-related awards, promotions/raises, and professional accomplishments.
2. The alumni, in the first several years after receiving their baccalaureate degree, will be successful in pursuing continuing education as evidenced by:
   a. Effective progression toward an advanced postundergraduate degree or professional licensure/certification;
   b. Participation in professional societies, professional conferences and meetings;
   c. Participation in life-long learning by adapting to new technologies, tools and methodologies in electrical engineering, and responding to the challenges of a changing environment;
   d. Scholarly accomplishments (e.g., publications, presentations);
   e. Professional self-study.

The electrical engineering degree has a sufficient number of technical electives to allow the student to develop skills in specialized areas such as communication and signal processing, control systems, electric power systems, electronics and digital systems.

Computer Engineering

The program educational objectives of the computer engineering program are as follows:

1. The alumni, in the first several years after receiving their baccalaureate degree, will be productive and successful in the professional practice of computer engineering as evidenced by:
   a. Job satisfaction and contributions toward the success of one's employers;
   b. Effective participation and leadership on engineering teams;
   c. Being effective in identifying and solving real-world problems;
   d. Being effective at handling increased responsibilities;
   e. Receipt of job-related awards, promotions/raises, and professional accomplishments.
2. The alumni, in the first several years after receiving their baccalaureate degree, will be successful in pursuing continuing education as evidenced by:
   a. Effective progression toward an advanced postundergraduate degree or professional licensure/certification;
   b. Participation in professional societies, professional conferences and meetings;
   c. Participation in life-long learning by adapting to new technologies, tools and methodologies in computer engineering, and responding to the challenges of a changing environment;
   d. Scholarly accomplishments (e.g., publications, presentations);
   e. Professional self-study.

The computer engineering degree is a more structured degree compared to electrical engineering, with more required courses and thus fewer electives.

Computer Science

The program educational objectives of the computer science program are as follows:

1. The alumni, in the first several years after receiving their baccalaureate degree, will be productive and successful in the professional practice of computing as evidenced by:
   a. Job satisfaction and contributions toward the success of one's employers;
   b. Effective participation and leadership on computing/engineering teams;
   c. Being effective in identifying and solving real-world problems;
   d. Being effective at handling increased responsibilities;
   e. Receipt of job-related awards, promotions/raises, and professional accomplishments.
2. The alumni, in the first several years after receiving their baccalaureate degree, will be successful in pursuing continuing education as evidenced by:
   a. Effective progression toward an advanced postundergraduate degree or professional certification;
   b. Participation in professional societies, professional conferences and meetings;
   c. Participation in life-long learning by adapting to new technologies, tools and methodologies in computing, and responding to the challenges of a changing environment;
   d. Scholarly accomplishments (e.g., publications, presentations);
   e. Professional self-study.

The computer science degree offers courses that emphasize core computer science concepts and their applications.

[1] Link opens new window.

Majors in Electrical Engineering and Computer Science

- Dual/Accelerated BS to MS in Computer Networking (p. 122)
- Dual/Accelerated BS to MS in Computer Science (p. 123)
- Dual/Accelerated BS to MS in Electrical and Computer Engineering (p. 123)
- BS in Computer Engineering (p. 123)
- BS in Computer Science (p. 124)
- BS in Electrical Engineering (p. 125)

Minors in Electrical Engineering and Computer Science

- Minor in Computer Science (p. 125)

Courses in Electrical Engineering and Computer Science

- Computer Science (CS) (p. 359)[1]
- Electrical Engineering (EE) (p. 374)[2]

[1] For a computer science course to be used as a prerequisite, it must have been passed with a *C*- or better.

[2] For a course to be used as a prerequisite, it must have been passed with a *C*- or better.

Dual/Accelerated BS to MS in Computer Networking

The dual/accelerated bachelor's to master's degree offers outstanding students the opportunity to pursue both the bachelor's and master's degree in unison and in an accelerated time frame.

Admission

To be considered for admission to the program, a student must have successfully completed at least 90 credit hours with a GPA of at least 3.250 (or equivalent score from another country) in the bachelor's degree.

For complete requirements, including the eligible undergraduate programs and majors, please consult the Graduate Catalog and/or the EECS department's website.

Program Requirements

- Each student must take at least 18 credit hours of MSCN major courses.
- Only MSCN major courses at the 700-level and above can be used for dual credit hours. Up to 9 credit hours can be used for the combined undergraduate and graduate program.
- Until the bachelor's degree is awarded, a Dual/Accelerated Enrollment Form must be completed for each semester in which the student takes qualifying courses at the graduate level.
- Up to 12 credit hours of elective courses, i.e., courses other than the major courses listed above, may be taken by an MSCN student. Of these 12 credit hours of electives, at most 6 credit hours may be from outside the EECS department.

For complete degree requirements, including lists of major courses and graduating options, please consult the Master of Science in computer networking program in the Graduate Catalog and/or the EECS department's website.

Dual/Accelerated BS to MS in Computer Science

The dual/accelerated bachelor's to master's degree offers outstanding students the opportunity to pursue both the bachelor's and master's degree in unison and in an accelerated time frame.

Admission

To be considered for admission to the program, a student must have successfully completed at least 90 credit hours with a GPA of at least 3.250 (or equivalent score from another country) in the bachelor's degree.

For complete requirements, including the eligible undergraduate programs and majors, please consult the Graduate Catalog and/or the EECS department's website.

Program Requirements

- Each student must take at least 18 credit hours of MSCS major courses.
- Only MSCS major courses at the 700-level and above can be used for dual credit hours. Up to 9 credit hours can be used for the combined undergraduate and graduate program.
- Until the bachelor's degree is awarded, a Dual/Accelerated Enrollment Form must be completed for each semester in which the student takes qualifying courses at the graduate level.
- Up to 12 credit hours of elective courses, i.e., courses other than the major courses listed, may be taken by an MSCS student. Of these 12 credit hours of electives, at most 6 credit hours may be from outside the EECS department.

For complete degree requirements, including lists of major courses and graduating options, please consult the Graduate Catalog and/or the EECS department's website.

Dual/Accelerated BS to MS in Electrical and Computer Engineering

The dual/accelerated BS to MS in electrical and computer engineering (MSECE) offers outstanding undergraduate students in electrical engineering or computer engineering the opportunity to pursue both the bachelor's and master's in unison and in an accelerated time frame.

Admission

To be considered for admission to the dual/accelerated MSECE program, a student must have successfully completed at least 90 credit hours with a cumulative GPA of 3.000 or higher in the bachelor's degree.

Program Requirements

Up to 9 technical elective credit hours numbered 700-level or above can be used for both BS and MSECE programs. Each MSECE student chooses a major specialization area. Current major areas in the department are: communication and signal processing; computing systems; control systems and robotics; and power and energy systems. Any of these can be chosen as a major area. There are three options to complete the MSECE degree.

Thesis Option (30 credit hours), including:

- At least 9 credit hours of courses from a major area, of which at least 3 credit hours must be numbered at the 800-level or higher; and
- EE 876 Master's Thesis, 6 credit hours

Project Option (33 credit hours), including:

- At least 9 credit hours of courses from a major area, of which at least 3 credit hours must be numbered at the 800-level or higher; and
- EE 878 Master's Directed Project, 3 credit hours

Coursework Option (36 credit hours of courses), including:

- At least 12 credit hours of courses from a major area;
- At least 9 credit hours must be 800-level or higher, and at least 6 credit hours must be in the major area;
- At least 3 credit hours must be courses with a research writing and presentation component; and
- At least 27 credit hours of courses chosen from all the MSECE major and/or other EECS graduate-level courses.

BS in Computer Engineering

A minimum total of 124 credit hours is required for the computer engineering program and includes the 72 credit hours of major courses that must be completed with a minimum grade point average of 2.000. All courses that are prerequisites to other courses must be completed with a grade of *C-* or better. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students in the computer engineering program must take the following courses:

Course	Title	Hours
College/Program Requirements		
PHIL 354	Ethics and Computers [1]	3
Mathematical/Natural Sciences		
MATH 242	Calculus I [1]	5
MATH 243	Calculus II [1]	5
MATH 321	Discrete Structures I	3
or CS 321	Discrete Structures I	
MATH 511	Linear Algebra	3
MATH 555	Differential Equations I	3

PHYS 313	Physics for Scientists I [1]	4
PHYS 314	Physics for Scientists II [1]	4
PHYS 316	University Physics Lab II [1]	1
IME 254	Engineering Probability and Statistics I	3
Major Courses		
CS 194	Introduction to Digital Design	4
CS 211	Introduction to Programming	4
CS 238	Assembly Language Programming	3
IME 255	Engineering Economy	3
EE 282	Circuits I	4
EE 284	Circuits II	3
EE 285L	Programming with MATLAB for Electrical and Computer Engineers	1
CS 311	Object-Oriented Programming	4
CS 338	FPGA-Based System Design	4
CS 394	Introduction to Computer Architecture	3
ME 398	Thermodynamics I	3
CS 400	Data Structures	4
CS 464	Computer Networks	3
EE 492	Electronic Circuits I	4
CS 540	Operating Systems	3
CS 594	Microprocessor-Based System Design	4
EE 585 & EE 595	Senior Design Project I and Senior Design Project II	4
Technical Electives		
Select 14 credit hours which must be chosen with advisor's approval from a departmentally approved list. At least 12 of the 14 credit hours must be from the EECS department. Up to 2 credit hours of co-op can be used as nondepartmental technical electives.		14
Other General Education Courses [2]		18
Total Credit Hours		124

[1] May count as a general education course.

[2] See the requirements of the WSU General Education program (p. 57). Starting in fall 2021, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences.

Applied Learning

Students in the Bachelor of Science in computer engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the two capstone design experiences consisting of EE 585 and EE 595.

BS in Computer Science

A minimum total of 120 credit hours is required for the computer science program and includes the 65 credit hours of major courses that must be completed with a minimum grade point average of 2.000. All courses that are prerequisites to other courses have to be completed with a grade of *C-* or better. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students in the computer science program must take the following courses:

Course	Title	Hours
College/Program Requirements		
PHIL 125	Introductory Logic [1,2]	3
or PHIL 105	Critical Reasoning	
PHIL 354	Ethics and Computers [1]	3
Mathematical/Natural Sciences		
MATH 242	Calculus I [1]	5
MATH 243	Calculus II [1]	5
MATH/CS 321	Discrete Structures I	3
MATH/CS 322	Discrete Structures II	3
MATH 511	Linear Algebra	3
PHYS 313	Physics for Scientists I [1]	4
PHYS 314	Physics for Scientists II [1]	4
PHYS 316	University Physics Lab II [1]	1
IME 254	Engineering Probability and Statistics I	3
Major Courses		
IME 255	Engineering Economy	3
CS 194	Introduction to Digital Design	4
CS 211	Introduction to Programming	4
CS 238	Assembly Language Programming	3
CS 311	Object-Oriented Programming	4
CS 394	Introduction to Computer Architecture	3
CS 400	Data Structures	4
CS 410	Programming Paradigms	3
CS 464	Computer Networks	3
CS 480	Introduction to Software Engineering	3
CS 510	Programming Language Concepts	3
CS 540	Operating Systems	3
CS 560	Design and Analysis of Algorithms	3
CS 665	Introduction to Database Systems	3
EE 585 & EE 595	Senior Design Project I and Senior Design Project II	4
Technical Electives		
Select 15 credit hours. At least 9 out of the 15 credit hours must be from the EECS department. Up to 2 credit hours of co-op can be used as nondepartmental technical electives.		15
Other General Education Courses [3]		15
First-Year Seminar Course or Departmental Technical Elective [4]		3
Total Credit Hours		120

[1] May count as a general education course.

[2] PHIL 125 is preferred.

[3] See the requirements of the WSU General Education program (p. 57).

[4] Starting in fall 2021, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences. All other students are required to take an additional departmental technical elective.

Applied Learning

Students in the Bachelor of Science in computer science program are required to complete an applied learning or research experience to

graduate from the program. The requirement can be met by completing the two capstone design experiences consisting of EE 585 and EE 595.

BS in Electrical Engineering

A minimum total of 124 credit hours is required for the electrical engineering program and includes the 72 credit hours of major courses that must be completed with a minimum grade point average of 2.000. All courses that are prerequisites to other courses must be completed with a grade of C- or better. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students in the electrical engineering program must take the following courses:

Course	Title	Hours
College/Program Requirements		
PHIL 385	Engineering Ethics [1]	3
Mathematical/Natural Sciences		
MATH 242	Calculus I [1]	5
MATH 243	Calculus II [1]	5
MATH 344	Calculus III	3
MATH 511	Linear Algebra	3
MATH 555	Differential Equations I	3
PHYS 313	Physics for Scientists I [1]	4
PHYS 314	Physics for Scientists II [1]	4
CHEM 211	General Chemistry I [1]	5
IME 254	Engineering Probability and Statistics I	3
Major Courses		
CS 194	Introduction to Digital Design	4
CS 211	Introduction to Programming	4
AE 223	Statics	3
IME 255	Engineering Economy	3
EE 282	Circuits I	4
EE 284	Circuits II	3
EE 285L	Programming with MATLAB for Electrical and Computer Engineers	1
EE 383	Signals and Systems	3
ME 398	Thermodynamics I	3
EE 463	Applied Engineering Electromagnetics	3
EE 488	Electric Machines and Transformers	4
EE 492	Electronic Circuits I	4
EE 493	Electronic Circuits II	4
or EE 688	Power Electronics	
EE 586	Introduction to Communication Systems	4
EE 585 & EE 595	Senior Design Project I and Senior Design Project II	4
EE 684	Introductory Control System Concepts	3
or ME 659	Mechanical Control Systems	
Technical Electives		
Select 14 credit hours which must be chosen with advisor's approval from a departmentally approved list. At least 12 of the 14 credit hours must be from the EECS department. Up to 2 credit hours of co-op can be used as nondepartmental technical electives.		14
Other General Education Courses [2]		18
Total Credit Hours		124

[1] May count as a general education course.

[2] See the requirements of the WSU General Education program (p. 57). Starting in fall 2021, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences.

Applied Learning

Students in the Bachelor of Science in electrical engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the two capstone design experiences consisting of EE 585 and EE 595.

Minor in Computer Science

The minor provides a valuable addition to other majors and can help a student demonstrate ability in the computer science discipline. Students must complete the following computer science courses:

Course	Title	Hours
CS 211	Introduction to Programming	4
CS 311	Object-Oriented Programming	4
CS 400	Data Structures	4
Select one 400-level or higher CS elective of at least 3 credit hours		3
Total Credit Hours		15

Further requirements for the computer science minor:

- CS 400 and the additional *400-level or higher CS* course must be taken from the department of electrical engineering and computer science at Wichita State University.
- A minimum grade average of 2.000 is required on the aggregate of classes taken for this minor.
- A minimum of a *C-* grade is required in each of the courses that are applied to this minor.
- The total credit hours required for receiving the minor must be at least 15 (which may require additional CS classes if the programming classes are transferred in at lower credit hours than listed above).
- At least 3 credit hours of coursework must be completed beyond what was required for the student's major (i.e., at least one of the classes that applies to the minor must not be counted toward the student's major).

Engineering Technology

The Bachelor of Science in Engineering Technology (BSET) program at Wichita State University is a hands-on program based on engineering technology fundamentals, engineering principles, instrumentation, mathematics, science and practical design principles needed to equip students for employment or further education. The focus is on current engineering technology issues and applications used in product design, testing, installation and maintenance to prepare students for careers in manufacturing, facilities management, construction, healthcare, education and technical services or sales.

The BSET curriculum offers four specialized program concentrations:

- Civil Engineering Technology;
- Engineering Technology Management;
- Facilities Management; and
- Mechatronics Technology.

Program Educational Objectives

Once our students are out in the workforce, they should be able to:

1. Pursue gainful careers and practice successfully in a cybersecurity, environmental, management or mechatronics engineering technology profession;
2. Remain technically current and adapt to rapidly changing technologies through continuous learning and self-improvement;
3. Demonstrate independent thinking and function effectively in diverse teams to solve open-ended problems in an industrial environment; and
4. Communicate effectively and perform ethically and professionally in business, industry and society.

Sequence of Courses

The engineering technology undergraduate program requires a minimum completion of 120 credit hours for graduation minus advanced placement credit. Technical elective courses enable a student to graduate with a broad background in engineering technology with a focus in one of four concentrations: civil engineering technology, cybersecurity, engineering technology management or mechatronics technology.

For further program information, please visit the Engineering Technology website (http://wichita.edu/engtech/)[1] or contact:

Gary Brooking
Director of Engineering Technology
College of Engineering
1845 Fairmount Street
Wichita, KS 67260-0072
Phone: 316-978-7637
Email: Gary.Brooking@wichita.edu (gary.brooking@wichita.edu)

[1] Link opens new window.

Majors in Engineering Technology

- BS in Applied Computing (p. 126)
- BSET in Engineering Technology - Concentration in Civil Engineering Technology (p. 128)
- BSET in Engineering Technology - Concentration in Engineering Technology Management (p. 129)
- BSET in Engineering Technology - Concentration in Facilities Management (p. 130)
- BSET in Engineering Technology - Concentration in Mechatronics Technology (p. 130)

Minors in, or of special interest to, Engineering Technology Students

- **General Business** — A minor in general business is available to any student who is not pursuing a degree in the Barton School of Business. Please see the Barton School of Business section of the catalog for detailed Minor in general business (p. 113) requirements.
- **Management** — A minor in management is available to any student whose major field or area of emphasis is outside of management. Please see the Barton School of Business section of the catalog for detailed Minor in management (p. 114) requirements.
- **Computer Science** — The CS minor provides a valuable addition to the mechatronics technology major. Please see the Electrical Engineering and Computer Science section of the catalog for Minor in computer science (p. 125) requirements.

Certificates in Engineering Technology

- Certificate in Applied Data Analysis (p. 131)
- Certificate in Assistive Technology and Accessible Design (p. 131)
- Certificate in Cyber Physical Systems (p. 132)
- Certificate in Cybersecurity Essentials (p. 132)
- Certificate in Data and Web Security (p. 132)
- Certificate in Fundamentals of Information Technology (p. 132)
- Certificate in Human Factors in Security and Technology (p. 132)
- Certificate in Sustainable Energy Technology (p. 133)
- Certificate in Sustainable Water Technology (p. 133)

Courses in Engineering Technology

- Engineering Technology (ENGT) (p. 385)

BS in Applied Computing

The Bachelor of Science in applied computing is a flexible program focused on developing applied computing skills. The program is unique as it includes a set of required core courses, a required Fundamentals of Information Technology certificate and at least two additional stackable certificates plus technical electives that comprise the degree. Current planned certificates include: Data and Web Security, Cyber-Physical Systems, Game and Simulation Programing, Applied Data Analysis, and Human Factors in Security Technology.

The applied computer program produces well-rounded professionals that are highly capable in many areas of information technology, including cybersecurity, game development, web development, data analytics and simulations. Having a wide range of applied technical skills allows graduates to work in almost any information technology job or be given a diverse array of projects and tackle all with the same level of success. The certificates are vetted by industry leaders, ensuring that students learn the subjects needed to be successful in today's job market.

Program Requirements

A minimum total of 120 credit hours is required for the BS in applied computing program. All courses with an ENGT prefix require that any prerequisite course is passed with a *C*- or better grade (1.700/4.000 grade point average). In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students in the BS in applied computing program must take the following courses:

Course	Title	Hours
College/Program Requirements		
WSUE 102A	First-Year Seminar: Introduction to Technology and Innovation [1, 2]	3
or ID 300	Design Thinking & Innovation	
PSY 111	General Psychology [2]	3
PSY 323	Social Psychology [2]	3
PHIL 354	Ethics and Computers [2]	3
Program Required Mathematics/Natural Sciences		
MATH 111	College Algebra [2]	3
MATH 123	College Trigonometry [2]	3
PHYS 213	General College Physics I [2]	5
PHYS 214	General College Physics II [2]	5
Applied Computing Core		
ENGR 220	Applied Analog and Digital Electronics	3

ENGT 324	Applied Web Applications and Database Development	3
ENGT 326	Cyber Operations	4
ENGT 201	Introduction to Engineering Technology	1
ENGT 301	Fundamentals of Engineering Technology	2
ENGT 401	Senior Project I	3
ENGT 402	Senior Project II	3
PHIL 125	Introductory Logic	3
ECON 201	Principles of Macroeconomics	3
PSY 301	Psychological Statistics [2, 3]	3
or STAT 370	Elementary Statistics	
Completion of the Engineering+ Program [4]		
Required Core Certificate - Fundamentals of Information Technology		12
ENGT 121	Cybersecurity Awareness	3
ENGT 222	Applied Computing and Networking I	3
ENGT 321	Applied Computing and Networking II	3
ENGT 322	Applied Programming and Scripting	3
Required Elective Certificates		
Select a minimum of two of the certificates listed below that contribute at least 27 unduplicated credit hours or more.		27-32
Certificate in Applied Data Analysis		
Certificate in Cyber Physical Systems		
Certificate in Cybersecurity Essentials		
Certificate in Data and Web Security		
Certificate in Human Factors in Security and Technology		
Electives		
With an advisor, select additional technical electives chosen from an approved list to make a total of 120 unduplicated credit hours.		
Total Required Credit Hours		120

[1] All first-year college students must take WSUE 102A within their first two semesters. Transfer students can choose ID 300 to replace WSUE 102A.

[2] May count as a general education course.

[3] Students selecting PSY 301 will need to ensure they have a total of 9 credit hours of 300 level or above general education classes.

[4] Details outlined under College of Engineering Requirements (p. 118), #2.

Example Sequence for Cybersecurity Focus

Course	Title	Hours
Required Core		
General Education (unduplicated general education credit hours)		27
Math and Science (some courses may count as general education)		16
Applied Computing Core		25
Certificate in Fundamentals of Information Technology		12
Required Elective Certificates		
Certificate in Cybersecurity Essentials		13
Certificate in Data and Web Security (unduplicated credit hours)		9
Certificate in Human Factors in Security and Technology (unduplicated credit hours)		6
Additional Electives		
Technical Electives or additional certificate		12
Total Credit Hours		120

Applied Learning

Students in engineering technology programs are required to complete an applied learning or research experience to graduate from the programs. The requirement can be met by completing the four-course capstone design experience consisting of ENGT 201, ENGT 301 , ENGT 401 and ENGT 402.

Required Core Certificate

Certificate in Fundamentals of Information Technology

The certificate requires the completion of 12 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C*-.

Course	Title	Hours
Required Courses		
ENGT 121	Cybersecurity Awareness	3
ENGT 222	Applied Computing and Networking I	3
ENGT 321	Applied Computing and Networking II	3
ENGT 322	Applied Programming and Scripting	3
Total Credit Hours		12

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Elective Certificates

Certificate in Applied Data Analysis

The certificate requires the completion of 14 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C*-.

Course	Title	Hours
Required Courses		
MATH 242	Calculus I	5
MATH 321	Discrete Structures I	3
MATH 322	Discrete Structures II	3
ENGT 572	Applied Machine Learning	3
Total Credit Hours		14

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Cyber Physical Systems

The certificate requires the completion of 17 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C*-.

Course	Title	Hours
Required Courses		
MATH 242	Calculus I	5
ENGT 320	Circuits Technology with Lab	4
ENGT 320L	Circuits Technology Lab	0
ENGT 361	Industrial Controls and Instrumentation	4
ENGT 462	Cyber Physical Systems	4
Total Credit Hours		17

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Cybersecurity Essentials

The certificate requires the completion of 13 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
ENGT 461	Digital Forensics	3
ENGT 462	Cyber Physical Systems	4
ENGT 463	Cyber Risk Management	3
ENGT 464	Web Application Security	3
Total Credit Hours		13

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Data and Web Security

The certificate requires the completion of 15 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
BADM 161	Business Software: Word	1
BADM 162	Business Software: Excel	1
BADM 163	Business Software: Access and PowerPoint	1
MIS 605	Systems Analysis and Design	3
MIS 696	Management of the IS Function	3
ENGT 463	Cyber Risk Management	3
ENGT 464	Web Application Security	3
Total Credit Hours		15

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Human Factors in Security and Technology

The certificate requires the completion of 15 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
PSY 323	Social Psychology	3
PSY 405	Human Factors Psychology	3
ENGT 363	Human Threats to Cybersecurity	3
ENGT 461	Digital Forensics	3
ENGT 463	Cyber Risk Management	3
Total Credit Hours		15

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

BSET in Engineering Technology - Concentration in Civil Engineering Technology

A minimum total of 120 credit hours is required for the BSET in civil engineering technology program. All courses with an ENGT prefix require that any prerequisite course is passed with a *C-* or better grade (1.700/4.000 grade point average). In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students in the BSET in civil engineering technology program must take the following courses:

Course	Title	Hours
College/Program Requirements		
WSUE 102A	First-Year Seminar: Introduction to Technology and Innovation [1, 2]	3
or ID 300	Design Thinking & Innovation	
ECON 201	Principles of Macroeconomics [2]	3
BIOL 370	Introductory Environmental Science [2]	3
PHIL 385	Engineering Ethics [1, 2]	3
Required Program Mathematics/Natural Sciences		
MATH 242	Calculus I [2]	5
MATH 243	Calculus II [2]	5
PHYS 313	Physics for Scientists I [2]	4
PHYS 315	University Physics Lab I [2]	1
CHEM 211	General Chemistry I [2]	5
Engineering Technology Core [3]		
ENGT 312	Applied Statics	3
ENGT 354	Statistical Process Control	3
ENGT 201	Introduction to Engineering Technology	1
ENGT 301	Fundamentals of Engineering Technology	2
ENGT 401	Senior Project I	3
ENGT 402	Senior Project II	3
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
Engineering+ Program		
Completion of the Engineering+ program [4]		

Course	Title	Hours
Concentration: Civil Engineering Technology		
ENGT 320	Circuits Technology with Lab	4
ENGT 323	Introduction to Fluids	3
ENGT 334	Introduction to Strength and Mechanics of Materials	3
ENGT 370	Environmental Engineering Technology	3
ENGT 492	Energy Management and Sustainability	3
ENGT 510	Solar and Wind Engineering	3
ENGT 600	Water and Wastewater Treatment	3
ENGT 610	Hydraulics and Hydrology	3
ENGT 620	Structural Analysis and Design	3
CS 211	Introduction to Programming	4
ME 250	Materials Engineering	3
ME 251	Materials Engineering Laboratory	1

IME 258	Manufacturing Methods and Materials I	3
IME 258L	Manufacturing Methods and Materials I Lab	1
GEOL 300	Energy, Resources and Environment [2]	3
Technical Electives		
Select 15 credit hours of technical electives preapproved by a faculty advisor. Please refer to the engineering technology (ET) website or consult with your ET advisor for current list of technical electives.		15
Total Program Hours		120

[1] All first-year college students must take WSUE 102A within their first two semesters. Transfer students can choose ID 300 to replace WSUE 102A.

[2] May count as a general education course.

[3] All engineering technology students must complete these courses, regardless of engineering technology concentration.

[4] Details outlined under College of Engineering Requirements (p. 118), #2.

Applied Learning

Students in engineering technology programs are required to complete an applied learning or research experience to graduate from the programs. The requirement can be met by completing the four-course capstone design experience consisting of ENGT 201, ENGT 301, ENGT 401 and ENGT 402.

BSET in Engineering Technology - Concentration in Engineering Technology Management

A minimum total of 120 credit hours is required for the BSET in engineering technology management. All courses with an ENGT prefix require that any prerequisite courses are each passed with a *C*- or better grade (1.700/4.000 grade point average). In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students in the BSET in engineering technology management must take the following courses:

Course	Title	Hours
College/Program Requirements		
WSUE 102A	First-Year Seminar: Introduction to Technology and Innovation [1, 2]	3
or ID 300	Design Thinking & Innovation	
ECON 201	Principles of Macroeconomics [2]	3
IB 333	International Business [2]	3
PHIL 385	Engineering Ethics [2]	3
Program Required Mathematics/Natural Sciences		
MATH 242	Calculus I [2]	5
MATH 243	Calculus II [2]	5
PHYS 313	Physics for Scientists I [2]	4
PHYS 315	University Physics Lab I [2]	1
CHEM 211	General Chemistry I [2, 3]	5
or PHYS 314	Physics for Scientists II	
Engineering Technology Core [4]		
ENGT 312	Applied Statics	3
ENGT 354	Statistical Process Control	3
ENGT 201	Introduction to Engineering Technology	1
ENGT 301	Fundamentals of Engineering Technology	2
ENGT 401	Senior Project I	3
ENGT 402	Senior Project II	3
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
Engineering+ Program		
Completion of the Engineering+ program [5]		

Course	Title	Hours
Required Courses for Concentration		
ENGR 220	Applied Analog and Digital Electronics	3
ENGT 441	Analysis of Decision Processes in Technology	3
ENGT 664	Engineering Project Management	3
ENGR 501	The Engineer as Leader	3
IME 258	Manufacturing Methods and Materials I	3
IME 258L	Manufacturing Methods and Materials I Lab	1
BADM 161	Business Software: Word	1
BADM 162	Business Software: Excel	1
BADM 163	Business Software: Access and PowerPoint	1
ACCT 210	Financial Accounting	3
ECON 232	Statistical Software Applications for Business	1
MKT 300	Marketing	3
MIS 310	Fundamentals of Business Application Development [6]	3-4
or CS 211	Introduction to Programming	
DS 350	Introduction to Production and Operations Management	3
MGMT 360	Principles of Management	3
BLAW 431	Legal Environment of Business	3
HRM 466	Fundamentals of Human Resource Management	3
Technical Electives		
Select 17 credit hours of technical electives preapproved by a faculty advisor. Students taking CS 211 as part of the core courses will need 16 credit hours of technical electives. Please refer to the engineering technology (ET) website or consult with your ET advisor for current list of technical electives.		17-16
Total Program Hours		120

[1] All first-year college students must take WSUE 102A within their first two semesters. Transfer students can choose ID 300 to replace WSUE 102A.

[2] May count as a general education course.

[3] Students taking PHYS 314 are required to take PHYS 316 lab.

[4] All engineering technology students must complete these courses, regardless of engineering technology concentration.

[5] Details outlined under College of Engineering Requirements (p. 118), #2.

[6] Students taking CS 211 require one less credit hour toward approved technical electives to satisfy the total hour requirements.

Applied Learning

Students in engineering technology programs are required to complete an applied learning or research experience to graduate from the programs. The requirement can be met by

completing the four-course capstone design experience consisting of ENGT 201, ENGT 301, ENGT 401 and ENGT 402.

BSET in Engineering Technology - Concentration in Facilities Management

Program Requirements

A minimum total of 120 credit hours is required for the BSET in facilities management program. All courses with an ENGT prefix require that any prerequisite course is passed with a *C-* or better grade (1.700/4.000 grade point average). In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students in the BSET in facilities management program must take the following courses:

Course	Title	Hours
College/Program Requirements		
WSUE 102A	First-Year Seminar: Introduction to Technology and Innovation [1, 2]	3
or ID 300	Design Thinking & Innovation	
ECON 201	Principles of Macroeconomics [2]	3
ECON 202	Principles of Microeconomics [2]	3
PHIL 385	Engineering Ethics [2]	3
GEOL 300	Energy, Resources and Environment	3
or BIOL 370	Introductory Environmental Science	
Program Required Mathematics/Natural Sciences		
MATH 242	Calculus I [2]	5
MATH 243	Calculus II [2]	5
CHEM 211	General Chemistry I [2]	5
PHYS 313	Physics for Scientists I [2]	4
PHYS 315	University Physics Lab I [2]	1
Engineering Technology Core [3]		
ENGT 312	Applied Statics	3
ENGT 354	Statistical Process Control	3
ENGT 201	Introduction to Engineering Technology	1
ENGT 301	Fundamentals of Engineering Technology	2
ENGT 401	Senior Project I	3
ENGT 402	Senior Project II	3
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
Completion of the Engineering+ Program [4]		

Course	Title	Hours
Required Courses for Concentration		
ENGT 210	Introduction to Facilities Management	3
ENGR 220	Applied Analog and Digital Electronics	3
ENGT 370	Environmental Engineering Technology	3
ENGT 441	Analysis of Decision Processes in Technology	3
ENGT 492	Energy Management and Sustainability	3
ENGT 664	Engineering Project Management	3
BADM 162	Business Software: Excel	1
ACCT 210	Financial Accounting	3
ACCT 220	Managerial Accounting	3
RE 310	Principles of Real Estate	3
DS 350	Introduction to Production and Operations Management	3
MGMT 360	Principles of Management	3
RE 420	Real Estate Property Management	3
BLAW 431	Legal Environment of Business	3
HRM 466	Fundamentals of Human Resource Management	3
MGMT 681	Strategic Management	3
FIN 340	Financial Management I	3
Technical Electives		
Select 6 credit hours of technical electives preapproved by a faculty advisor. Please refer to the engineering technology (ET) website or consult with your ET advisor for current list of technical electives.		6
Total Program Hours		120

[1] All first-year college students must take WSUE 102A within their first two semesters. Transfer students can choose ID 300 to replace WSUE 102A.

[2] May count as a general education course.

[3] All engineering technology students must complete these courses, regardless of engineering technology concentration.

[4] Details outlined under College of Engineering Requirements (p. 118), #2.

Applied Learning

Students in engineering technology programs are required to complete an applied learning or research experience to graduate from the programs. The requirement can be met by completing the four-course capstone design experience consisting of ENGT 201, ENGT 301, ENGT 401 and ENGT 402.

BSET in Engineering Technology - Concentration in Mechatronics Technology

A minimum total of 120 credit hours is required for the BSET in mechatronics technology program. All courses with an ENGT prefix require that any prerequisite course is passed with a *C-* or better grade (1.700/4.000 grade point average). In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students in the BSET in mechatronics technology program must take the following courses:

Course	Title	Hours
College/Program Requirements		
WSUE 102A	First-Year Seminar: Introduction to Technology and Innovation [1, 2]	3
or ID 300	Design Thinking & Innovation	
PHIL 125	Introductory Logic [2]	3
ECON 201	Principles of Macroeconomics [2]	3
PHIL 385	Engineering Ethics [2]	3
Program Required Mathematics/Natural Sciences		
MATH 242	Calculus I [2]	5
MATH 243	Calculus II [2]	5
PHYS 313	Physics for Scientists I [2]	4
PHYS 315	University Physics Lab I [2]	1
PHYS 314	Physics for Scientists II [2]	4

PHYS 316	University Physics Lab II [2]	1
Engineering Technology Core [3]		
ENGT 312	Applied Statics	3
ENGT 354	Statistical Process Control	3
ENGT 201	Introduction to Engineering Technology	1
ENGT 301	Fundamentals of Engineering Technology	2
ENGT 401	Senior Project I	3
ENGT 402	Senior Project II	3
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
Engineering+ Program		
Completion of the Engineering+ program [4]		

Course	Title	Hours
Required Courses for Concentration		
ENGT 121	Cybersecurity Awareness	3
ENGT 313	Applied Dynamics (prerequisite for ENGT 348)	1
ENGT 320	Circuits Technology with Lab	4
ENGT 323	Introduction to Fluids	3
ENGT 334	Introduction to Strength and Mechanics of Materials	3
ENGT 348	Machine Elements	3
ENGT 361	Industrial Controls and Instrumentation	4
ENGT 410	Robotics Technology	3
ENGT 411	Microcomputer-Based Mechanical Systems Technologies	3
ENGT 497	Electrical Machines and Electronic Circuits	4
CS 194	Introduction to Digital Design	4
CS 211	Introduction to Programming	4
IME 258	Manufacturing Methods and Materials I	3
IME 258L	Manufacturing Methods and Materials I Lab	1
Technical Electives		
Select 15 credit hours of technical electives preapproved by a faculty advisor. Please refer to the engineering technology (ET) website or consult with your ET advisor for current list of technical electives.		15
Total Program Hours		120

[1] All first-year college students must take WSUE 102A within their first two semesters. Transfer students can choose ID 300 to replace WSUE 102A.

[2] May count as a general education course.

[3] All engineering technology students must complete these courses, regardless of engineering technology concentration.

[4] Details outlined under College of Engineering Requirements (p. 118), #2.

Applied Learning

Students in engineering technology programs are required to complete an applied learning or research experience to graduate from the programs. The requirement can be met by completing the four-course capstone design experience consisting of ENGT 201, ENGT 301, ENGT 401 and ENGT 402.

Certificate in Applied Data Analysis

Admission

Students seeking this certificate must be admitted to the university or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the undergraduate coordinator before half of the required credit hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 14 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
MATH 242	Calculus I	5
MATH 321	Discrete Structures I	3
MATH 322	Discrete Structures II	3
ENGT 572	Applied Machine Learning	3
Total Credit Hours		14

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Assistive Technology and Accessible Design

Admission

Students seeking this certificate must be admitted to the university, or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the certificate coordinator before half of the required hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 18 credit hours from a selected list of courses. A cumulative grade point average of at least 3.000 must be maintained for all courses comprising the certificate program and no grades below *C*.

Course	Title	Hours
Required Courses		
WSUE 102A	First-Year Seminar: Introduction to Technology and Innovation	3
HPS 229	Applied Human Anatomy	3
ID 300	Design Thinking & Innovation	3
ENGR 302	Accessible Design	3
SOC 537	The Social Consequences of Disability	3
IME 549	Industrial Ergonomics	3
or PSY 405	Human Factors Psychology	
Total Credit Hours		18

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Note: This certificate has not been approved as a gainful employment program.

Certificate in Cyber Physical Systems

Admission

Students seeking this certificate must be admitted to the university, or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the undergraduate coordinator before half of the required credit hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 17 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
MATH 242	Calculus I	5
ENGT 320	Circuits Technology with Lab	4
ENGT 320L	Circuits Technology Lab	0
ENGT 361	Industrial Controls and Instrumentation	4
ENGT 462	Cyber Physical Systems	4
Total Credit Hours		17

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Cybersecurity Essentials

Admission

Students seeking this certificate must be admitted to the university, or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the undergraduate coordinator before half of the required credit hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 13 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
ENGT 461	Digital Forensics	3
ENGT 462	Cyber Physical Systems	4
ENGT 463	Cyber Risk Management	3
ENGT 464	Web Application Security	3
Total Credit Hours		13

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Data and Web Security

Admission

Students seeking this certificate must be admitted to the university, or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the undergraduate coordinator before half of the required credit hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 15 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
BADM 161	Business Software: Word	1
BADM 162	Business Software: Excel	1
BADM 163	Business Software: Access and PowerPoint	1
MIS 605	Systems Analysis and Design	3
MIS 696	Management of the IS Function	3
ENGT 463	Cyber Risk Management	3
ENGT 464	Web Application Security	3
Total Credit Hours		15

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Fundamentals of Information Technology

Admission

Students seeking this certificate must be admitted to the university, or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the undergraduate coordinator before half of the required credit hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 12 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
ENGT 121	Cybersecurity Awareness	3
ENGT 222	Applied Computing and Networking I	3
ENGT 321	Applied Computing and Networking II	3
ENGT 322	Applied Programming and Scripting	3
Total Credit Hours		12

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Human Factors in Security and Technology

Admission

Students seeking this certificate must be admitted to the university, or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study

for the certificate program with the undergraduate coordinator before half of the required credit hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 15 credit hours from a selected list of courses. A cumulative grade point average of at least 2.000 must be maintained for all courses comprising the certificate program and no grades below *C-*.

Course	Title	Hours
Required Courses		
PSY 323	Social Psychology	3
PSY 405	Human Factors Psychology	3
ENGT 363	Human Threats to Cybersecurity	3
ENGT 461	Digital Forensics	3
ENGT 463	Cyber Risk Management	3
Total Credit Hours		15

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Certificate in Sustainable Energy Technology

Admission

Students seeking this certificate must be admitted to the university, or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the undergraduate coordinator before half of the required hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 12 credit hours from a selected list of courses. A cumulative grade point average of at least 3.000 must be maintained for all courses comprising the certificate program and no grades below *C*.

Course	Title	Hours
Required Courses		
ENGT 370	Environmental Engineering Technology	3
ENGT 492	Energy Management and Sustainability	3
ENGT 510	Solar and Wind Engineering	3
EE 577L	Renewable Energy Engineering	3
Total Credit Hours		12

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Note: This certificate has not been approved as a gainful employment program.

Certificate in Sustainable Water Technology

Admission

Students seeking this certificate must be admitted to the university, or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the undergraduate coordinator before half of the required hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 12 credit hours from a selected list of courses. A cumulative grade point average of at least 3.000 must be maintained for all courses comprising the certificate program and no grades below *C*.

Course	Title	Hours
Required Courses		
ENGT 323	Introduction to Fluids	3
ENGT 370	Environmental Engineering Technology	3
ENGT 600	Water and Wastewater Treatment	3
ENGT 610	Hydraulics and Hydrology	3
Total Credit Hours		12

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Note: This certificate has not been approved as a gainful employment program.

Industrial, Systems, and Manufacturing Engineering

The industrial, systems and manufacturing engineering (ISME) department at WSU takes responsibility for instruction and research in design, analysis and operation of manufacturing and other integrated systems of people, material, equipment and capital. The department offers curricula and educational experience designed and continuously improved through the involvement and contribution of its constituents: students and alumni, potential employers of program graduates, and faculty.

The ISME department offers two undergraduate degree programs, one in industrial engineering (BSIE) and another in product design and manufacturing engineering (BSPDME). These engineering degree programs are accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org)[1].

The department also offers three graduate degree programs: Master of Engineering Management (MEM), MS in industrial engineering (MSIE), and PhD in industrial engineering. Both the MSIE and PhD programs allow concentrations in operations research, systems, production and supply chain analytics, quality and reliability, manufacturing engineering, and human systems engineering. The MEM program is geared toward helping engineers/technologists develop planning, decision-making and managerial skills while receiving advanced technical knowledge.

Modern, well-equipped laboratories are available to supplement classroom theory in ergonomics, manufacturing engineering and computer analysis. The department’s laboratory facilities include Manufacturing Processes Lab, CAD/Systems Lab, Metrology Lab, Reliability Lab, Rapid Prototyping and Product Development Lab, Sustainable Engineered Systems, and Open Computing Lab. Students in the academic programs offered by the ISME department get ample opportunity to work on real-life problems in local industries as part of course requirements.

[1] Link opens new window.

Majors in Industrial, Systems and Manufacturing Engineering

- Dual/Accelerated Bachelor's to Master's in Industrial Engineering (p. 134)
- Dual/Accelerated BS to MEM Program (p. 134)
- BS in Industrial Engineering (p. 135)
- BS in Product Design and Manufacturing Engineering (p. 136)

Minors in Industrial, Systems and Manufacturing Engineering

- Minor in Manufacturing Engineering (p. 137)

Courses in Industrial, Systems and Manufacturing Engineering

- Industrial and Manufacturing Engineering (IME) (p. 431)

Dual/Accelerated Bachelor's to Master's in Industrial Engineering

The Department of Industrial, Systems, and Manufacturing Engineering offers a dual/accelerated bachelor's to master's degree program to undergraduate students in both the industrial engineering, and product design and manufacturing engineering programs, culminating in the Master of Science in engineering.

The accelerated program offers outstanding students the opportunity to pursue both the bachelor's and master's degrees in a parallel and coordinated program. Students in the program are guided by the graduate coordinator and the departmental graduate committee until the BS degree is complete. Once the undergraduate degree is complete, an advisor in the area of the student's interest is identified.

Admission

To be considered for admission to the program, the student must:

- Have a minimum WSU GPA of 3.250, and
- Be within 40 credit hours of completing the requirements for a bachelor's degree.

Undergraduate students apply for bachelor's to master's programs using the regular Graduate School application form and admission process (including paying the Graduate School application fee).

Students should apply for graduate admission at least one semester before the semester in which they plan to obtain credit at both the undergraduate and graduate level. Should the student meet the admission requirements set for the program, tentative admission is granted, pending the award of the bachelor's degree.

Tentative graduate admission does *not* guarantee final admission to the graduate program. Final graduate admission is contingent upon the student meeting all the admission requirements in place for the graduate program at the time the bachelor's degree is awarded. If a tentatively admitted student does not achieve final admission, the graduate work already completed is moved to the undergraduate transcript.

Program Guidelines

- The maximum number of credit hours that can be used for both undergraduate and graduate program credit (joint degree courses) is limited to 9 credit hours.
- Only courses 700 level and above can be used for joint credit. Courses that are prerequisites for the graduate program, core courses in the undergraduate curriculum, workshop or cooperative education courses are also excluded.
- Until the bachelor's degree is awarded, for each semester in which the student takes courses at both the graduate *and* undergraduate level, a Dual/Accelerated Enrollment Form must be completed indicating the courses taken for graduate credit (as well as joint credit).
- The bachelor's degree may be awarded at any time following the completion of the undergraduate degree requirements and completion of the joint degree hours.
- The bachelor's degree must be awarded at least two semesters before the graduate degree is awarded.
- Graduate program coursework must be completed within eight years (from the time the first graduate course counted toward degree requirements is taken) or within six years from the awarding of the bachelor's degree, whichever comes first.
- The supervisory committee should be listed on each dual enrollment form, and a program of study filed as soon as the student has received their bachelor's degree.
- A tentative *outline for degree completion* should be developed by the student and advisor and kept in the student's departmental file. The outline for degree completion projects courses to be taken each semester and the semester in which the bachelor's degree and master's degree would be awarded.
- In addition, annual reviews of student progress are conducted with a written progress report placed in the student's departmental file by the departmental graduate committee.
- Students in a dual/accelerated degree program may *not* hold a graduate assistantship until after the bachelor's degree is awarded, and the student is fully admitted to the graduate program.
- For the purpose of requesting exceptions to program and university regulations, students in a dual/accelerated degree program are considered undergraduates and thus proceed through the undergraduate processes until the bachelor's degree is awarded.
- Students admitted to the dual/accelerated degree program, who do not complete the program or who request admission to any other WSU program, forfeit the joint hours in the program. The joint hours will be posted only to the undergraduate transcript. If joint hours are already posted to both the graduate and undergraduate transcript, the hours on the graduate transcript will be removed.

Dual/Accelerated BS to MEM Program

Admission

To be considered for admission to the program, the student must:

- Have a minimum WSU GPA of 3.250;
- Be a current undergraduate student in engineering, science, business or related discipline; and
- Successfully completed at least 80 credit hours.

Undergraduate students apply for bachelor's to master's programs using the regular Graduate School application form and admission process (including paying the Graduate School application fee).

Students should apply for graduate admission at least one semester before the semester in which they plan to obtain credit at both the undergraduate and graduate level. Should the student meet the admission requirements set for the program, tentative admission is granted, pending the award of the bachelor's degree.

Tentative graduate admission does *not* guarantee final admission to the graduate program. Final graduate admission is contingent upon the

student meeting all the admission requirements in place for the graduate program at the time the bachelor's degree is awarded. If a tentatively admitted student does not achieve final admission, the graduate work already completed is moved to the undergraduate transcript.

Program Requirements

- The maximum number of credit hours that can be used for both undergraduate and graduate program credit (joint degree courses) is limited to 9 credit hours.
- Only courses 700 level and above can be used for joint credit. Courses that are prerequisites for the graduate program, core courses in the undergraduate curriculum, workshop or cooperative education courses are also excluded.
- Until the bachelor's degree is awarded, for each semester in which the student takes courses at both the graduate *and* undergraduate level, a Dual/Accelerated Enrollment Form must be completed indicating the courses taken for graduate credit (as well as joint credit).
- The bachelor's degree may be awarded at any time following the completion of the undergraduate degree requirements and completion of the joint degree hours.
- The bachelor's degree must be awarded at least two semesters before the graduate degree is awarded.
- The supervisory committee should be listed on each dual enrollment form, and a plan of study filed as soon as the student has received their bachelor's degree.
- A tentative *outline for degree completion* should be developed by the student and advisor and kept in the student's departmental file. The outline for degree completion projects courses to be taken each semester and the semester in which the bachelor's degree and master's degree would be awarded.
- In addition, annual reviews of student progress are conducted with a written progress report placed in the student's departmental file by the departmental graduate committee.
- Students in a dual/accelerated degree program may *not* hold a graduate assistantship until after the bachelor's degree is awarded, and the student is fully admitted to the graduate program.
- For the purpose of requesting exceptions to program and university regulations, students in a dual/accelerated degree program are considered undergraduates and thus proceed through the undergraduate processes until the bachelor's degree is awarded.

BS in Industrial Engineering

Industrial Engineers (IEs) apply scientific knowledge to solve problems in manufacturing, service industries, businesses and institutions, and are focused on the design modeling and analysis of complex systems to achieve productivity improvement through better use of human resources, financial resources, natural resources, and man-made structures and equipment. IEs apply a full range of analytical, simulation and experimentation tools to problems in designing, planning, implementing and operating systems. These problems are found in a wide variety of organizations (such as banks, hospitals, social services and government agencies), project-based firms (such as construction and consulting) and product-based firms (such as processing, manufacturing and electronics). The focus of industrial engineering is systems design, systems integration and improvement.

Program Educational Objectives

The educational objectives of the industrial engineering program are driven by WSU's mission as an urban university. Industrial engineering graduates are expected, within three to five years after graduation, to meet the following Program Educational Objectives (PEOs):

- PEO1: Be engaged, innovative professionals and leaders in designing, modeling, analyzing, implementing, managing and improving modern complex systems in sectors of local, regional, national and global industries.
- PEO2: Pursue life-long learning, such as graduate studies and research, certification and licensure from professional organizations, Fundamentals of Engineering certification, or active participation in professional societies/activities.
- PEO3: Achieve professional success through the program's emphasis on experiential learning through solving real world problems.

Program Requirements

The BS in industrial engineering program requires the completion of 125 credit hours for graduation, minus hours commensurate with advanced placement credit. Students may select 23 credit hours of technical electives to emphasize the study of systems engineering, supply chain and analytics, or manufacturing engineering. This allows students to specialize in a specific area of industrial engineering. Students' programs are determined by their own interests in consultation with their faculty advisors. All the prerequisite courses must have a grade that generates 2.000 or more credit points per credit hour.

In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students must meet the specific requirements for the industrial engineering program given in the accompanying table.

Course	Title	Hours
College/Program Requirements		
PHIL 385	Engineering Ethics [1]	3
Other general education courses [2]		18
Mathematics/Natural Sciences		
MATH 242	Calculus I [1]	5
MATH 243	Calculus II [1]	5
MATH 511	Linear Algebra	3
PHYS 313	Physics for Scientists I [1]	4
PHYS 314	Physics for Scientists II [1]	4
CHEM 211	General Chemistry I [1]	5
IME 254	Engineering Probability and Statistics I	3
Select one technical elective in math and science from the following		3
MATH 555	Differential Equations I	
MATH 344	Calculus III [1]	
MATH 321	Discrete Structures I	
MATH 513	Fundamental Concepts of Algebra	
CHEM 212	General Chemistry II [1]	
GEOL 302	Earth and Space Sciences [1]	
GEOL 310	Oceanography [1]	
GEOL 300	Energy, Resources and Environment [1]	
BIOL 103	Microbes and You [1]	
BIOL 106	The Human Organism [1]	
BIOL 107	The Human Organism Laboratory [1]	
PHYS 395	Solar System Astronomy [1]	
PHYS 517	Electronics Laboratory	
Major Courses		

CS 211	Introduction to Programming	3-4
or MIS 310	Fundamentals of Business Application Development	
or MATH 451	Computational Mathematics Using MATLAB	
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
IME 255	Engineering Economy	3
IME 258	Manufacturing Methods and Materials I	3
IME 258L	Manufacturing Methods and Materials I Lab	1
IME 452	Work Systems	3
IME 524	Descriptive Analytics	3
IME 549	Industrial Ergonomics	3
IME 550	Operations Research I	3
IME 553	Production Systems	3
IME 554	Statistical Quality Control	3
IME 556	Information Systems	3
IME 563	Facilities Planning and Design	3
IME 565	Systems Simulation	3
IME 590 & IME 690	Industrial Engineering Design I and Industrial Engineering Design II	6
IME 650	Operations Research II	3
Technical Electives		
Track Based Technical Electives [3]		9
Additional Technical Electives [3]		14
Total Credit Hours		125

[1] May count as a general education course.

[2] See the requirements of the WSU General Education program (p. 57). Starting in fall 2021, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences.

[3] There are three tracks from which the students may take technical electives. At least three of the technical elective courses must be from the same track.
Track I – Manufacturing: IME 561, IME 761, IME 558, ME 250/ME 251, ME 672, IME 676, IME 775, IME 758, IME 767, IME 788.
Track II – Supply Chain and Analytics: IME 664, IME 734, IME 753, IME 754, IME 755, IME 780AN, IME 783, IB 400 or DS 725.
Track III – Systems Engineering: IME 664, IME 749, IME 759, IME 755, IME 764, IME 767, IME 740, MGMT 460, MIS 600, MIS 605.
Other courses that may be used as technical electives: College of Engineering courses from other programs may also be used as technical electives. Up to 3 credit hours of IME 481N/IME 481P could be used as technical electives.
Nonengineering technical electives: ACCT 210, ACCT 220, ACCT 310, ACCT 420, ACCT 430, ECON 201, ECON 202, BLAW 431, ECON 660, ENTR 310, ENTR 440, ENTR 605, ENTR 705, IB 333, MGMT 360, MGMT 450, MGMT 462, MGMT 463, MGMT 662. Other courses with permission from the chair of the ISME department.

Applied Learning

Students in the Bachelor of Science in industrial engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the two-course capstone design experience consisting of IME 590 and IME 690.

BS in Product Design and Manufacturing Engineering

The product design and manufacturing engineering program prepares students to engineer products as well as their production, in an integrated manner. The goal of design and manufacturing activities is the cost-effective conversion of raw materials and intermediate products into higher value products through the use of various design, processing, assembly, automation and mass-production techniques. Students in this program learn to appreciate and use the relationships between design, materials selection, processing, productivity, quality and cost to enhance profitability. The strength of this program is its curriculum in three areas — materials and processes, product engineering and assembly, and manufacturing quality and productivity — with an emphasis on aviation in course materials, projects and a capstone design project. Graduates of this program can apply their broad and comprehensive skills in a wide spectrum of industries.

Program Educational Objectives

The educational objectives of the product design and manufacturing (PDM) engineering program are driven by WSU's mission as an urban university. PDM engineering graduates are expected, within three to five years after graduation, to meet the following Program Educational Objectives (PEOs):

- PEO1: Be engaged, innovative professionals and leaders in designing, modeling, analyzing, implementing, managing, and improving products, processes and systems in manufacturing sectors at local, regional, national and global levels.
- PEO2: Pursue life-long learning, such as graduate studies and research, certification and licensure from professional organizations, Fundamentals of Engineering certification, or active participation in professional societies/activities.
- PEO3: Achieve professional success through the program's emphasis on experiential learning through solving real world problems.

Program Requirements

The BS in product design and manufacturing engineering (BSPDME) program requires the completion of 128 credit hours for graduation, minus hours commensurate with advanced placement credit. Students may select 18 credit hours of technical electives to emphasize the study of advanced engineering concepts and topics in other engineering disciplines that impact design and processing. Selection of appropriate courses allows students to tailor their studies to fit their individual interests and needs. Students' programs of study are determined in consultation with their faculty advisors. All the prerequisite courses must have a grade that generates 2.000 or more credit points per credit hour.

In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Engineering, students must meet the specific requirements for the product design and manufacturing engineering program given below.

Course	Title	Hours
College/Program Requirements		
PHIL 385	Engineering Ethics [1]	3
Other general education courses [2]		18
Mathematics/Natural Sciences		
MATH 242	Calculus I [1]	5

MATH 243	Calculus II [1]	5
MATH 451	Computational Mathematics Using MATLAB	3
MATH 555	Differential Equations I	3
PHYS 313	Physics for Scientists I [1]	4
PHYS 315	University Physics Lab I [1]	1
PHYS 314	Physics for Scientists II [1]	4
PHYS 316	University Physics Lab II [1]	1
CHEM 211	General Chemistry I [1]	5
IME 254	Engineering Probability and Statistics I	3
Product Design		
AE 223	Statics	3
EE 282	Circuits I	4
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
IME 255	Engineering Economy	3
IME 425	Kinematic and Dynamic Design	3
IME 625	Product Performance Evaluation using CAE	3
ME 250 & ME 251	Materials Engineering and Materials Engineering Laboratory	4
AE 333	Mechanics of Materials	3
IME 554	Statistical Quality Control	3
Manufacturing		
IME 258	Manufacturing Methods and Materials I	3
IME 258L	Manufacturing Methods and Materials I Lab	1
IME 553	Production Systems	3
IME 561	Applied Control Systems	3
IME 558	Manufacturing Methods and Materials II	4
IME 676	Aircraft Manufacturing and Assembly	3
IME 761	Robot Programming and Applications	3
IME 788	Rapid Prototyping and 3D Printing	3
IME 590	Industrial Engineering Design I	3
Technical Electives		
Technical Electives [3]		18
Total Credit Hours		128

[1] May count as a general education course.

[2] See the requirements of the WSU General Education program (p. 57). Starting in fall 2021, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences.

[3] Students should consult with their faculty advisor for a list of approved technical electives.

Applied Learning

Students in the Bachelor of Science in manufacturing engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the capstone design experience consisting of IME 590.

Minor in Manufacturing Engineering

A minor in manufacturing engineering consists of 23 credit hours including:

Course	Title	Hours
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
ME 250 & ME 251	Materials Engineering and Materials Engineering Laboratory	4
IME 258	Manufacturing Methods and Materials I	3
AE 333	Mechanics of Materials	3
IME 558	Manufacturing Methods and Materials II	4
ME 672	Manufacturing of Composites	3
or IME 676	Aircraft Manufacturing and Assembly	
Select 3 credit hours from an approved list		3
Total Credit Hours		23

At least 12 credit hours must be taken at WSU with at least a 2.250 GPA in those courses.

Mechanical Engineering

Mechanical engineering is one of the oldest and broadest engineering fields. Mechanical engineers are vital team members in virtually any industrial activity ranging from concept to design, and analysis to manufacturing, from aircraft and automotive to consumer products and building equipment. In these jobs, mechanical engineers design products, machines and develop processes for manufacturing. They analyze, test and develop devices, systems and processes to attain the best performance and durability within cost and time constraints. Examples of specific mechanical engineering jobs include:

- Design, development and manufacturing of automotive engines and vehicle systems;
- Design, development and manufacturing of gas turbine and other aircraft engines;
- Design and construction of electrical power plant energy conversion and generating systems;
- Design, development and manufacturing of consumer products, ranging from appliances such as refrigerators, washers and electric drills, to the manufacturing systems for producing facial tissue and processed foods and packaging of these items;
- Design and specification of heating, air conditioning and ventilating systems used in aircraft, automobiles and buildings;
- Analysis of the complex flow of gases and fluids such as air flow in aircraft inlet ducts and fluid flow in hydraulic and pumping systems;
- Study of heat flow, ranging from boilers and automotive radiators to heat management problems in orbiting spacecraft;
- Study of globalization, moral, ethical, economic and business issues related to mechanical engineering; and
- Design and analysis of robotic systems.

Students in the mechanical engineering program are prepared specifically for these job possibilities, and are also empowered to continue their education, i.e., graduate school. This is accomplished through a broad course of study that covers not only the technical aspects required, but the ethical, professional, communication, economic and business skills needed to be a successful practicing

engineer. The program includes components in mathematics and natural sciences, written and oral communication skills, humanities and social sciences, a core of engineering science subjects, and a specified set of required technical courses covering the basic areas of mechanical engineering. In addition, students select elective courses that allow them to develop additional specialized knowledge in engineering such as robotics, manufacturing, entrepreneurship, biomechanics, materials structure and behavior, heat transfer and energy conversion. Modern laboratories and a wide variety of computer facilities provide students with hands-on experience in experimental work and computer-aided design and engineering. The undergraduate program in mechanical engineering is accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org)[1].

[1] Link opens new window.

Majors in Mechanical Engineering

- Dual/Accelerated BS to MS in Mechanical Engineering (p. 138)
- BS in Mechanical Engineering (p. 138)

Minors in Mechanical Engineering

- Minor in Mechanical Engineering (p. 139)

Certificates in Mechanical Engineering

- Certificate in Sustainable Materials and Design (p. 139)

Courses in Mechanical Engineering

- Mechanical Engineering (ME) (p. 445)

Dual/Accelerated Bachelor's to Master's Degree in Mechanical Engineering

The dual/accelerated bachelor's to master's degree (ABMS) is designed to offer outstanding students the opportunity for advancing their careers by pursuing the bachelor's and master's in a parallel program and accelerated time frame. The ABMS also provides more focused advising, preparing the student for graduate study during their sophomore and junior years. The ABMS program develops a close working relationship between the student and a graduate advisor early in the student's academic career. Eligibility requires ME majors to be within 30–45 credit hours of graduating and have a WSU GPA of 3.250 or better.

BS in Mechanical Engineering

Educational Objectives

Graduates of the Bachelor of Science degree in mechanical engineering are expected to meet the following objectives within a few years of graduation:

- Educate students to be successful mechanical engineers with emphasis on sustainability and globalization.
- Prepare students to pursue life-long learning.
- Prepare students for real-world problems through the program's emphasis on experiential learning and industry-based projects in a diverse and innovative work environment.

Mechanical Engineering Honors Track Admission Requirements

1. Students must be admitted to the Honors College;
2. Students must be within 60 credit hours of degree completion;
3. Students must have an overall GPA of at least 3.500 and a GPA of 3.500 in all engineering courses; and
4. Students must complete a letter of application to the mechanical engineering chairperson including the following:
   a. Transcript;
   b. Resume; and
   c. One-page essay on academic and career plans including an undergraduate research idea.

BS in Mechanical Engineering Sequence of Courses

The program requires the completion of 128 credit hours for graduation, minus hours commensurate with advanced placement credit. Specific degree requirements are given below. All the prerequisite courses must have a grade that generates 2.000 or more credit points per credit hour. A minimum total of 128 hours is required for the BS in mechanical engineering program and includes the 59 credit hours of major courses that must be completed with a minimum grade point average of 2.000. In addition to meeting the requirements of the WSU General Education Program (p. 57), and the requirements of the College of Engineering, students in the BS in mechanical engineering must take the following courses:

Course	Title	Hours
Foundation Courses		
PHIL 385	Engineering Ethics	3
Mathematics/Natural Sciences		
MATH 242	Calculus I	5
MATH 243	Calculus II	5
MATH 344	Calculus III	3
MATH 555	Differential Equations I	3
PHYS 313	Physics for Scientists I	4
PHYS 314	Physics for Scientists II	4
PHYS 315	University Physics Lab I	1
CHEM 211	General Chemistry I	5
Natural Sciences/General Education Elective [2]		3
Major Courses		
AE 223	Statics	3
AE 333	Mechanics of Materials	3
EE 282	Circuits I	4
IME 222	Engineering Graphics	2
IME 222L	Graphics Lab	1
ME 250	Materials Engineering	3
ME 251	Materials Engineering Laboratory	1
ME 325	Numerical Methods for Engineers	3
ME 335	Dynamics for Mechanical Engineers	3
ME 339	Design of Machinery	3
ME 398	Thermodynamics I	3
ME 439	Mechanical Engineering Design I	3
ME 475	Integrated Design and Manufacturing	3
ME 521	Fluid Mechanics	3
ME 522	Heat Transfer	3
ME 533	Mechanical Engineering Laboratory	3
ME 541	Mechanical Engineering Design II	3
ME 625	Applications in Thermal Engineering	3
ME 633	Mechanical Engineering Systems Laboratory	3
ME 659	Mechanical Control Systems	3
ME 662	Senior Capstone Design	3
Mechanical Design Elective [2]		3

Thermal Design Elective [2]	3
Thermal/Fluids Science Elective [2]	3
Mechanical Engineering Elective [2]	3
Technical Electives [2]	3
Other general education courses	18
Total Credit Hours	128

[1] See the requirements of the WSU General Education program (p. 57). Starting in fall 2021, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences.

[2] Must be chosen with advisor's approval.

Applied Learning

Students in the Bachelor of Science in mechanical engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ME 662 Senior Capstone Design.

Mechanical Engineering Honors Track

Completion Requirements

1. Formal admission into the mechanical engineering departmental honors track;
2. Maintain a minimum overall GPA of 3.500 and a minimum GPA of 3.500 in engineering courses; and
3. One of the following two options:
   a. Complete any of the ME 600- or 700-level elective courses with a grade of *B* or better; or
   b. For students with research as part of their professional interests — enroll in ME 678 and complete an undergraduate research project under faculty guidance, resulting in an honors report and presentation of a technical paper highlighting the student's research in a local technical venue such as GRASP (Undergraduate Research and Scholarly Projects), or a relevant ASME technical conference or equivalent.

Minor in Mechanical Engineering

A minor in mechanical engineering consists of the following courses (as well as any prerequisites required by these courses):

Course	Title	Hours
ME 339	Design of Machinery	3
ME 398	Thermodynamics I	3
ME 439	Mechanical Engineering Design I	3
ME 521	Fluid Mechanics	3
ME 522	Heat Transfer	3
Total Credit Hours		15

Certificate in Sustainable Materials and Design

The undergraduate certificate in sustainable materials and design is a university-issued certificate. It is designed for engineering and technology professionals and undergraduate students enrolled in related fields who wish to gain training in this focused topic. Students completing this certificate will have a strong understanding of the fundamentals of materials, its sustainable technology and design, as well as indepth knowledge in critical and upcoming areas such as new computer aided engineering (CAE) based programs toward efficient design, high technology nondestructive analysis (analytical and numerical), meso- micro- nano-scale sustainable materials research, automation and recovery of engineering materials for environmental safety, security and health.

Admission

Students seeking this certificate must be admitted to the university in one of the degree programs offered by the department or in a nondegree status. All university policies relative to admission apply. Students pursuing an undergraduate certificate must file a plan of study for the certificate program with the undergraduate coordinator before half of the required hours are completed. Students may apply certificate coursework toward a degree program.

Program Requirements

The certificate requires the completion of 12 credit hours from a selected list of courses. A cumulative grade point average of at least 3.000 must be maintained for all courses comprising the certificate program and no grades below *C*.

Course	Title	Hours
Select four of the following seven courses		12
ME 541	Mechanical Engineering Design II	
ME 637	Computer-Aided Engineering	
ME 665	Selection of Materials for Design and Manufacturing	
ME 670	Introduction to Nanotechnology	
ME 673	Recovery of Engineering Materials	
ME 702	Energy and Sustainability	
ME 749	Applications of Finite Element Methods in Mechanical Engineering	
Total Credit Hours		12

Students completing the certificate program receive an appropriately-worded certificate from the university and a notation is made on the student's transcript when the certificate has been awarded.

Fine Arts, College of

Rodney Miller, ***dean***
116 Wiedemann Hall • 316-WSU-3389
College of Fine Arts Webpage **(**http://wichita.edu/finearts/**)**[1]
Wendy Hanes, *assistant dean*

The College of Fine Arts is responsible for instruction, scholarly inquiry, performance, teacher education (art and music) and applied study in music, dance, theatre, and visual and media arts. The School of Art, Design and Creative Industries, the School of Digital Arts, the School of Music and the School of Performing Arts (dance, theatre and music theatre) offer both general arts study and professional training programs at the undergraduate level; professional degrees are offered at the graduate level.

Students are presented with a complete spectrum of choices according to their interest in professional activities, teaching careers, graduate study or acquiring an appreciation of the arts. They have the opportunity to explore various art forms as well as to develop the ability to respond to changes and challenges within the world of the arts. The college strives to develop and use new artistic techniques, current historical research and recent technical innovations to achieve these ends.

The School of Music is an accredited member of the National Association of Schools of Music; the dance program is accredited by the National Association of Schools of Dance; and the School of Art, Design and Creative Industries is accredited by the National Association of Schools of Art and Design. All of these programs adhere to requirements for entrance and graduation that accord with the associations' published criteria.

[1] Link opens new window.

College of Fine Arts Policies

Admission

All entering freshmen who declare a major within a discipline in the College of Fine Arts, or who enter as a general undecided student in a fine arts discipline, will be enrolled in and advised by the school that houses the discipline (art, design and creative industries; digital arts; music; performing arts — dance, music theatre and theatre)[1]. All students must maintain a grade point average of 2.000 or above to remain in good standing (see Academic Probation and Dismissal Standards (p. 33)).

Transfer students must present an earned GPA of 2.000 or higher for all prior college work in order to be fully admitted into one of the schools within the College of Fine Arts. Transfer students with a GPA of at least 1.700 but less than 2.000 may petition for probationary admission.

Probation and Dismissal

Students are expected to make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the university.

Students are required to maintain an overall and institutional grade point average of at least 2.000. Students enrolled in either the music education or art education programs must meet specific curriculum and GPA requirements prior to acceptance into student teaching; call or consult the associate dean of students and certification in the College of Applied Studies, 316-978-3303.

Students who do not achieve or maintain the required 2.000 grade point average will be placed (or continued) on probation at the conclusion of each semester in which their overall or institutional grade point average falls below 2.000 and they have attempted at least 6 credit hours at Wichita State University. Students on probation are limited to a maximum of 12 credit hours per semester while on probation. Students will be dismissed at the end of any semester on probation if they fail to earn a semester grade point average at or above the minimum required, and have an overall or institutional grade point average also below the minimum required. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Transfer students admitted on probation must complete at least 12 credit hours with a minimum grade point average of 2.000 on work at Wichita State before probation may be lifted.

Students who have been dismissed for poor scholarship may be readmitted by permission of the relevant school Curriculum and Policy Committee in the College of Fine Arts and by the university's Committee on Admissions and Exceptions.

Graduation Requirements

Students must meet the WSU graduation requirements including a minimum of 45 credit hours of upper-division courses, plus the college requirements described with each program.

General Education Requirements

The College of Fine Arts conforms to the policy set forth by the division of academic affairs at Wichita State University. Some College of Fine Arts programs incorporate specific general education courses, which are required. Students should refer to the General Education Program (p. 57) requirements as well as their specific program check sheet.

Inter-College Double Major

An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Applied Studies, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 35).

[1] The College of Fine Arts Advising Center is located in 319 McKnight, 316-978-6634.

Degrees and Certificates Offered

Undergraduate

The College of Fine Arts offers four undergraduate degrees: Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Music (BM), and Bachelor of Music Education (BME). Graduation requirements for each degree are listed in the descriptions of the appropriate school programs.

Graduate

The Graduate School offers a program leading to the Master of Fine Arts (MFA) with emphases in ceramics, painting, printmaking and sculpture; a Master of Music Education (MME) with emphases in elementary music, instrumental music, choral music and music in special education; and a Master of Music (MM) with emphases in chamber music, history-literature, instrumental conducting, opera performance, performance, piano pedagogy and composition.

For information concerning requirements for entrance and curricula, consult the Wichita State University Graduate Catalog.

Certificates

The School of Performing Arts offers two undergraduate certificates: stage management and directing.

Special Academic Area Cooperative Education

The College of Fine Arts participates in the university cooperative education internship program. The program is designed to provide relevant paid employment experiences that integrate with and complement the student's academic program. Degree credit is awarded. Students are placed in a variety of positions including education and business settings in theatre, music and art disciplines. For further information, contact the fine arts coordinator in the cooperative education office.

Courses in Fine Arts - General

- Fine Arts (FA) (p. 391)
- WSU First-Year Seminar: Fine Arts (WSUF) (p. 519)

School of Art, Design and Creative Industries

Jeff Pulaski, director

Department Website **(**https://wichita.edu/adci/**)**[1]

The School of Art, Design and Creative Industries offers four program areas: art education, art history, graphic design and studio art. These programs offer courses within the BA and BFA degrees to train and educate art and design majors. Students in academic programs other than art are encouraged to enroll in any of our courses to gain a better understanding of art and extend their visual literacy.

The programs of study at the School of Art, Design and Creative Industries demand from each student the self-discipline and commitment to become a professional designer, educator, artist or scholar. Many entering students have not yet identified the art discipline in which they wish to develop their strengths. Others enter the school with a clear professional direction. Through structured programs which provide ample opportunity for experimentation, the school meets the needs of all its students.

During the first year of study, the foundation studies curriculum develops technical abilities and visual literacy within a conceptual and historical framework. These fundamental skills provide the basis for understanding and creating art forms at a professional level in advanced coursework.

Art students have excellent classroom and laboratory facilities in McKnight Art Center and Henrion Annex. Clayton Staples Art Gallery offers guest artist and thematic exhibits in addition to featuring BFA and MFA graduation shows. McKnight provides extensive space for exhibiting student work including two other student-run galleries, Project Space and Print Space. The school manages Shift Space, an off-campus gallery downtown in the heart of Wichita's creative community.

At the Edwin A. Ulrich Museum of Art in McKnight, students can view a wide range of exhibitions and hear a variety of visiting artists and guest lecturers. The Lewis and Selma Miller Fund provides programs of regional and national interest.

Degrees Offered

The School of Art, Design and Creative Industries offers three undergraduate degrees. The Bachelor of Arts (BA) in art degree is a general liberal arts degree and offers students the opportunity to pursue an emphasis in art or art history, with minor studies required in any second area of study in the university. The Bachelor of Fine Arts (BFA) in art—studio art emphasis is a professional degree offering students eight concentrations—applied drawing, ceramics, community and social practices, electronic media, painting, photo media, print media, and sculpture. The Bachelor of Fine Arts (BFA) in art—art education emphasis offers training in fine art creation, pedagogy and classroom skills, leading to teacher licensure in the state of Kansas. The Bachelor of Fine Arts (BFA) in graphic design is a professional degree offering students studies in graphic design. The school offers minors in art and design, art history, and graphic design to students pursuing majors outside the school. All degree programs are described in detail in the following section.

Advising

The School of Art, Design and Creative Industries requires faculty advising of all its students each semester prior to enrollment. Students are advised on the basis of the program (student progress check sheet) in effect on the date they are admitted into a particular degree program (BA or BFA) rather than the date they enter the university.

Art Foundation Studies

The art foundation studies curriculum prepares students with broad technical, conceptual and visual literacy skills that are basic to all areas of art and design. The curriculum is required of all art and design majors, although students interested in the Bachelor of Arts in art, art history emphasis take a slightly narrowed set of courses. Please see the appropriate program section of the catalog for more details on the specific courses required for each degree.

Prior to completing ARTF 202, all art and design students are designated BA in art majors.

Upon completion of ARTF 202, students declare a degree path with major emphasis and are eligible for appropriate upper-division coursework. Changing major codes within art and design after completing ARTF 202 requires approval by the art and design faculty in the new major area.

Transfer Students

Upon acceptance to Wichita State, students must:

1. Arrange a meeting with the art and design academic advisor at 316-978-7701; and
2. Submit a portfolio of artwork from the courses to be transferred using WSU's Art, Design and Creative Industries online portal (http://wsufinearts.slideroom.com)[1].

Transfer portfolios assist the department in matching the art courses a transfer student has already taken with WSU courses to ensure a smooth transition to the School of Art, Design and Creative Industries.

Deadlines for each semester are as follows: fall, September 1; spring, February 1. Transfer portfolios must be submitted by February 1 to be applied in time for advising. In addition, transfer portfolios submitted by this date will automatically be considered for scholarships (those received after February 1 will have to apply for scholarships on their own the following year). All transfer portfolios are submitted online at the ADCI portal (http://wsufinearts.slideroom.com)[1]. This online application portal will compile applicants' portfolios, saving partial submissions to allow for return to the portfolio as often as necessary until the application is completed.

Transfer portfolios and applications received after the semester deadline will not be reviewed until the following semester. In such cases students may still be admitted to the School of Art, Design and Creative Industries, but with proposed transfer credits subject to the next portfolio review.

Transfer students with 60 credit hours and art and design requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Attendance

The undergraduate art student is expected to attend all scheduled classes and examinations. At the discretion of the faculty member, the student may be failed in a course, or given a lowered grade, based on absences. In high enrollment classes, a student who misses the first two class meetings may be asked to drop the course. In cases of extended absence for serious illness or other unavoidable reasons the student should notify the director of the School of Art, Design and Creative Industries.

Special Needs

Students with special needs are requested to consult with their professor in his or her office during the first week of class. Students are required to provide appropriate documentation to the director of disability services before classroom services or accommodations are provided. A special need may involve seating arrangements, note taking, tape recording, examinations, etc. For more information contact the Office of Disability Services at 316-978-3309.

Minimum Grade Requirements

Art and design students must receive a grade of *C* (2.000 grade points) or better in all art and design courses applied toward their degree requirements. This policy also applies to transfer credits in art and design being applied toward degree requirements.

Fees

As part of university fees, the College of Fine Arts charges students a fee per credit hour for certain equipment, materials and services that must be provided for the class rather than purchased individually. More information about fees can be found in the Financial Information section of this catalog.

Student Artwork

The School of Art, Design and Creative Industries reserves the right to temporarily withhold artwork for exhibition. Students are encouraged to exhibit work in the school as a significant part of the educational experience. At the same time, the school and the university cannot insure student artwork for exhibition purposes or take responsibility for its loss or damage under any circumstances. At the end of each semester, students are required to remove all personal supplies and artwork from classrooms, laboratories, lockers and studios. Work or materials left behind will be disposed of by the school.

Graduation Audit

Students should have a graduation audit prior to the final two semesters before the student's intended completion date. Appointments can be scheduled with an advisor in the School of Art, Design and Creative Industries. Especially if students have transfer credits, they should keep careful track of their general education and degree requirements to avoid unexpected problems surfacing as they approach their expected date of graduation.

[1] Link opens new window.

Majors in the School of Art, Design and Creative Industries

- BA in Art - Art Emphasis (p. 143)
- BA in Art - Art History Emphasis (p. 144)
- BFA in Art - Art Education Emphasis (p. 145)
- BFA in Art - Studio Art: Applied Drawing Concentration (p. 147)
- BFA in Art - Studio Art: Ceramics Media Concentration (p. 148)
- BFA in Art - Studio Art: Community and Social Practices Concentration (p. 149)
- BFA in Art - Studio Art: Electronic Media Concentration (p. 149)
- BFA in Art - Studio Art: Painting Concentration (p. 150)
- BFA in Art - Studio Art: Photo Media Concentration (p. 151)
- BFA in Art - Studio Art: Print Media Concentration (p. 152)
- BFA in Art - Studio Art: Sculpture Concentration (p. 153)
- BFA in Graphic Design (p. 154)

Minors in the School of Art, Design and Creative Industries

- Minor in Art and Design (p. 155)
- Minor in Art History (p. 155)
- Minor in Graphic Design (p. 155)

Courses in the School of Art, Design and Creative Industries

- Art Education (ARTE) (p. 306)
- Art Foundation (ARTF) (p. 307)
- Art History (ARTH) (p. 308)
- Graphic Design (ARTG) (p. 307)
- Studio Art (ARTS) (p. 311)

BA in Art - Art Emphasis

The Bachelor of Arts (BA) in art degree with an art emphasis is designed for students who want to combine a broad training in art and design with additional areas of study. After completing the art foundation studies curriculum, each student gains experience in 2-D, 3-D and design areas, followed by focused work in a single area, or work in a variety of courses from multiple areas as per the student's goals. The degree requires a minor in an area outside ADCI along with elective courses, selected with the assistance of an advisor, that can be from within ADCI or from other areas of the university.

Program Requirements

A minimum total of 120 credit hours is required for the BA in art — art emphasis, including 55 credit hours of art and art history courses listed below. A grade of *C* or higher is required for major courses to count toward degree requirements. In addition to the university scholastic, residence and General Education Program (p. 57) requirements, candidates for the BA in art - art emphasis degree must also complete a minor in a discipline other than art and design. The requirements for minors are set by each department. Credit hours completed for a minor cannot be used to satisfy requirements for two or more minors. Credit hours completed for the minor may include coursework that satisfies General Education requirements.

Course	Title	Hours
Art Foundation Studies Curriculum		
ARTF 102	Introduction to Art and Design [1]	
ARTF 136	Foundation 2-D Design [1]	
ARTF 145	Foundation Drawing [1]	
ARTF 189	Foundation 3-D Design [1]	
ARTF 202	Mid-Program Review	
Art History		
ARTH 125_ Intro to Visual and Material Culture (two different courses)		
ARTH 300-level, any combination of courses totaling 6 credit hours; not more than three credits of ARTH 390_		
ARTH 500-level, one course		
Art Distribution Requirements		
Select one of the following 2-D courses		3

ARTS 232	Introduction to Photography	
ARTS 240	Introduction to Life Drawing	
ARTS 252	Introduction to Painting Media	
ARTS 261	Introduction to Printmaking	
Select one of the following 3-D courses		3
ARTS 270	Introduction to Ceramics	
ARTS 282	Introduction to Sculpture and Extended Media	
Select one of the following digital courses		3
ARTS 245	Digital Studio	
ARTS 283	Digital 3-D Tools in Sculpture	
Select one of the following design courses		3
ARTG 216	Typography I	
ARTG 234	Introduction to Graphic Design	
ARTG 235	Graphic Design Concepts	
ARTG 490	Graphic Design Applications	
ARTG 491	Interactive Design	
ARTG 493	Book Design and Production	
Art Emphasis Requirements		15
Any ART/E/G/S 200+ (3 credit hours)		
ART/E/G/S 300+ (6 credit hours)		
ARTS 590	SlowBurn Topics - First Semester (ARTS 590 or ARTH 395)	
ARTS 591	SlowBurn Topics - Second Semester (ARTS 591 or ARTH 396)	
Minor in a discipline other than art and design		
Select a minor from an area outside ADCI, as determined by Undergraduate Catalog requirements; at least 6 credit hours must be 300+ [2]		15
University Electives (at least 9 credit hours must be 300+)		14
With an advisor, select any additional coursework in art or other discipline that complements the student's plan of study; credits variable as necessary to fulfill degree requirements		
Total Credit Hours		56

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[3].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Credit hours required for a minor may vary. With an advisor, select a sufficient number of elective credit hours to fulfill the 120 credit hour requirement for the degree.

[3] Link opens a new window.

Applied Learning

Students in the BA in art - art emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ARTS 590 and ARTS 591, Slow Burn Topics, or ARTH 395 and ARTH 396, Slow Burn Topics.

BA in Art - Art History Emphasis

The Bachelor of Arts (BA) in art degree with an art history emphasis provides a thorough grounding in the liberal arts, provides students with the opportunity for real-life experience through partnerships with local arts organizations, and prepares them for their professional pursuits or graduate studies in art history, museum studies, conservation and art criticism. The program emphasizes thematic knowledge of the major concepts structuring art history across chronological and geographical boundaries, a broad understanding of modern and contemporary art, and exposure to both new/emerging media and also non-Western cultures. This broad, thematic knowledge is augmented by study in greater depth and precision of contemporary art history and art theory. Active research and the writing of analytical and critical texts is a component of courses at all levels. Students also gain a functional knowledge of the creative process through studio, graphic design, foundations or education courses.

Admission

Students gain formal admission to the degree program through the preparation of a plan of study in Mid-Program Review (ARTF 202), a course that provides structured advising about career options and degree requirements.

Program Requirements

A minimum total of 120 credit hours is required for the BA in art — art history emphasis and includes the 40 credit hours of art and art history courses listed below. In addition to the university scholastic, residence and General Education Program (p. 57) requirements, candidates for the degree must complete the 40 credit hours of art and art history courses with a minimum grade point average of 2.500 and demonstrate, through coursework, proficiency in at least one non-English language to support research through the reading of primary source materials. The language requirement is normally fulfilled in French or German, but other languages may be substituted with the approval of the art history area head. Grades below *C* (2.000 grade points) in ARTE, ARTG, ARTH or ARTS courses may not be applied toward degree requirements.

Art history majors are also required to complete an approved minor or second major in a related area of the humanities or social sciences, chosen in consultation with the art history faculty.

Course	Title	Hours
Art and Design Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 202	Mid-Program Review	1
Select two courses in ARTE/F/G/S 100-level (excludes ARTE 150, ARTE 281; ARTF 102, ARTF 202; ARTG 110, ARTG 111, ARTG 112, ARTG 281; ARTS 195)		6
Art History Emphasis		
ARTH 125_ Intro to Visual and Material Culture (select two different courses) [1]		6
ARTH 387	Theories of Art and Culture (An upper-division course in the theory of art can be substituted for this requirement)	3
ARTH 300 level, two courses (excludes ARTH 390_, 395_, 396_)		6
Select three 1 credit hour courses from the following		3
ARTH/S 390_ QuickFire Topics (select different courses)		
ARTS 375_Special Topics in Ceramics (select different courses)		
Select one of the following		3
ARTH 395_ SlowBurn Topics 1st Semester		
ARTS 590_ SlowBurn Topics 1st Semester		
Select one of the following		3
ARTH 396_ SlowBurn Topics 2nd Semester		
ARTS 591_ SlowBurn Topics 2nd Semester		
ARTS 500 level, two courses		6
Electives		

Electives include the language requirement, minor requirement, at least one writing-intensive course, and courses selected from any university program, including art and design, which fulfill the plan of study. Writing-intensive course may be satisfied with COMM 190, COMM 301, COMM 313, ENGL 210, ENGL 285 or ENGL 560.	44
Total Credit Hours	84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and the ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the art history program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completion of a Slow Burn course or an appropriate internship with permission of the art history faculty.

BFA in Art - Art Education Emphasis

The Bachelor of Fine Arts (BFA) in art degree with an art education emphasis is designed for students who want to prepare for a career in teaching the visual arts in grades prekindergarten through the 12th grade. The art teacher must develop competencies in general educational studies, professional teacher education and a range of art and design skills. After completing the art foundation curriculum in the first year, students must select a specialty from applied drawing, ceramics media, graphic design, painting, photo media, print media or sculpture. In the fourth or fifth semester, students apply to the teacher education program. In addition to meeting College of Applied Studies requirements, they must meet portfolio and any additional requirements established by art education faculty in ARTF 202 Mid-Program Review.

Upon acceptance, students engage in various types of teaching and directed observation through the period of undergraduate art education study. There is a four-semester sequence of fieldwork involving a one-hour-per-week assignment during the first semester that increases to an all-day assignment during the fourth semester. After art teacher candidates successfully complete the program, they are recommended to the state department of education for a conditional art teaching license. After two years of successful teaching with a conditional license, the art teacher applies for the professional license.

Admission

Requirements for admission to teacher education are identified in the College of Applied Studies section of this catalog. Please refer to it for detailed information. The following requirements must be satisfied for acceptance and to begin the core sequence of coursework in the School of Education in the College of Applied Studies:

1. A 2.750 GPA or higher within the 35 credit hours of foundation and general education coursework, which may include up to 10 hours of ARTF coursework;
2. A *C-* or higher grade in the four general education foundation courses which must be completed within a student's first 48 credit hours:
   a. ENGL 101 (or its equivalent)
   b. ENGL 102 (or its equivalent)
   c. COMM 111
   d. MATH 111 (or other higher-level mathematics course)
3. Receive a passing grade in STAT 370 or its equivalent; and
4. A passing grade in PSY 111, or its equivalent.

Standardized Test Requirement

A prospective art teacher candidate must satisfy one of four possible standardized test requirements. Minimum scores required on these national tests are listed in the College of Applied Studies section. Application packets are available at the College of Applied Studies Advising (CASA) office, 107 Corbin, and at https://wichita.edu/casa (https://wichita.edu/casa/).

Program Requirements

In addition to meeting the university's scholastic, residence and general education requirements for graduation, candidates for the BFA must complete the following courses for a total of 127 credit hours. Courses within the art education curriculum fulfill both the university general education requirements for graduation and preparation for Kansas licensure for teaching art in the elementary and secondary levels.

Course	Title	Hours
College Requirements Counted as General Education		
ARTH 125	Intro to Visual and Material Culture (select one of the lettered courses)	3
PSY 111	General Psychology	3
STAT 370	Elementary Statistics	3
ARTH 347	Themes in Contemporary Art and Design I	3
ARTS 312	Community Arts Engagement	3
CESP 334	Introduction to Diversity: Human Growth and Development	3
Art Foundation Studies		
ARTF 102	Introduction to Art and Design [2]	3
ARTF 136	Foundation 2-D Design [2]	3
ARTF 145	Foundation Drawing [2]	3
ARTF 189	Foundation 3-D Design [2]	3
ARTF 202	Mid-Program Review	1
Art History [3]		
ARTH 125_	Intro to Visual and Material Culture	3
ARTH 300+	Select any 3 credit hours of ARTH at or above the 300 level	3
Introductory Art and Design [4]		
ARTS 211	Introduction to Community and Social Practice	3
ARTS 232	Introduction to Photography	3
ARTS 240	Introduction to Life Drawing	3
ARTS 252	Introduction to Painting Media	3
ARTS 261	Introduction to Printmaking	3
ARTS 270	Introduction to Ceramics	3
Select one of the following courses		3
ARTE 302	Jewelry Design/Construction	
ARTE 313	Fiber Exploration	
ARTS 282	Introduction to Sculpture and Extended Media	
Select one of the following courses		3
ARTG 216	Typography I	
ARTS 245	Digital Studio	

ARTG 234	Introduction to Graphic Design	
Art Emphasis		
Select three courses numbering 300 or above from ARTG or a single ARTS media area.		9
Professional Education Sequence (33 credit hours) [5]		
ARTE 303	Stimulating Creative Behavior	3
ARTE 310	ISAM: Elementary Art Education and Literacy	3
ARTE 410	ISAM: Preteaching Internship: Middle	3
ARTE 414	ISAM: Secondary Art Education	3
ARTE 511	Cross-Cultural Aesthetic Inquiry	3
CI 311	Introduction to Diversity: Field Experience	1
CI 320	Introduction to Diversity: Exceptionalities	2
CI 427	Philosophy, History and Ethics of Education	3
CESP 433	Learning Assessment and Evaluation Theory: Evidence-Based Instruction	3
ARTE 459	Teaching Internship: Elementary Art	4
ARTE 462	Teaching Internship: Secondary Art	4
ARTE 517	Teaching Internship Seminar	1
Additional Courses		
In consultation with an advisor, select sufficient general education and elective courses to complete the required 127 credit hours.		24
Total Credit Hours		127

[1] Must be approved general education courses.

[2] Must be completed prior to enrolling in ARTF 202.

[3] An additional 6 credit hours of Art History are counted in the general education requirements.

[4] An additional 3 credit hours of ARTS are counted in the general education requirements.

[5] An additional 3 credit hours of CESP are counted in the general education requirements.

Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci (http://wichita.edu/adci/)).

Teaching Internship

The teaching internship year takes place during the student's final year in the program through ARTE 410 (fall semester) and ARTE 459, ARTE 462 and ARTE 517 (spring semester). Students are required to complete ARTE 310 and ARTE 414 with a grade of *B-* or better before beginning their teaching internships. Assignments for all teaching internship placements are made by the art education faculty in consultation with the art teacher candidate. The Teaching Internship Handbook, distributed by the College of Applied Studies, lists all policies to be followed during the teaching internship by the teacher candidates, the cooperating teachers and the university supervisors.

ARTE 410 consists of a 12-week preteaching internship in a local middle school during the fall semester. Working with a professional cooperating teacher, students observe a class every day of their placement. Toward the end of their internship, students plan and teach an original 10-day unit of study to their middle school class. Based on this activity, students complete a practice Kansas Performance Teaching Portfolio (KPTP). By midterm of this semester, students apply for placement in their spring teaching internship (Core III).

Beginning the spring teaching internship requires:

1. *B-* or higher in ARTE 410;
2. Senior standing;
3. Minimum 2.500 in art courses;
4. Minimum 2.500 overall grade point average;
5. Recommendation by the art education faculty following a formal interview; and
6. Passing the second transition point, which includes a selection of embedded assessments identified in the standards for art teacher preparation and the required coursework in the School of Education (C&I courses) and in the School of Art, Design and Creative Industries.

During the spring semester, art teacher candidates enroll in ARTE 459, ARTE 462 and ARTE 517. These courses require students to work with a high school art teacher all day for eight weeks (ARTE 462), an elementary school art teacher all day for seven weeks (ARTE 459) and participate in a teaching internship seminar (ARTE 517) weekly during the entire semester. A grade of *B-* or higher is required in each of these courses.

Embedded Assessments

Embedded assessments are included within coursework in the major during the last four semesters. These competencies reflect national standards as well as meet the KSDE (Kansas State Department of Education) required competencies for art teacher preparation. There are seven competencies.

1. The teacher of art demonstrates a strong theoretical foundation in art education.
2. The teacher of art demonstrates knowledge, competency and teaching ability in the content of art and design.
3. The teacher creates a safe environment that supports individual and collaborative problem solving and that encourages positive social interaction, active engagement in learning, and self-motivation.
4. The teacher of art selects and adapts a variety of appropriate resources, materials and technologies in order to design curriculum that enables students to create, present, respond and connect to art.
5. The teacher of art demonstrates knowledge of collaborative and promotional strategies for working with colleagues, families and community groups to achieve common goals for enriching the art program, enhancing students' learning and improving the school environment.
6. The teacher of art understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide teachers' decision making.
7. The teacher of art demonstrates knowledge of professional art organizations, and seeks professional growth and development opportunities to advance the profession.

Licensure

It is possible to graduate with a degree but fail to meet requirements necessary for licensure recommendation. Art teacher candidates assume responsibility for knowing, and fully understanding, their program assessment plan and transition point requirements, which must be met successfully prior to licensure recommendation. Application for teacher licensure in Kansas requires completion of the Principles of Learning

and Teaching (PLT) examination and the Praxis content examination, as established by the Kansas State Department of Education in order to qualify for the initial license. A fingerprint test administered by the police department is required. Candidates must be free of any felony conviction. A grade of *B-* or higher in each of the teaching internship (Core III) courses (ARTE 459, ARTE 462 and ARTE 517) is necessary to receive a recommendation for the teaching license. (See Program Requirements.)

BFA in Art - Studio Art: Applied Drawing Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The applied drawing concentration offers intensive studio work within courses designed to develop a wide range of technical and conceptual skills, including traditional media, mixed media and digital media. The concentration requires a foundation in fundamental aspects of drawing media and rendering, and allows students to pursue applied or fine art drawing approaches.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses. Students must also meet the university's scholastic, residence and General Education Program (p. 57) requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in studio art must take the following courses. (One ARTH 125_ course *may* count as their fine arts general education course.)

Course	Title	Hours
Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
ARTH 347	Themes in Contemporary Art and Design I	3
Select 3 credit hours in ARTH 300 + (300-level or above)		3
Introductory Studies		
ARTS 195	Studio Tools Workshop	1
ARTS 240	Introduction to Life Drawing	3
ARTS 245	Digital Studio	3
ARTS 252	Introduction to Painting Media	3
Select one of the following		3
ARTS 270	Introduction to Ceramics	
ARTS 282	Introduction to Sculpture and Extended Media	
ARTS 283	Digital 3-D Tools in Sculpture	
Select two courses from the following		6
ARTS 211	Introduction to Community and Social Practice	
ARTS 232	Introduction to Photography	
ARTS 261	Introduction to Printmaking	
ARTG 216	Typography I	
ARTG 234	Introduction to Graphic Design	
ARTG 235	Graphic Design Concepts	
Studio Art Program Studies		
Select one course in ARTE/ARTG/ARTS 200- or 300- level (excludes ARTS 375_, ARTS 390_ courses)		3
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_ courses)		6
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_)		6
Select one of the following		3
ARTH 395_	SlowBurn Topics - 1st Semester	
ARTS 590_	SlowBurn Topics - 1st Semester	
ARTS 495	Professional Practices in Studio Art	
Select one of the following		3
ARTH 396_	SlowBurn Topics - 2nd Semester	
ARTS 591_	SlowBurn Topics - 2nd Semester	
ARTS 481N	Internship	
Select three 1 credit hour courses from the following		3
ARTH/ARTS 390_	QuickFire Topics	
ARTS 375_	Special Topics in Ceramics	
Applied Drawing Concentration		
ARTS 326	The Moving Image	3
ARTS 341	Life Drawing Studio	3
Select two of the following courses		6
ARTS 347	Mixed Media in Drawing	
ARTS 356	Painting with Narrative and Sequence	
ARTS 545	Advanced Drawing Studio	
ARTS 547	Drawing Senior Project	1
ARTS 599	Senior Exhibition	3
Total Credit Hours		84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the BFA in studio art program are required to complete an applied learning or research experience. The requirement can be met by completing ARTS 599 Senior Exhibition.

BFA in Art - Studio Art: Ceramics Media Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The ceramics media concentration builds a breadth of knowledge of clay forming techniques (hand building, casting and throwing), with opportunity for concentrated exploration. This concentration also fosters a working knowledge of the use of ceramics materials and methods (such as the use of slips and glazes, as well as firing processes including stoneware, wood-firing, soda-glazing and raku) in support of critical creativity and experimentation with the medium to investigate individual interests.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses. Students must also meet the university's scholastic, residence and general education (p. 57) requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in studio art must take the following courses. (One ARTH 125_ course *may* count as their fine arts general education course.)

Course	Title	Hours
Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
ARTH 347	Themes in Contemporary Art and Design I	3
Select 3 credit hours in ARTH 300 + (300-level or above)		3
Introductory Studies		
ARTS 195	Studio Tools Workshop	1
ARTS 240	Introduction to Life Drawing	3
ARTS 245	Digital Studio	3
ARTS 270	Introduction to Ceramics	3
Select three of the following courses		9
ARTS 211	Introduction to Community and Social Practice	
ARTS 232	Introduction to Photography	
ARTS 252	Introduction to Painting Media	
ARTS 261	Introduction to Printmaking	
ARTS 282	Introduction to Sculpture and Extended Media	
ARTS 283	Digital 3-D Tools in Sculpture	
ARTG 216	Typography I	
ARTG 234	Introduction to Graphic Design	
ARTG 235	Graphic Design Concepts	
Studio Art Program Studies		
Select one course in ARTE/ARTG/ARTS 200-level or 300-levell (excludes ARTS 375_, ARTS 390_)		3
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_)		6
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_)		6
Select one of the following		3
ARTH 395_	SlowBurn Topics - 1st Semester	
ARTS 590_	SlowBurn Topics - 1st Semester	
ARTS 481N	Internship	
Select one of the following		3
ARTH 396_	SlowBurn Topics - 2nd Semester	
ARTS 591_	SlowBurn Topics - 2nd Semester	
ARTS 481N	Internship	
Select three 1 credit hour courses from the following		3
ARTH/ARTS 390_	QuickFire Topics	
ARTS 375_	Special Topics in Ceramics	
Ceramics Media Concentration		
Select two of the following		6
ARTS 370	Studio Pottery	
ARTS 372	Sculptural Ceramics	
ARTS 374	Atmospheric Firing	
ARTS 376	Ceramic Design/Mold-Making for Ceramics	
ARTS 373	Intermediate Ceramics Studio III	3
ARTS 570	Advanced Ceramics	3
ARTS 577	Ceramics Senior Project	1
ARTS 599	Senior Exhibition	3
Total Credit Hours		84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Links opens new window.

Applied Learning

Students in the BFA in studio art program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ARTS 599 Senior Exhibition.

BFA in Art - Studio Art: Community and Social Practices Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The community and social practices concentration offers studio courses from a student's choice in media along with coursework exploring the multiple ways art functions within and relates to different communities, cultures and constituent audiences. Secondary curricular interests include arts administration, arts education, psychology, social work and art therapy.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses. Students must also meet the university's scholastic, residence and General Education Program (p. 57) requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in studio art must take the following courses. (One ARTH 125_ course *may* count as their fine arts general education course.)

Course	Title	Hours
Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
ARTH 347	Themes in Contemporary Art and Design I	3
Select 3 credit hours in ARTH 300 + (300-level or above)		3
Introductory Studies		
ARTS 195	Studio Tools Workshop	1
ARTS 232	Introduction to Photography	3
ARTS 240	Introduction to Life Drawing	3
ARTS 245	Digital Studio	3
ARTS 211	Introduction to Community and Social Practice	3
Select one course in ARTS 200-level 2D media and one course in ARTS 200-level 3D media		6
ARTS 252	Introduction to Painting Media	
ARTS 270	Introduction to Ceramics	
ARTS 261	Introduction to Printmaking	
ARTS 282	Introduction to Sculpture and Extended Media	
ARTS 283	Digital 3-D Tools in Sculpture	
Studio Art Program Studies		
ARTE 303	Stimulating Creative Behavior	3
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_)		6
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_)		6
Select one of the following		3
ARTH 395_	SlowBurn Topics - 1st Semester	
ARTS 590_	SlowBurn Topics - 1st Semester	
ARTS 481N	Internship	
Select one of the following		3
ARTH 396_	SlowBurn Topics - 2nd Semester	
ARTS 591_	SlowBurn Topics - 2nd Semester	
ARTS 481N	Internship	
Select three 1 credit hour courses from the following		3
ARTH/ARTS 390_	QuickFire Topics	
ARTS 375_	Special Topics in Ceramics	
Community and Social Practices Concentration		
Select one of the following		3
ARTS 312	Community Arts Engagement	3
ARTS 324	Art and Social Media	3
ARTS 481N	Internship	3
ARTE 511	Cross-Cultural Aesthetic Inquiry	3
ARTS 517	Community and Social Practice Senior Project	1
ARTS 599	Senior Exhibition	3
Total Credit Hours		87

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the BFA in studio art program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ARTS 599 Senior Exhibition.

BFA in Art - Studio Art: Electronic Media Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism,

the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The electronic media concentration offers explorations in a wide range of digital processes applicable to both fine and applied arts, including still imaging, 2D media, screen-based media, video, sound and performance. Coursework includes investigation into media theory and personal expression.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses. Students must also meet the university's scholastic, residence and General Education Program (p. 57) requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in studio art must take the following courses. (One ARTH 125_ course *may* count as their fine arts general education course.)

Course	Title	Hours
Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
ARTH 347	Themes in Contemporary Art and Design I	3
Select 3 credit hours in ARTH 300 + (300-level or above)		3
Introductory Studies		
ARTS 195	Studio Tools Workshop	1
ARTS 240	Introduction to Life Drawing	3
ARTS 245	Digital Studio	3
Select four courses from the following		12
ARTS 211	Introduction to Community and Social Practice	
ARTS 232	Introduction to Photography	
ARTS 252	Introduction to Painting Media	
ARTS 261	Introduction to Printmaking	
ARTS 282	Introduction to Sculpture and Extended Media	
ARTS 283	Digital 3-D Tools in Sculpture	
ARTG 216	Typography I	
ARTG 234	Introduction to Graphic Design	
ARTG 235	Graphic Design Concepts	
Studio Art Program Studies		
Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_)		3
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_)		6
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_)		6
Select one of the following		3
ARTH 395_	SlowBurn Topics - 1st Semester	
ARTS 590_	SlowBurn Topics - 1st Semester	
ARTS 481N	Internship	
Select one of the following		3
ARTH 396_	SlowBurn Topics - 2nd Semester	
ARTS 591_	SlowBurn Topics - 2nd Semester	
ARTS 481N	Internship	
Select three 1 credit hour courses from the following		3
ARTH/ARTS 390_	QuickFire Topics	
ARTS 375_	Special Topics in Ceramics	
Electronic Media Concentration		
ARTS 322	Video, Sound and Performance	3
ARTS 324	Art and Social Media	3
ARTS 326	The Moving Image	3
ARTS 525	Advanced Electronic Media	3
ARTS 527	Electronic Media Senior Project	1
ARTS 599	Senior Exhibition	3
Total Credit Hours		84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the BFA in studio art program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ARTS 599 Senior Exhibition.

BFA in Art - Studio Art: Painting Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The painting concentration offers intensive studio work within courses designed to develop a wide range of technical and conceptual skills, including traditional media, mixed media, digital media, and painting's influence and expression in contemporary visual culture. This approach requires a foundation in the fundamental aspects of painting media, as

well as an understanding of the historical and social context in which painting is encountered.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses. Students must also meet the university's scholastic, residence and General Education Program (p. 57) requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in studio art must take the following courses. (One ARTH 125_ course *may* count as their fine arts general education course.)

Course	Title	Hours
Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
ARTH 347	Themes in Contemporary Art and Design I	3
Select 3 credit hours in ARTH 300 + (300-level or above)		3
Introductory Studies		
ARTS 195	Studio Tools Workshop	1
ARTS 240	Introduction to Life Drawing	3
ARTS 245	Digital Studio	3
ARTS 252	Introduction to Painting Media	3
Select three courses from the following		9
ARTS 211	Introduction to Community and Social Practice	
ARTS 232	Introduction to Photography	
ARTS 261	Introduction to Printmaking	
ARTS 270	Introduction to Ceramics	
ARTS 282	Introduction to Sculpture and Extended Media	
ARTS 283	Digital 3-D Tools in Sculpture	
ARTG 216	Typography I	
ARTG 234	Introduction to Graphic Design	
ARTG 235	Graphic Design Concepts	
Studio Art Program Studies		
Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_)		3
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_)		6
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_)		6
Select one of the following		3
ARTH 395_	SlowBurn Topics - 1st Semester	
ARTS 590_	SlowBurn Topics - 1st Semester	
ARTS 481N	Internship	
Select one of the following		3
ARTH 396_	SlowBurn Topics - 2nd Semester	
ARTS 591_	SlowBurn Topics - 2nd Semester	
ARTS 481N	Internship	
Select three 1 credit hour courses from the following		3
ARTH/ARTS 390_	QuickFire Topics	
ARTS 375_	Special Topics in Ceramics	
Painting Concentration		
Select one course in ARTS 300+ 300-level or above (excludes ARTS 375_ and ARTS 390_)		3
Select two of the following		6
ARTS 354	Painting Materials and Processes	
ARTS 356	Painting with Narrative and Sequence	
ARTS 358	Painting in the Expanded Field	
ARTS 554	Advanced Painting	3
ARTS 557	Painting Senior Project	1
ARTS 599	Senior Exhibition	3
Total Credit Hours		84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the BFA in studio art program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ARTS 599 Senior Exhibition.

BFA in Art - Studio Art: Photo Media Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The photo media concentration offers coursework in both analog and digital methods, including B&W darkroom printing, 19th century processes, studio lighting, large format shooting and printing, advanced digital manipulation, appropriation, and crossover with time-based media. A foundation in the fundamental aspects of photography is required, as well as an understanding of the historical and social context in which photography is encountered.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses. Students

must also meet the university's scholastic, residence and General Education Program (p. 57) requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in studio art must take the following courses. (One ARTH 125_ course *may* count as their fine arts general education course.)

Course	Title	Hours
Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
ARTH 347	Themes in Contemporary Art and Design I	3
Select 3 credit hours in ARTH 300 + (300-level or above)		3
Introductory Studies		
ARTS 195	Studio Tools Workshop	1
ARTS 240	Introduction to Life Drawing	3
ARTS 245	Digital Studio	3
ARTS 232	Introduction to Photography	3
Select three courses from the following		9
ARTS 211	Introduction to Community and Social Practice	
ARTS 232	Introduction to Photography	
ARTS 252	Introduction to Painting Media	
ARTS 261	Introduction to Printmaking	
ARTS 282	Introduction to Sculpture and Extended Media	
ARTS 283	Digital 3-D Tools in Sculpture	
ARTG 216	Typography I	
ARTG 234	Introduction to Graphic Design	
ARTG 235	Graphic Design Concepts	
Studio Art Program Studies		
Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_)		3
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_)		6
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_)		6
Select one of the following		3
ARTH 395_	SlowBurn Topics - 1st Semester	
ARTS 590_	SlowBurn Topics - 1st Semester	
ARTS 481N	Internship	
Select one of the following		3
ARTH 396_	SlowBurn Topics - 2nd Semester	
ARTS 591_	SlowBurn Topics - 2nd Semester	
ARTS 481N	Internship	
Select three 1 credit hour courses from the following		3
ARTH/ARTS 390_	QuickFire Topics	
ARTS 375_	Special Topics in Ceramics	
Photo Media Concentration		
Select two of the following		6
ARTS 330	Analog Photographic Techniques	
ARTS 331	Digital Photographic Techniques	
ARTS 334	Photo Media Topics	
ARTS 335	Contemporary Photography Studio	3
ARTS 535	Advanced Photo Media	3
ARTS 537	Photo Media Senior Project	1
ARTS 599	Senior Exhibition	3
Total Credit Hours		84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the BFA in studio art program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ARTS 599 Senior Exhibition.

BFA in Art - Studio Art: Print Media Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The print media concentration offers a broad range of studio experiences in the varied media of printmaking through coursework using intaglio, lithography, relief, serigraphy and digital processes. The program provides a wide exposure to traditional and contemporary techniques.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses. Students must also meet the university's scholastic, residence and General Education Program (p. 57) requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in studio art must take the

following courses. (One ARTH 125_ course *may* count as their fine arts general education course.)

Course	Title	Hours
Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
ARTH 347	Themes in Contemporary Art and Design I	3
Select 3 credit hours in ARTH 300 + (300-level or above)		3
Introductory Studies		
ARTS 195	Studio Tools Workshop	1
ARTS 240	Introduction to Life Drawing	3
ARTS 245	Digital Studio	3
ARTS 261	Introduction to Printmaking	3
Select three courses from the following		9
ARTS 211	Introduction to Community and Social Practice	
ARTS 232	Introduction to Photography	
ARTS 252	Introduction to Painting Media	
ARTS 270	Introduction to Ceramics	
ARTS 282	Introduction to Sculpture and Extended Media	
ARTS 283	Digital 3-D Tools in Sculpture	
ARTG 216	Typography I	
ARTG 234	Introduction to Graphic Design	
ARTG 235	Graphic Design Concepts	
Studio Art Program Studies		
Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_)		3
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_)		6
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_)		6
Select one of the following		3
ARTH 395_	SlowBurn Topics - 1st Semester	
ARTS 590_	SlowBurn Topics - 1st Semester	
ARTS 481N	Internship	
Select one of the following		3
ARTH 396_	SlowBurn Topics - 2nd Semester	
ARTS 591_	SlowBurn Topics - 2nd Semester	
ARTS 481N	Internship	
Select three 1 credit hour courses from the following		3
ARTH/ARTS 390_	QuickFire Topics	
ARTS 375_	Special Topics in Ceramics	
Print Media Concentration		
Select three of the following		9
ARTS 360	Intaglio	
ARTS 361	Lithography	
ARTS 366	Silkscreen	
ARTS 367	Relief	
ARTS 369	Intermediate Printmaking Studio	
ARTS 560	Advanced Printmaking	3
ARTS 567	Printmaking Senior Project	1
ARTS 599	Senior Exhibition	3
Total Credit Hours		84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the BFA in studio art program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ARTS 599 Senior Exhibition.

BFA in Art - Studio Art: Sculpture Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The sculpture concentration offers a varied and rich learning experience in a broadly defined interpretation of three-dimensional media. The sculpture studios in Henrion Gym, where modeling, fabricating, carving, casting, nontraditional and contemporary techniques take place, continually expose students to diverse sculpture-making processes. The focus of the sculpture concentration is to provide students with instruction in technical and creative problem solving to promote experimentation and technical proficiency in developing a personal artistic vision relevant to current art practice.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses. Students must also meet the university's scholastic, residence and General Education Program (p. 57) requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in studio art must take the following courses. (One ARTH 125_ course *may* count as their fine arts general education course.)

Course	Title	Hours
Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
ARTH 347	Themes in Contemporary Art and Design I	3
Select 3 credit hours in ARTH 300 + (300-level or above)		3
Introductory Studies		
ARTS 195	Studio Tools Workshop	1
ARTS 240	Introduction to Life Drawing	3
ARTS 245	Digital Studio	3
ARTS 282	Introduction to Sculpture and Extended Media	3
Select three courses from the following		9
ARTS 211	Introduction to Community and Social Practice	
ARTS 232	Introduction to Photography	
ARTS 252	Introduction to Painting Media	
ARTS 261	Introduction to Printmaking	
ARTS 270	Introduction to Ceramics	
ARTS 283	Digital 3-D Tools in Sculpture	
ARTG 216	Typography I	
ARTG 234	Introduction to Graphic Design	
ARTG 235	Graphic Design Concepts	
Studio Art Program Studies		
Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_)		3
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_)		6
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_)		6
Select one of the following		3
ARTH 395_	SlowBurn Topics - 1st Semester	
ARTS 590_	SlowBurn Topics - 1st Semester	
ARTS 481N	Internship	
Select one of the following		3
ARTH 396_	SlowBurn Topics - 2nd Semester	
ARTS 591_	SlowBurn Topics - 2nd Semester	
ARTS 481N	Internship	
Select three 1 credit hour courses from the following		3
ARTH/ARTS 390_	QuickFire Topics	
ARTS 375_	Special Topics in Ceramics	
Sculpture Concentration		
ARTS 380	Intermediate Sculpture	3
ARTS 381	Materials, Techniques and Extended Media in Sculpture	3
ARTS 383	Time as Media in Sculpture	3
ARTS 580	Advanced Sculpture	3
ARTS 587	Sculpture Senior Project	1
ARTS 599	Senior Exhibition	3
Total Credit Hours		84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the BFA in studio art program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing ARTS 599 Senior Exhibition.

BFA in Graphic Design

The Bachelor of Fine Arts (BFA) in graphic design is the professional degree for students intending to enter the field of visual communication and design. The program provides courses in typography, illustration, photography, book design, advertising, package design, computer graphics and design theory.

The study of graphic design develops the ability to solve communication problems within a cultural, aesthetic, technical, ethical and economic context. Designers create visual messages that serve many needs including advertising, packaging, publishing, identity and branding, websites and digital graphics. These solutions require creativity and lateral thinking, as well as the technical, verbal and written skills to solve specific client problems in their communications.

Graphic design has its roots in a variety of disciplines, including sociology, linguistics, technology, and art and design history. The field has traditionally been linked to commerce and the ability of merchants and institutions to communicate with specific audiences. It is also related to philosophical, literary, architectural and artistic movements.

Throughout their course of study, graphic design majors assemble a professional portfolio of work to present to potential employers. Career options include advertising agencies, art studios, corporate art departments and freelance work.

The art foundation studies program and the preparatory coursework in the graphic design program enable design majors to meet criteria for application into the degree after the mid-program review. A limited number of students are accepted into the program based on portfolio review during ARTF 202. Students admitted into the program are required to complete the graphic design emphasis coursework during the four consecutive semesters of their junior and senior years. They are also required to enroll in ARTG 354 each of those semesters for a total of 4 credit hours.

Program Requirements

A minimum total of 120 credit hours is required for the BFA in graphic design and includes 52–65 credit hours of art and art history courses. Students must also meet the university's scholastic, residence and general education requirements for graduation.

A grade of *C* (2.000 grade points) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

In addition to meeting the requirements of the WSU General Education Program (p. 57), students in the BFA in graphic design must take the following courses. (One ARTH 125_ *may* count as their fine arts general education course.)

Course	Title	Hours
Art Foundation Curriculum		
ARTF 102	Introduction to Art and Design [1]	3
ARTF 136	Foundation 2-D Design [1]	3
ARTF 145	Foundation Drawing [1]	3
ARTF 189	Foundation 3-D Design [1]	3
ARTF 202	Mid-Program Review	1
Art History		
Select two different ARTH 125_ courses (one of which may count towards General Education)		6
Select two different ARTH courses at or above the 300 level		6
Introductory Graphic Design		
ARTG 110	Vector Applications	1
ARTG 111	Pixel-Based Applications	1
ARTG 112	Layout Applications	1
ARTG 216	Typography I	3
ARTG 234	Introduction to Graphic Design	3
ARTG 235	Graphic Design Concepts	3
Graphic Design Program Studies		
ARTG 316	Typography II	3
ARTG 334	Exploration of Graphic Design Media	3
ARTG 335	Sequential Media	3
ARTG 337	Drawing for Visual Communication	3
ARTG 354	Professional Practices in Graphic Design (complete four enrollments)	4
ARTG 434	Graphic Design Campaigns	3
ARTG 435	Graphic Design Capstone	3
ARTG 490	Graphic Design Applications	3
ARTG 491	Interactive Design	3
ARTG 481N	Internship	1
Select two of the following		6
ENTR 310	The Entrepreneurial Experience	
MKT 300	Marketing	
COMM 525	Advertising Copywriting	
Electives		
Graphic design electives should be chosen with the approval of a graphic design advisor. In addition to any graphic design courses, students may also choose electives from other courses offered in the School of Art, Design and Creative Industries including studio arts, art education and art history. Students may also choose classes from other programs within the university including communication, business, entrepreneurship, marketing and technical theatre.		12
Total Credit Hours		84

Note: 45+ upper-division credit hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and at the ADCI website (http://wichita.edu/adci/)[2].

[1] Must be completed prior to enrolling in ARTF 202.

[2] Link opens new window.

Applied Learning

Students in the BFA in graphic design program are required to complete an applied learning or research experience to graduate from the program. This requirement can be met by completing four semesters of ARTG 354, as well as a sequence of four upper-division studio classes, including a capstone course (ARTG 334, ARTG 335, ARTG 434 and ARTG 435).

Minor in Art and Design

A minor in art and design includes 18 credit hours of coursework from different levels in the art area(s) of the student's choice, including studio art, art education, graphic design and art history courses as allowed by prerequisites or instructor's consent. ADCI majors are not eligible for the minor in art and design. ADCI minors must declare their status to ensure registration privileges in restricted courses. The minor consists of:

Course	Title	Hours
Select 3 credit hours from any ARTH 12x course		3
Select 6–9 credit hours from any 100-level ARTF or 200-level ARTE, ARTG, or ARTS course		6-9
Select 6–9 credit hours from any 300+ ARTE, ARTG, ARTH or ARTS course		6-9
Total Credit Hours		18

Minor in Art History

A minor in art history includes 18 credit hours in art history. It complements degree programs and certificates in anthropology, classical studies, creative writing, English, history, medieval and renaissance studies, and women's studies in Fairmount College of Liberal Arts and Sciences.

Course	Title	Hours
Select 6 credit hours in lower-division courses (ARTH 125_; two different topics)		6
Select 12 credit hours in upper-division work selected in consultation with the student's art history advisor (courses must include at least one at the 500 level)		12
Total Credit Hours		18

Minor in Graphic Design

A minor in graphic design includes 15 credit hours in graphic design courses. It is available to any student whose major area is outside the School of Art, Design and Creative Industries.

Course	Title	Hours
Introductory Sequence		
ARTG 216	Typography I	3
ARTG 234	Introduction to Graphic Design	3
ARTG 235	Graphic Design Concepts	3
ARTG 490	Graphic Design Applications	3
Additional Course		
Select an additional course from the following:		3
ARTG 316	Typography II	
ARTG 490	Graphic Design Applications (as a repeat)	
ARTG 491	Interactive Design	
ARTG 530	Seminar in Graphic Design	
Or one 300+ course in graphic design chosen in consultation with an advisor		
Total Credit Hours		15

School of Digital Arts

BAA in Media Arts

The Bachelor of Applied Arts (BAA) curriculum merges arts, science and technology curricula, creating opportunities for students to gain

training in the emerging creative technologies of audio production, filmmaking, animation and video game design.

The program engages with businesses and focuses on developing student's technological acumen combined with *design thinking skills*. These include the capabilities to

1. Develop creative solutions,
2. Effectively communicate,
3. Practice entrepreneurship, and
4. Master emerging software/hardware.

The development of these capabilities is grounded in an applied academic curriculum. WSU's location in the largest city in Kansas is a vital component to this learning process.

The media arts program is structured as one BAA degree with five concentrations: animation, audio production, collaborative design, filmmaking and game design. The structure is unique as it has five related concentrations under one degree classification.

Majors in the School of Digital Arts

- BAA in Media Arts - Concentration in Animation (p. 156)
- BAA in Media Arts - Concentration in Audio Production (p. 156)
- BAA in Media Arts - Concentration in Collaborative Design (p. 157)
- BAA in Media Arts - Concentration in Filmmaking (p. 158)
- BAA in Media Arts - Concentration in Game Design (p. 158)

Certificates in the School of Digital Arts

- Certificate in Animation (p. 159)
- Certificate in Audio Production (p. 159)
- Certificate in Filmmaking (p. 159)
- Certificate in Game Design (p. 159)

Courses in Media Arts

- Media Arts (MART) (p. 438)

BAA in Media Arts - Concentration in Animation

Program Requirements

The Bachelor of Applied Arts in media arts — concentration in animation consists of 120 credit hours. In addition to the university scholastic, residence and general education requirements, students must take the following required courses (some required courses *may* also fulfill general education requirements): 21 credit hours in common core courses and 54 credit hours in a discipline specific track. BAA majors are required to earn a minimum grade of *C* in each course designated as a *C*-required course.

Course	Title	Hours
Media Arts Core Courses		
MART 101	Introduction to Media Arts	3
MART 102	Introduction to Media Aesthetics and Analysis	3
COMM 306	Introduction to Multimedia	3
COMM 406	Audio Production	3
MART 391	Professional Practices in Media Arts - Portfolio	1
MART 392	Professional Practices in Media Arts - Business Development	1
MART 393	Professional Practices in Media Arts - Legal Issues	1
MART 299	Media Arts Practicum I	1
MART 399A	Media Arts Practicum II - Animation	2
MART 499A	Media Arts Practicum III - Animation	3
Total Credit Hours		21

Course	Title	Hours
Animation Concentration Requirements		
ARTF 136	Foundation 2-D Design	3
ARTF 145	Foundation Drawing	3
ARTS 240	Introduction to Life Drawing	3
or MART 270	Figure Drawing for Animators	
MART 220	Computer Modeling	3
ARTH 125_	Select one ARTH 125 lettered course - art history, bodies or play	3
Select one 100 level art history elective		3
MART 222	Digital Animation I	3
MART 322	Digital Animation II	3
MART 422	Digital Animation III	3
Select one 300 level art history elective		3
THEA 390	Acting for the Camera	3
MART 354	Clay Modeling	3
MART 352	Story Boarding	3
THEA 516	Scriptwriting I	3
MART 357	Rigging	3
ARTG 490	Graphic Design Applications	3
MART 424	Compositing and VFX I	3
COMM 604	Video Storytelling	3
Electives		
With the assistance of an advisor, select sufficient general education and elective courses to meet the required 120 credit hours. These electives could include a minor.		
Total Credit Hours		54

Applied Learning

Students in the BAA in media arts - concentration in animation program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by enrolling in and completing three levels of Media Arts Practicum: I, II and III.

BAA in Media Arts - Concentration in Audio Production

Program Requirements

Bachelor of Applied Arts in media arts - concentration in audio production consists of 120 credit hours. In addition to the university scholastic, residence and general education requirements, students must take the following required courses (some required courses *may* also fulfill general education requirements): 21 credit hours in common core courses and 54 credit hours in a discipline specific track. BAA majors are required to earn a minimum grade of *C* in each course designated as a *C*-required course.

Course	Title	Hours
Media Arts Core Courses		
MART 101	Introduction to Media Arts	3
MART 102	Introduction to Media Aesthetics and Analysis	3
COMM 306	Introduction to Multimedia	3
COMM 406	Audio Production	3

MART 391	Professional Practices in Media Arts - Portfolio	1
MART 392	Professional Practices in Media Arts - Business Development	1
MART 393	Professional Practices in Media Arts - Legal Issues	1
MART 299	Media Arts Practicum I	1
MART 399B	Media Arts Practicum II - Audio Production	2
MART 499B	Media Arts Practicum III - Audio Production	3
Total Credit Hours		21

Course	Title	Hours
Audio Production Concentration Requirements		
MUSC 140	Music Theory for Commercial Musicians I	2
or MUSC 127	Theory I	
MUSC 142	Music Theory for Commercial Musicians II	2
or MUSC 128	Theory II	
MUSC 240	Jazz Music Theory 3	2
MUSC 242	Jazz Music Theory 4	2
MUSC 141	Aural Skills for Commercial Musicians I	2
or MUSC 129	Aural Skills I	
MUSC 143	Aural Skills for Commercial Musicians II	2
or MUSC 130	Aural Skills II	
MUSC 241	Jazz Aural Skills 3	2
MUSC 243	Jazz Aural Skills 4	2
Ensemble	Select four enrollments of 1 credit hour each.	4
Applied Music	MUSA 231_, MUSA 232_ or MUSA 252_. Select one of the lettered courses for four enrollments of 1 credit hour each.	4
MART 110	Introduction to Music Technology and Industry	2
MART 111	Intro to Music Business	2
MUSC 113	Music in Context	3
MUSC 531	Introduction to Electronic Music	2
MUSC 641	Orchestration	2
MART 540	Advanced Editing and Mastering	3
MART 570	Electronic Music Production	2
MART 571	Live Sound Design	3
COMM 506	Sound for Picture	3
MART 575	Seminar in Music Technology	3
PHYS 210	Physics of Sound	3
MART 481N	Internship	1
Electives		
With the assistance of an advisor, select sufficient general education and elective courses to meet the required 120 credit hours. These electives could include a minor.		
Total Credit Hours		53

Applied Learning

Students in the BAA in media arts – concentration in audio production are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing MART 299, MART 399B and MART 499B.

BAA in Media Arts - Concentration in Collaborative Design

Program Requirements

Bachelor of Applied Arts in media arts - concentration in collaborative design consists of 120 credit hours. In addition to the university scholastic, residence and general education requirements, students must take the following required courses (some required courses *may* also fulfill general education requirements): 21 credit hours in common core courses and 54 credit hours in a discipline specific track. BAA majors are required to earn a minimum grade of *C* in each course designated as a *C*-required course.

Course	Title	Hours
Media Arts Core Courses (21 Credit Hours, C or Better)		
MART 101	Introduction to Media Arts	3
MART 102	Introduction to Media Aesthetics and Analysis	3
COMM 306	Introduction to Multimedia	3
COMM 406	Audio Production	3
MART 391	Professional Practices in Media Arts - Portfolio	1
MART 392	Professional Practices in Media Arts - Business Development	1
MART 393	Professional Practices in Media Arts - Legal Issues	1
MART 299	Media Arts Practicum I	1
MART 399E	Media Arts Practicum II - Collaborative Design	2
MART 499E	Media Arts Practicum III - Collaborative Design	3
Total Credit Hours		21

Course	Title	Hours
Collaborative Design Core (54 Credit Hours)		
Select 54 credit hours from the following courses. Students may substitute appropriate courses from other programs in consultation with, and approval from, their faculty advisor. Students are also encouraged to substitute appropriate certificates or minors with advisor approval.		54
ARTF 136	Foundation 2-D Design	
ARTF 145	Foundation Drawing	
ARTG 235	Graphic Design Concepts	
ARTH 125_	Select one of the lettered ARTH 125 courses.	
ARTH XXX	Select one 300–599 level ARTH course	
ARTS 240	Introduction to Life Drawing	
COMM 506	Sound for Picture	
COMM 604	Video Storytelling	
ID 300	Design Thinking & Innovation	
ID 500	Design Thinking Process	
ID 501	Design Thinking Facilitation	
ID 502	Design Thinking Implementation: Design Challenges Level I	
ID 503	Introduction to Branding	
ID 504	Building a Brand Strategy	
ID 505	Design Thinking Implementation: Design Challenges Level II	

ID 506	Leadership Development for Innovation	
MART 110	Introduction to Music Technology and Industry	
MART 111	Intro to Music Business	
MART 220	Computer Modeling	
MART 222	Digital Animation I	
MART 232	Game Design I	
MART 260	Game Design Concepts	
MART 322	Digital Animation II	
MART 325	Editing for Film	
MART 332	Game Design II	
MART 351	Principles of Video Production	
MART 352	Story Boarding	
MART 353	Video Storytelling	
MART 357	Rigging	
MART 359	Cinematography I	
MART 361	Game Technology and Coding II	
MART 365	Props and Character Design	
MART 422	Digital Animation III	
MART 424	Compositing and VFX I	
MART 432	Game Design III	
MART 481N	Internship	
MART 540	Advanced Editing and Mastering	
MART 570	Electronic Music Production	
MART 571	Live Sound Design	
MART 575	Seminar in Music Technology	
MUSC 531	Introduction to Electronic Music	
THEA 516	Scriptwriting I	
Electives		
With the assistance of an advisor, select sufficient general education and elective courses to meet the required 120 credit hours. These electives could include a minor.		
Total Credit Hours		54

Applied Learning

Students in the BAA in media arts – concentration in collaborative design are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing MART 299, MART 399E and MART 499E.

BAA in Media Arts - Concentration in Filmmaking

Program Requirements

Bachelor of Applied Arts in media arts - concentration in filmmaking consists of 120 credit hours. In addition to the university scholastic, residence and general education requirements, students must take the following required courses (some required courses *may* also fulfill general education requirements): 21 credit hours in common core courses and 54 credit hours in a discipline specific track. BAA majors are required to earn a minimum grade of *C* in each course designated as a *C*-required course.

Course	Title	Hours
Media Arts Core Courses		
MART 101	Introduction to Media Arts	3
MART 102	Introduction to Media Aesthetics and Analysis	3
COMM 306	Introduction to Multimedia	3
COMM 406	Audio Production	3
MART 391	Professional Practices in Media Arts - Portfolio	1
MART 392	Professional Practices in Media Arts - Business Development	1
MART 393	Professional Practices in Media Arts - Legal Issues	1
MART 299	Media Arts Practicum I	1
MART 399C	Media Arts Practicum II - Filmmaking	2
MART 499C	Media Arts Practicum III - Filmmaking	3
Total Credit Hours		21

Course	Title	Hours
Filmmaking Concentration Requirements		
Select one of the following technical theatre courses		3
THEA 244	Stagecraft: Applied Technology	
THEA 253	Costuming for the Stage and Film	
THEA 254	Stage Makeup	
THEA 272	Stage Management	
THEA 228	Script Analysis	3
THEA 359	Directing I	3
THEA 390	Acting for the Camera	3
MART 474	Compositing and VFX II	3
MART 385	Directing for Film	3
MART 379	Cinematography II	3
COMM 506	Sound for Picture	3
MART 325	Editing for Film	3
COMM 321	Introduction to Film Studies	3
MART 359	Cinematography I	3
MART 353	Video Storytelling	3
MART 352	Story Boarding	3
MART 351	Principles of Video Production	3
THEA 516	Scriptwriting I	3
THEA 517	Scriptwriting II	3
MART 424	Compositing and VFX I	3
Select one film studies course		3
Electives		
With the assistance of an advisor, select sufficient general education and elective courses to meet the required 120 credit hours. These electives could include a minor.		
Total Credit Hours		54

Applied Learning

Students in the BAA in media arts – concentration in filmmaking are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing MART 299, MART 399C and MART 499C.

BAA in Media Arts - Concentration in Game Design

Program Requirements

The Bachelor of Applied Arts in media arts - concentration in game design consists of 120 credit hours. In addition to the university scholastic, residence and general education requirements, students must take the following required courses (some required courses *may* also fulfill general education requirements): 21 credit hours in common core

courses and 54 credit hours in a discipline specific track. BAA majors are required to earn a minimum grade of *C* in each course designated as a *C*-required course.

Course	Title	Hours
Media Arts Core Courses		
MART 101	Introduction to Media Arts	3
MART 102	Introduction to Media Aesthetics and Analysis	3
COMM 306	Introduction to Multimedia	3
COMM 406	Audio Production	3
MART 391	Professional Practices in Media Arts - Portfolio	1
MART 392	Professional Practices in Media Arts - Business Development	1
MART 393	Professional Practices in Media Arts - Legal Issues	1
MART 299	Media Arts Practicum I	1
MART 399D	Media Arts Practicum II - Game Design	2
MART 499D	Media Arts Practicum III - Game Design	3
Total Credit Hours		21

Course	Title	Hours
Game Design Concentration Requirements		
ARTF 136	Foundation 2-D Design	3
ARTF 145	Foundation Drawing	3
ARTS 240	Introduction to Life Drawing	3
MART 220	Computer Modeling	3
ARTH 125_	Art History, Bodies or Play (select one of the ARTH 125 lettered courses)	3
ARTH 1XX	Select one 100 level art history course	3
MART 222	Digital Animation I	3
MART 322	Digital Animation II	3
MART 260	Game Design Concepts	3
MART 354	Clay Modeling	3
MART 352	Story Boarding	3
MART 361	Game Technology and Coding II	3
MART 365	Props and Character Design	3
THEA 516	Scriptwriting I	3
MART 357	Rigging	3
MART 232	Game Design I	3
MART 332	Game Design II	3
MART 432	Game Design III	3
Electives		
With the assistance of an advisor, select sufficient general education and elective courses to meet the required 120 credit hours. These electives could include a minor.		
Total Credit Hours		54

Applied Learning

Students in the BAA in media arts – concentration in game design are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing MART 299, MART 399D and MART 499D.

Certificate in Animation

Program Requirements

The certificate in animation requires the following:

Course	Title	Hours
ARTS 240	Introduction to Life Drawing	3
or MART 270	Figure Drawing for Animators	
MART 220	Computer Modeling	3
MART 222	Digital Animation I	3
MART 322	Digital Animation II	3
Select one additional course from the following		3
MART 422	Digital Animation III	
MART 365	Props and Character Design	
MART 357	Rigging	
MART 352	Story Boarding	
Total Credit Hours		15

Certificate in Audio Production

Program Requirements

The certificate in audio production requires the following:

Course	Title	Hours
MART 110	Introduction to Music Technology and Industry	2
MART 111	Intro to Music Business	2
COMM 306	Introduction to Multimedia	3
MUSC 531	Introduction to Electronic Music	2
MART 540	Advanced Editing and Mastering	3
MART 571	Live Sound Design	3
Total Credit Hours		15

Certificate in Filmmaking

Program Requirements

The certificate in filmmaking requires the following:

Course	Title	Hours
MART 325	Editing for Film	3
MART 351	Principles of Video Production	3
MART 353	Video Storytelling	3
Select two of the following courses		6
THEA 359	Directing I	
MART 359	Cinematography I	
THEA 516	Scriptwriting I	
Total Credit Hours		15

Certificate in Game Design

Program Requirements

The certificate in game design requires the following:

Course	Title	Hours
MART 220	Computer Modeling	3
MART 260	Game Design Concepts	3
MART 232	Game Design I	3
MART 360	Game Technology and Coding I	3
Select one additional course from the following		3
MART 332	Game Design II	
MART 222	Digital Animation I	

MART 361	Game Technology and Coding II	
ARTS 240	Introduction to Life Drawing	
MART 270	Figure Drawing for Animators	
Total Credit Hours		15

School of Music

Aleksander Sternfeld-Dunn, director
School of Music Website **(**http://wichita.edu/music/**)**[1]

The School of Music, which includes program areas of music education, musicology-composition, keyboard, strings, voice and winds/percussion, offers courses and curricula designed to train and educate students who are planning careers in music. In addition, the school's offerings allow students to gain an understanding of music as a humanistic study. Recitals by students, faculty and guests are augmented by the overall community programs in the fine arts.

Students in the School of Music enjoy the use of extensive facilities in the Duerksen Fine Arts Center and Wiedemann Hall; these include the Lewis and Selma Miller Concert Hall and the recital/concert auditorium in Wiedemann Hall, which was constructed in 1986 to house the first Marcussen organ in North America.

[1] Link opens new window.

Policies

Proficiency Examinations

Students eligible for university enrollment may enter a music degree program after completing a successful audition demonstrating performance ability on a minimum of one instrument or in voice. Students must perform for a faculty jury each semester to determine their proficiency level and progress. Semester proficiency cards, on which progress is recorded, are maintained for each student.

All music majors must pass a piano proficiency examination. Entering students majoring in music whose background indicates they are competent in piano may pass the requirement by special examination. Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements. Transfer students who submit proof of the completion of a comparable piano proficiency examination by official transcript or letter from their former institutions are exempted from this requirement.

All proficiency examinations must be passed before a student is allowed to student teach or graduate.

Applied Music

Individual instruction is given in instruments and voice to develop musicianship, performance skills and reading knowledge of music literature. Specific requirements for each level are set by the individual applied areas.

Applied students other than music majors must enroll in the appropriate nonmajor category (see Schedule of Courses). This will provide a 30-minute lesson per week.

Enrollments of 1 credit hour are provided to music majors studying secondary instruments. These receive a 30-minute lesson each week and require a minimum of five hours of practice per week.

Enrollments of 2 credit hours are provided to majors and special music students. These receive either:

1. A 30-minute private lesson (minimum) each week and a one-hour master class each week or
2. A one-hour lesson per week or other equivalent arrangement at the option of the instructor.

Students are required to practice a minimum of 10 hours each week.

Enrollments of 4 credit hours are provided to performance majors (juniors and above) and special music students. These receive two 30-minute lessons each week (minimum) and a one-hour master class each week, or other equivalent arrangement at the option of the instructor. Students are required to practice a minimum of 20 hours per week.

Students receive academic credit for applied music instruction only when they are taught on the university campus by approved music faculty.

Applied music students may enroll in the following classifications:

- Freshmen and sophomores:

Course	Title	Hours
MUSA 112_	Applied Music Instruction for Nonmajors	
MUSA 231_	Applied Music, Majors	
MUSA 232_	Applied Music, Majors	

- Juniors and seniors:

Course	Title	Hours
MUSA 112_	Applied Music Instruction for Nonmajors	
MUSA 431_	Applied Music, Majors	
MUSA 432_	Applied Music, Majors	
MUSA 434_	Applied Music, Majors [1]	

- Graduate students:

Course	Title	Hours
MUSA 712_	Applied Music Instruction for Nonmajors	
MUSA 731_	Applied Music, Majors	
MUSA 732_	Applied Music, Majors	
MUSA 734_	Applied Music, Majors [1]	

[1] Performance majors or designated students only may enroll in MUSA 434 or MUSA 734.

These applied music courses are repeatable for credit.

Prior to graduation all music majors must achieve an acceptable level of performance proficiency, which is determined by the faculty according to each student's degree program. In addition, students may be required to pass an examination on materials in their chief performing medium.

Recitals

All music majors are required to enroll in four semesters of MUSP 105[2], and attend a minimum of 14 specified recitals and concerts sponsored by the School of Music each of the semesters. For majors other than BA, performance of the senior recital fulfills a fifth semester recital requirement; they must be enrolled in Recital during that semester (MUSP 400 for BME and BM majors; MUSP 450 or MUSP 451 for accompanying majors). Senior recital is not required for the BA in music.

All music majors are required to declare a chief performance medium. BM and BME majors are required to present either a public or a jury recital prior to graduation. The decision as to whether the performance

will be jury or public is made by an examining committee. Students present to the examining committee a projected senior recital program and the examining committee determines:

1. The suitability of the projected program;
2. The capability of the student to perform the program publicly; or
3. The advisability of performing the senior recital before a faculty jury in lieu of a public recital.

Further recital specifications are found under graduation requirements for Bachelor of Music in composition.

No music major may prepare or perform the senior recital without the guidance of a School of Music faculty member. In the event the required applied music credit hours have been earned prior to the recital presentation, music majors must continue to enroll (2 credit hour minimum) in their major instrument through the preparation for and the performance of the recital. The required number of credit hours must be earned in applied instruction even though there may be credits to complete after the senior recital has been performed.

[2] See BME degree requirements for specific recital requirements in those degree plans.

Majors in the School of Music

- Bachelor of Arts in Music (p. 161)
- Bachelor of Music (p. 161)
  - BM in Composition - Keyboard Emphasis (p. 161)
  - BM in Composition - Strings Emphasis (p. 161)
  - BM in Composition - Winds/Percussion Emphasis (p. 161)
  - BM in Composition - Vocal Emphasis (p. 161)
  - BM in Composition - Harp/Guitar/Bass Emphasis (p. 161)
  - BM in Jazz and Contemporary Media (p. 162)
  - BM in Performance - Instrumental Emphasis (p. 163)
  - BM in Performance - Keyboard Emphasis (p. 163)
  - BM in Performance - Vocal Emphasis (p. 164)
- Bachelor of Music Education (p. 165)
  - BME - Instrumental (p. 166)
  - BME - Keyboard (p. 166)
  - BME - Vocal (p. 167)
  - Bachelor of Special Music Education (p. 168)

Minors in the School of Music

- Minor in Music (p. 169)

Courses in the School of Music

- Music Applied (MUSA) (p. 456)
- Music Education (MUSE) (p. 467)
- Music Performance (MUSP) (p. 469)
- Musicology-Composition (MUSC) (p. 464)

Bachelor of Arts in Music

Program Requirements

Students who wish to earn a Bachelor of Arts (BA) in music are required to complete courses in Fairmount College of Liberal Arts and Sciences and in the College of Fine Arts as indicated in the music degree check sheets and to elect 50 music credit hours as specified in the following areas and course listings.

Candidates for the degree must also complete a minor in a discipline other than music, *or* proficiency in a foreign language at a level equivalent to 5 credit hours beyond the 112 course.

Course	Title	Hours
Group I: Applied Music		
Applied Music [1]		8
Group II: General Music		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230	Theory IV and Aural Skills IV	4
MUSC 523	Form And Analysis	2
Group III: History and Literature of Music		
MUSC 113	Music in Context	3
MUSC 334	History of Music I	3
MUSC 335	History of Music II	3
Select one of the following		3
3 credit hours of upper division in Music History or Literature		
MUSC 162	World Music	
Group IV: Ensembles		
Ensembles [2, 3]		7
Group V: Recital Attendance		
MUSP 105	Recital Attendance (four semesters)	0
Group VI: Upper Division Music Electives		
Select from the areas of music literature, music theory, applied music, conducting and ensembles		5
Total Credit Hours		50

[1] Transfer students must enroll in two semesters of applied music at WSU.

[2] See degree check sheets for specified ensembles.

[3] Ensembles are counted by semester.

Note: All music majors must pass a piano proficiency examination.

Applied Learning

Students in the Bachelor of Arts in music program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by taking a minimum of eight semesters of lessons on an applied instrument, as well as seven semesters of ensembles.

Bachelor of Music Requirements

Students receiving the Bachelor of Music (BM) choose either a performing medium (piano, organ, voice, strings, wind or percussion) or composition as their major area of emphasis.

The general graduation requirements of the university must be met as described in the general education program (p. 57). In addition, certain music requirements must be met for the different degree emphases in the School of Music.

All students must earn 45+ hours of credit in upper-division courses.

BM in Composition – All Emphases

The School of Music offers five majors in music composition:

- Bachelor of Music in composition — keyboard emphasis
- Bachelor of Music in composition — strings emphasis
- Bachelor of Music in composition — winds/percussion emphasis
- Bachelor of Music in composition — voice emphasis
- Bachelor of Music in composition — harp/guitar/bass emphasis

Program Requirements

With the exception of the ensembles required, the degree requirements are the same for each major. Please consult an advisor to determine which ensembles are needed for a specific major. Other requirements are:

Course	Title	Hours
Applied Music		
Select one of the following options:		19
Option A:		
Chief performing medium (piano, organ) - 16 credit hours		
Other performing medium - 3 credit hours		
Option B:		
Chief performing medium (non keyboard) 8 credit hours		
Keyboard performing medium - 8 credit hours		
Other performing media - 3 credit hours		
General Music		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230	Theory IV and Aural Skills IV	4
MUSC 259 & MUSC 260	Introduction to Music Composition and Beginning Music Composition	4
MUSC 560	Applied Composition	4
MUSC 660	Applied Composition	4
MUSC 523	Form And Analysis	2
MUSC 531	Introduction to Electronic Music	2
MUSC 561	18th Century Counterpoint	2
MUSC 641	Orchestration	2
MART 110	Introduction to Music Technology and Industry	2
or MART 111	Intro to Music Business	
History and Literature of Music		
MUSC 113	Music in Context	3
MUSC 334	History of Music I	3
MUSC 335	History of Music II	3
Conducting		
MUSP 307	Instrumental Conducting	2
or MUSP 308	Choral Conducting	
MUSP 651	Advanced Conducting and Score Reading	2
or MUSP 691	Advanced Choral Conducting	
Ensembles		
Ensembles [1, 2]		8
Recital Attendance		
MUSP 105	Recital Attendance (four semesters)	0
Senior Recital		
MUSP 400	Senior Recital	0
Total Credit Hours		78

[1] See degree check sheets for specified ensembles.

[2] Ensembles are counted by semester.

Composition majors are required to present for public performance a selection of their compositions representing large and small forms, totaling a minimum of 20 minutes. Students must submit completed scores representing a majority of the program to an examining committee the semester prior to that of the proposed recital; the examining committee shall determine the acceptability of the program. The composition or compositions must be submitted in a minimum of two copies done manually in ink or by laser printing using an approved music typesetting computer program. These copies must represent a high quality of manuscript technique or music typesetting. In addition, students may elect to present a second recital in their chief performing medium with the permission of their applied music instructor and achievement of junior proficiency in that instrument.

Note: All music majors must pass a piano proficiency examination.

Applied Learning

Students in the Bachelor of Music in composition program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a senior recital of original compositions, MUSP 400.

BM in Jazz and Contemporary Media

Program Requirements

Course	Title	Hours
Applied Music		
MUSA 232_	Applied Music Instruction (classical) [1]	6
MUSA 252_	Applied Music-Jazz	4
MUSA 454	Applied Lessons Jazz Performance	16
MUSA 113P & MUSA 116P	Piano Class Level I - Music Majors and Piano Class Level IV - Music Majors	2
MUSA 313J	Basic Jazz Piano [2]	2
General Music		
MUSC 120	Jazz Improv Level 1	2
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 240 & MUSC 241	Jazz Music Theory 3 and Jazz Aural Skills 3	4
MUSC 242 & MUSC 243	Jazz Music Theory 4 and Jazz Aural Skills 4	4
MUSC 345	Jazz Arranging	2
MUSC 523	Form And Analysis	2
MART 110	Introduction to Music Technology and Industry	2
MART 111	Intro to Music Business	2
History and Literature of Music		
MUSC 113	Music in Context	3
MUSC 334	History of Music I	3
MUSC 335	History of Music II	3
MUSC 348A	History of Jazz	3
Pedagogy		
MUSE 511	Jazz Pedagogy	2

Ensembles		
Ensembles [3, 4]		8
Recital Attendance		
MUSP 105	Recital Attendance (specified number of recitals per semester for four semesters)	0
Recital		
MUSP 300	Junior Recital	0
MUSP 400	Senior Recital	0
Total Credit Hours		78

[1] As directed by jazz faculty until upper-level proficiency is demonstrated via jury (may continue with additional 232 courses with permission).

[2] Piano proficiency is a prerequisite for Basic Jazz Piano.

[3] See degree check sheets for specified ensembles.

[4] Ensembles are counted by semester.

Note: All music majors must pass a piano proficiency examination.

Applied Learning

Students in the Bachelor of Music in jazz and contemporary media program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by performing in eight semesters of applied lessons MUSA 252 and MUSA 454; eight semesters of ensembles/combos MUSP 411M Jazz Combo/Banda Hispanica Jazz Combo; MUSP 212T Jazz Arts Ensemble; MUSP 411T Jazz Arts Ensemble 1; MUSP 412T Jazz Arts Ensemble 2; and successfully completing MUSP 400 Senior Recital .

BM in Performance - Instrumental Emphasis

Program Requirements

Course	Title	Hours
Applied Music		
Chief performing medium		24
Second performing medium (four semesters)		4
General Music		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230	Theory IV and Aural Skills IV	4
MUSC 523	Form And Analysis	2
MUSC 561	18th Century Counterpoint	2
MUSC 641	Orchestration	2
History and Literature of Music		
MUSC 113	Music in Context	3
MUSC 334	History of Music I	3
MUSC 335	History of Music II	3
Select one of the following:		3
3 credit hours of upper-division electives in music history or literature		
MUSC 162	World Music	
Conducting		
MUSP 307	Instructional Conducting	2
MUSP 651	Advanced Conducting and Score Reading	2
Ensembles		
Ensembles [1, 2]		10
Electives		
Music courses		2
Pedagogy		
Select one of the following:		2
MUSP 620	String Pedagogy: Violin and Viola	
MUSP 680	Woodwind Pedagogy	
MUSP 681	Brass Pedagogy	
MUSP 682	Percussion Pedagogy	
MUSP 790	Special Topics in Music (for all other instrumental BM majors)	
Senior Recital		
MUSP 400	Senior Recital	0
Recital Attendance		
MUSP 105	Recital Attendance (specified number of recitals per semester for four smstr.)	0
Total Credit Hours		80

[1] See degree check sheets for specified ensembles.

[2] Ensembles are counted by semester.

Note: All music majors must pass a piano proficiency examination.

Applied Learning

Students in the BM in performance - instrumental emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a recital (MUSP 400) in their senior year.

BM in Performance - Keyboard Emphasis

All Programs

Course	Title	Hours
Applied Music		
Chief performing medium (see specific major)		
Second performing medium		4
General Music		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230	Theory IV and Aural Skills IV	4
MUSC 523	Form And Analysis	2
MUSC 561	18th Century Counterpoint	2
MUSC 641	Orchestration	2
History and Literature of Music		
MUSC 113	Music in Context	3
MUSC 334	History of Music I	3
MUSC 335	History of Music II	3
Conducting		
MUSP 307	Instrumental Conducting	2
or MUSP 308	Choral Conducting	
Ensembles		
See specific major [1, 2]		
Recital Attendance		

MUSP 105	Recital Attendance (specified number of recitals per semester for four semesters)	0
Total Credit Hours		37

[1] See degree check sheets for specified ensembles.
[2] Ensembles are counted by semester.

Specific Keyboard Program Requirements

Piano Performance Emphasis

Course	Title	Hours
Courses required of all keyboard majors (from above)		37
Applied Piano		24
Second performing medium		4
MUSP 250 & MUSP 251	Applied Piano Concerto and Applied Piano Concerto	4
MUSP 207 & MUSP 407	Piano Repertoire and Piano Repertoire	6
MUSP 580	Piano Pedagogy	2
MUSC 782 & MUSC 783	Piano Literature I and Piano Literature II	4
Ensembles - Four semesters of accompanying required for all Bachelor of Music piano majors and 4 credit hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying or an ensemble each semester they hold a scholarship [1, 2]		8
MUSP 300	Junior Recital	0
MUSP 400	Senior Recital	0
Total Credit Hours		89

[1] See degree check sheets for specified ensembles.
[2] Ensembles are counted by semester.

Piano Accompanying Emphasis

Course	Title	Hours
Courses required of all keyboard majors (from above)		37
Applied Piano		16
Second performing medium		4
MUSP 223 & MUSP 224	Applied Piano Accompanying and Applied Piano Accompanying	4
MUSP 423 & MUSP 424	Applied Piano Accompanying and Applied Piano Accompanying	8
MUSP 121	Italian Diction	1
MUSP 122	English Diction	1
MUSP 221	German Diction	1
MUSP 222	French Diction	1
MUSP 207 & MUSP 407	Piano Repertoire and Piano Repertoire	4
MUSP 580	Piano Pedagogy	2
MUSC 726	Voice Literature	3
MUSC 685	String Literature & Materials	2
Ensembles - Four semesters of accompanying required for all Bachelor of Music piano majors and 4 credit hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying or an ensemble each semester they hold a scholarship [1, 2]		8
MUSP 300	Junior Recital	0
MUSP 450 & MUSP 451	Accompanying Recital and Accompanying Recital	2
Total Credit Hours		94

[1] See degree check sheets for specified ensembles.
[2] Ensembles are counted by semester.

Piano Pedagogy Emphasis

Course	Title	Hours
Courses required of all keyboard majors (from above)		37
Applied Piano		24
Second performing medium		4
MUSP 207 & MUSP 407	Piano Repertoire and Piano Repertoire	6
MUSP 580	Piano Pedagogy	2
MUSP 581	Piano Teaching Materials	2
MUSC 782 & MUSC 783	Piano Literature I and Piano Literature II	4
MUSP 790_	Special Topics in Music (designated)	4
Ensembles - Four semesters of accompanying and 4 credit hours of appropriate ensemble required for all Bachelor of Music piano majors. Keyboard scholarship recipients are required to enroll in accompanying or an ensemble each semester they hold a scholarship [1, 2]		8
MUSP 400	Senior Recital	0
Total Credit Hours		91

[1] See degree check sheets for specified ensembles.
[2] Ensembles are counted by semester.

Organ Emphasis

Course	Title	Hours
Applied Organ		30
MUSC 587	Organ Literature & Design I	2
MUSC 588	Organ Literature & Design II	2
MUSP 596	Organ Pedagogy	2
MUSP 599	Organ Keyboard Skills, Service Playing and Accompanying	2
Ensembles (four semesters each, large ensemble/accompanying) [1, 2]		8
MUSP 300	Junior Recital	0
MUSP 400	Senior Recital	0
Electives		6
General Music		22
General Education		42
Total Credit Hours		116

[1] See degree check sheets for specified ensembles.
[2] Ensembles are counted by semester.

Note: All music majors must pass a piano proficiency examination.

Applied Learning

Students in the BM in performance - keyboard emphasis program are required to complete an applied learning or research experience to graduate from the program.

- **For students in the performance, pedagogy and organ emphases**, the requirement can be met by completing a recital (MUSP 400) in their senior year.
- **For students in the accompanying emphasis**, the requirements can be met by completing MUSP 450 and MUSP 451 Accompanying Recital.

BM in Performance - Vocal Emphasis

Program Requirements

Course	Title	Hours
Applied Music		
Voice		24
Piano (two semesters) - Study in another instrument may be substituted if student meets piano proficiency requirement		2
General Music		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230	Theory IV and Aural Skills IV	4
History and Literature of Music		
MUSC 113	Music in Context	3
MUSC 334	History of Music I	3
MUSC 335	History of Music II	3
Performance Studies		
MUSP 211E	Opera Lab	1
or MUSP 411E	Opera Lab	
MUSP 308	Choral Conducting	2
Literature and Diction		
MUSP 121	Italian Diction	1
MUSP 122	English Diction	1
MUSP 221	German Diction	1
MUSP 222	French Diction	1
MUSP 625	Voice Pedagogy	2
MUSC 726	Voice Literature	3
Ensembles		
Ensembles [1, 2]		10
Electives		
Select 3 credit hours from the following		3
MUSP 211E	Opera Lab [3]	
MUSP 411E	Opera Lab [3]	
MUSP 340	Voice Coaching	
MUSC 623	Opera Literature	
DANC 227	Mime/Physical Theatre 1 [3]	
DANC 210	Ballet Technique 1 [3]	
THEA 243	Acting I	
THEA 254	Stage Makeup	
Recital Attendance		
MUSP 105	Recital Attendance (specified number of recitals per semester for four smstr.)	0
Recitals		
MUSP 300	Junior Recital	0
MUSP 400	Senior Recital	0
Foreign Language		
ITAL 111	Elementary Italian I	5
Select 5 credit hours from the following		5
ITAL 112	Elementary Italian II	
FREN 111 and/or FREN 112		
GERM 111 and/or GERM 112		
Total Credit Hours		86

[1] See degree check sheets for specified ensembles.

[2] Ensembles are counted by semester.

[3] If not taken in performance studies.

Piano Proficiency

Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements. All music majors must pass the piano proficiency examination before graduation and BME students must have it completed before the student teaching semester.

Applied Learning

Students in the BM in performance - vocal emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a recital (MUSP 400) in their senior year.

Bachelor of Music Education

Requirements

Students receiving the Bachelor of Music Education (BME) must meet the state requirements for licensure. Students may select from four options within this degree:

1. Instrumental emphasis offered to satisfy the needs of students whose chief performing medium is instrumental or keyboard and who plan to enter the field of instrumental music teaching in the public schools.
2. Vocal emphasis offered to satisfy the needs of students whose chief performing medium is voice, and who plan to enter the field of vocal and general music teaching in the public schools.
3. Keyboard emphasis offered to satisfy the needs of students whose chief performing medium is keyboard and who plan to enter the field of vocal, instrumental or general music in the public schools.
4. Special music education emphasis offered to satisfy the needs of students, either vocal or instrumental specialists, who plan to enter the field of music education for special education children in the public schools.

Student Teaching

Admission into the student teaching semester requires:

- A minimum cumulative grade point average of 2.500;
- A minimum grade point average of 2.500 in music courses;
- Senior standing (90 credit hours — 200 credit points);
- A grade of *C* or better in:

Course	Title	Hours
ENGL 101	College English I (or its equivalent)	3
ENGL 102	College English II	3
COMM 111	Public Speaking	3
MATH 111	College Algebra	3

- Completion of prerequisites in educational psychology;
- Foundations of education and music education methods;
- Successful completion of the piano proficiency exam and all other music requirements (including senior recital);
- Successful completion of a physical examination; and
- A recommendation by the music education area.

Transfer students must satisfy education requirements for prerequisites not taken at Wichita State.

All students must have an application on file with the music education area and receive its approval. Students must file applications with the director of music education.

Graduation Requirements

The following programs fulfill both the university requirements for graduation and the Kansas licensure requirement and must be taken by all Bachelor of Music Education candidates. In completing the BME program, the student must meet the general education program requirements of the university given in the Requirements for Graduation (p. 34) section of the Undergraduate Catalog.

BME - Instrumental

Program Requirements

Course	Title	Hours
Music Requirements		
Applied Music [1]		
Primary medium		14
Secondary medium [2]		2
General Music		
Theory:		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230A	Theory IV and Aural Skills IV: Music Education	4
MUSC 523	Form And Analysis	2
or MUSC 641	Orchestration	
History and Literature of Music:		
MUSC 113	Music in Context [5]	3
MUSC 334	History of Music I [5]	3
MUSC 335	History of Music II	3
Conducting:		
MUSP 307	Instrumental Conducting	2
MUSP 651	Advanced Conducting and Score Reading	2
Ensembles		
Ensembles [3, 4]		8
Recital Attendance		
MUSP 105	Recital Attendance (two smstr.)	0
Senior Recital		
MUSP 400	Senior Recital	0
Music Education Requirements		
Introduction		
MUSE 171	Orientation to Music Education	1
MUSE 271	Introduction to Music Education	2
Core I		
CESP 334	Introduction to Diversity: Human Growth and Development [5]	3
MUSE 311	Introduction to Diversity Field Experience	1
MUSE 611	Music for Special Education	2
MUSE 617	Literacy Strategies for Content Areas: Music	2
Core II		
MUSE 303	Elementary and General Music Methods	2
MUSE 324	Fundamentals of Instrumental Music for Secondary Schools	2
MUSE 305	Pre Student Teaching	1
Core III		
MUSE 405	Teaching Internship Seminar	1
MUSE 451	Teaching Internship Elementary School: Music	3
MUSE 469	Teaching Internship Secondary Music	3
Additional Requirements		
MUSE 238	Wind and Percussion Methods I - Woodwind Emphasis	1
MUSE 239	Wind & Percussion Methods II- Brass Emphasis	1
MUSE 240 & MUSE 243	Wind and Percussion Methods III - Percussion Emphasis and Wind and Percussion Methods Lab - Rehearsal Emphasis	2
MUSE 241	String Rehearsal Methods	1
MUSE 342	Survey of Choral Techniques and Literature	2
MUSE 686	Marching Band Techniques	2
or MUSP 620	String Pedagogy: Violin and Viola	
Total Credit Hours		87

[1] Students must be enrolled in applied music during the semester of their senior recital.

[2] Piano majors should enroll in MUSP 207 and MUSP 407 for a total of 2 credit hours.

[3] See degree check sheets for specified ensembles, including requirements for transfer students.

[4] Ensembles are counted by semester.

[5] Counted as general education course.

Note: All music majors must pass a piano proficiency examination.

Applied Learning

Students in the Bachelor of Musical Education - instrumental concentration are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by student teaching, senior recital and ensemble performances.

BME - Keyboard

Program Requirements

Course	Title	Hours
Music Requirements		
Applied Music [1]		
Primary medium		14
Secondary medium		2
General Music		
Theory		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230A	Theory IV and Aural Skills IV: Music Education	4
MUSC 523	Form And Analysis	2
MUSC 641	Orchestration	2
History and Literature of Music		

MUSC 113	Music in Context [4]	3
MUSC 334	History of Music I [4]	3
MUSC 335	History of Music II	3
Conducting		
MUSP 307	Instrumental Conducting	2
or MUSP 308	Choral Conducting	
MUSP 651	Advanced Conducting and Score Reading	2
or MUSP 691	Advanced Choral Conducting	
Additional Requirements - Keyboard Majors		4
Piano Performance Majors		
MUSP 207 & MUSP 407	Piano Repertoire and Piano Repertoire	
MUSP 580	Piano Pedagogy	
or MUSP 581	Piano Teaching Materials	
Piano Pedagogy Majors		
MUSP 580	Piano Pedagogy	
or MUSP 581	Piano Teaching Materials	
MUSP 790	Special Topics in Music (Piano Pedagogy Supervised Teaching)	
Ensembles		
Ensembles [2, 3]		7
Recital Attendance		
MUSP 105	Recital Attendance (two semesters)	0
Senior Recital		
MUSP 400	Senior Recital	0
Music Education Requirements		
Introduction		
MUSE 171	Orientation to Music Education	1
MUSE 271	Introduction to Music Education	2
Core I		
CESP 334	Introduction to Diversity: Human Growth and Development	3
MUSE 311	Introduction to Diversity Field Experience	1
MUSE 611	Music for Special Education	2
MUSE 617	Literacy Strategies for Content Areas: Music	2
Core II		
MUSE 303	Elementary and General Music Methods	2
MUSE 305	Pre Student Teaching	1
MUSE 323	Fundamentals of Vocal Music for Secondary Schools	2
or MUSE 324	Fundamentals of Instrumental Music for Secondary Schools	
Core III		
MUSE 405	Teaching Internship Seminar	1
MUSE 451	Teaching Internship Elementary School: Music	3
MUSE 469	Teaching Internship Secondary Music	3
Additional Requirements		
MUSE 241	String Rehearsal Methods	1
MUSE 242	Wind and Percussion Rehearsal Methods	1
MUSE 342	Survey of Choral Techniques and Literature	2
Total Credit Hours		87

[1] Students must be enrolled in applied music during the semester of their senior recital.

[2] See degree check sheets for specified ensembles.

[3] Ensembles are counted by semester.

[4] Counted as general education course.

Note: All music majors must pass a piano proficiency examination.

Applied Learning

Students in the Bachelor of Music Education — keyboard program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by a senior recital and student teaching.

BME - Vocal

Program Requirements

Course	Title	Hours
Music Requirements		
Applied Music [1]		
Primary medium		14
Secondary medium		2
General Music		
Theory		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230A	Theory IV and Aural Skills IV: Music Education	4
MUSC 523	Form And Analysis	2
MUSC 641	Orchestration	2
History and Literature of Music		
MUSC 113	Music in Context	3
MUSC 334	History of Music I	3
MUSC 335	History of Music II	3
Conducting		
MUSP 308	Choral Conducting	2
MUSP 691	Advanced Choral Conducting	2
Electives		
Select 2 credit hours from the following		2
MUSP 121	Italian Diction	
MUSP 122	English Diction	
MUSP 221	German Diction	
MUSP 625	Voice Pedagogy	
Ensembles		
Ensembles [2, 3]		9
Recital Attendance		
MUSP 105	Recital Attendance (two semesters)	0
Senior Recital		
MUSP 400	Senior Recital	0
Music Education Requirements		
Introduction		
MUSE 171	Orientation to Music Education	1

MUSE 271	Introduction to Music Education	2
Core I		
CESP 334	Introduction to Diversity: Human Growth and Development	3
MUSE 311	Introduction to Diversity Field Experience	1
MUSE 611	Music for Special Education	2
MUSE 617	Literacy Strategies for Content Areas: Music	2
Core II		
MUSE 303	Elementary and General Music Methods	2
MUSE 323	Fundamentals of Vocal Music for Secondary Schools	2
MUSE 305	Pre Student Teaching	1
Core III		
MUSE 405	Teaching Internship Seminar	1
MUSE 451	Teaching Internship Elementary School: Music	3
MUSE 469	Teaching Internship Secondary Music	3
Additional Requirements		
MUSE 241	String Rehearsal Methods	1
MUSE 242	Wind and Percussion Rehearsal Methods	1
MUSE 342	Survey of Choral Techniques and Literature	2
Total Credit Hours		87

[1] Students must be enrolled in applied music during the semester of their senior recital.

[2] See degree check sheets for specified ensembles.

[3] Ensembles are counted by semester.

Piano Proficiency

Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements. All music majors must pass the piano proficiency examination before graduation and BME students must have it completed before the student teaching semester.

Applied Learning

Students in the Bachelor of Music Education — vocal program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by recitals, ensembles and student teaching.

Bachelor of Special Music Education

Program Requirements

Course	Title	Hours
Music Requirements		
Applied Music [1]		
Primary Medium		14
Secondary Medium		2
General Music		
Theory		
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 227 & MUSC 229	Theory III and Aural Skills III	4
MUSC 228 & MUSC 230A	Theory IV and Aural Skills IV: Music Education	4
MUSC 523	Form And Analysis	2
MUSC 641	Orchestration	2
History and Literature of Music		
MUSC 113	Music in Context [4]	3
MUSC 334	History of Music I [4]	3
MUSC 335	History of Music II	3
Conducting		
MUSP 307	Instrumental Conducting	2
or MUSP 308	Choral Conducting	
MUSP 651	Advanced Conducting and Score Reading	2
or MUSP 691	Advanced Choral Conducting	
Ensembles		
Ensembles - three of the seven semesters of ensemble must be 400 level [2, 3]		7
Recital Attendance		
MUSP 105	Recital Attendance (two smstr.)	0
Senior Recital		
MUSP 400	Senior Recital	0
Music Education Requirements		
Introduction		
MUSE 171	Orientation to Music Education	1
MUSE 271	Introduction to Music Education	2
Core I		
CESP 334	Introduction to Diversity: Human Growth and Development [4]	3
MUSE 311	Introduction to Diversity Field Experience	1
MUSE 611	Music for Special Education	2
MUSE 617	Literacy Strategies for Content Areas: Music	2
Core II		
MUSE 303	Elementary and General Music Methods	2
MUSE 305	Pre Student Teaching	1
MUSE 309	Special Music Education Methods	2
MUSE 323	Fundamentals of Vocal Music for Secondary Schools	2
or MUSE 324	Fundamentals of Instrumental Music for Secondary Schools	
Core III		
MUSE 405	Teaching Internship Seminar	1
MUSE 453	Teaching Internship: Special and Elementary Music Education	3
MUSE 469	Teaching Internship Secondary Music	3
Additional Requirements		
Select 4 credit hours (See check sheet for specific required courses)		4
MUSE 241	String Rehearsal Methods	
MUSE 242	Wind and Percussion Rehearsal Methods	
MUSE 342	Survey of Choral Techniques and Literature	
Music Electives as Advised		*2*
Electives must be upper division MUSE		

MUSC 523	Form And Analysis	
or MUSC 641	Orchestration	
Vocal Majors (select 2 credit hours)		
MUSP 625	Voice Pedagogy	
MUSP 725	Voice Pedagogy II	
MUSP 121	Italian Diction	
MUSP 122	English Diction	
MUSP 221	German Diction	
Keyboard Majors		
MUSP 580	Piano Pedagogy	
or MUSP 581	Piano Teaching Materials	
Instrumental Majors		
MUSE 686	Marching Band Techniques	
or MUSP 620	String Pedagogy: Violin and Viola	
Total Credit Hours		87

[1] Students must be enrolled in applied music during the semester of their senior recital.

[2] See degree check sheets for specified ensembles, including requirements for transfer students.

[3] Ensembles are counted by semester.

[4] Counted as general education.

Note: All music majors must pass a piano proficiency examination.

Applied Learning

Students in the Bachelors of Special Music Education program are required to complete an applied learning experience to graduate from the program. The requirement can be met by giving a senior recital and student teaching.

Minor in Music

A minor in music is available to any student whose major field or area of emphasis is outside the School of Music. A music minor consists of 20 credit hours as indicated:

Course	Title	Hours
MUSC 127 & MUSC 129	Theory I and Aural Skills I	4
MUSC 128 & MUSC 130	Theory II and Aural Skills II	4
MUSC 113	Music in Context	3
Select 9 additional credit hours from the following:		9
MUSC 162	World Music	
MUSC 227 & MUSC 229	Theory III and Aural Skills III	
MUSC 228 & MUSC 230	Theory IV and Aural Skills IV	
MUSC 334	History of Music I	
MUSC 335	History of Music II	
MUSC 523	Form And Analysis	
Applied music (4 credit hour maximum)		
Music ensembles (4 credit hour maximum)		
Total Credit Hours		20

School of Performing Arts

Linda Starkey, director

School of Performing Arts Website **(**http://wichita.edu/performingarts/**)**[1]

The School of Performing Arts includes the areas of dance, music theatre and theatre. The school offers rigorous and intensive training serving the educational needs of students who wish to pursue professional careers in the arts industry as performers, directors, designers, choreographers, technicians and stage managers. The faculty and staff are active as artists as well as teachers and scholars. Dance, theatre, film and musical theatre productions are designed to provide performance and technical experience for degree-bound students, while enriching the arts education of WSU students in the general educational curriculum.

[1] Link opens new window.

Majors in the School of Performing Arts

- Dance (p. 169)
  - BA in Dance (p. 170)
  - BFA in Dance (p. 170)
- Music Theatre (p. 172)
  - BA in Music Theatre (p. 172)
  - BFA in Music Theatre (p. 173)
- Theatre (p. 174)
  - BA in Theatre (p. 174)
  - BFA in Theatre Performance (p. 176)
  - BFA in Design and Technical Theater (p. 175)

Minors in the School of Performing Arts

- Minor in Dance (p. 171)
- Minor in Theatre (p. 176)
- Minor in Music Theatre (p. 174)

Certificates in the School of Performing Arts

- Certificate in Commercial Dance (p. 172)
- Certificate in Directing (p. 177)
- Certificate in Physical Performance Studies (p. 177)
- Certificate in Stage Management (p. 177)

Courses in the School of Performing Arts

- Dance (DANC) (p. 365)
- Theatre (THEA) (p. 508)

Dance

The Bachelor of Fine Arts (BFA) in dance is a degree focused on preparation for professional performance and choreography. Dance BFA major course offerings include study in modern, ballet and jazz techniques, choreography, dance history, dance kinesiology, repertoire and methods of teaching. Additional courses are offered in music theatre dance, tap, mime theatre, ballroom and other special forms.

The Bachelor of Arts (BA) is a degree in dance with emphasis on dance technique and related studies, and a complimentary course of study chosen from a wide variety of fields in consultation with the student's academic advisor. These can include, but are not limited to fields such as business, entrepreneurship, exercise science, psychology, sociology and other areas of interest. Dance BA major course offerings include study in modern, ballet and jazz techniques; dance history and dance kinesiology. Additional classes are offered in methods of teaching, choreography, music theatre dance, tap, mime theatre, ballroom and other special forms.

Programs in Dance

- BA in Dance (p. 170)
- BFA in Dance (p. 170)
- Minor in Dance (p. 171)
- Certificate in Commercial Dance (p. 172)

Courses in Dance

- Dance (DANC) (p. 365)

BA in Dance

Admission

For all dance BA majors, advancement in technique is not automatic and is possible only with faculty consent and approval. Students will be placed at the technical level the dance faculty deem appropriate for individual growth and development. Students with developed skill in one dance technique should not expect that ability to translate into the same level of skill in other dance techniques. The dance faculty works with each student to create the best fit between student goals and interests and faculty adjudication of each student's needs for both technical and artistic development. The faculty seeks to produce graduates who will be competitive in the professional field of dance.

Program Requirements

General Requirements

- Total credit hours for graduation 120 minimum, overall GPA 2.000 (2.500 in major);
- Must complete the 36 credit hours of the WSU General Education Program (p. 57), the requirements of the College of Fine Arts, and must have 45 credit hours of upper division credits; and
- Audition and perform in the faculty dance company, Wichita Contemporary Dance Theatre, a minimum of two semesters.

Major Requirements

- 42-43 credit hours in dance;
- 8 credit hours performing arts core courses;
- 15 credit hours electives outside the School of Performing Arts; and
- 18-19 credit hours electives based on plan of study.

Course	Title	Hours
Core Curriculum courses		
DANC 180E	Performing Arts Seminar	1
DANC 370	Professional Practices for the Performing Artist	3
DANC 580	Capstone Project	1
Technical Theatre Class (THEA 345 recommended; THEA 244 or THEA 253 also accepted)		3
Dance Technique		
Minimum proficiency must be at level 2 for **all** technique areas. Faculty advisor approval required for advancement into all technique classes above level 1. Classes may be repeated for credit.		
Select 12 credit hours of Modern Dance Technique from the following: [1]		12
DANC 301	Modern Technique 2	
DANC 401	Modern Technique 3	
Select 12 credit hours of Ballet Technique from the following: [1]		12
DANC 310	Ballet Technique 2	
DANC 410	Ballet Technique 3	
Select 4 credit hours of Jazz Technique from the following: [1]		4
DANC 335	Jazz Technique 2	
DANC 435	Jazz Technique 3	
Select 2-3 credit hours from the following [1]		2-3
DANC 301	Modern Technique 2	
DANC 310	Ballet Technique 2	
DANC 335	Jazz Technique 2	
DANC 401	Modern Technique 3	
DANC 410	Ballet Technique 3	
DANC 435	Jazz Technique 3	
Dance Requirements		
DANC 225	Dance History: Ancient Civilization to Early 1900s (Counted in General Education)	
DANC 325	Dance History: 20th and 21st Centuries	3
DANC 380	Dance Conditioning	2
DANC 415	Dance Kinesiology	3
DANC 580	Capstone Project (in addition to the semester counted in the core)	2
DANC 215	Dance Improvisation	1
DANC 320	Dance Repertoire (two enrollments of 0.5 credit hours)	1
Additional Requirements		
Non-English language proficiency courses or outside of performing arts with advisor approval (9 minimum credit hours required at 300+ upper division)		15
Electives based on plan of study with advisor approval (6 minimum credit hours required at 300+ upper division)		18-19
Total Credit Hours		84

[1] Placement and advancement by audition and/or faculty consent only.

BA dance majors culminate their studies with a Capstone Project (DANC 580). BA majors write a research paper, which may include an applied dance experience. Two semesters of capstone courses are required for BA majors in the fall and spring of their senior year. In the first semester of the Capstone Project, students research and develop an initial proposal and theoretical framework for their project. In the second semester of the Capstone Project, students implement, analyze and present their final works. BA Capstone Projects culminate in a final oral defense with the dance faculty.

Applied Learning

All students in a School of Performing Arts bachelor degree track or concentration are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a formal capstone project. Students create a major project whether self-generated, an extension of coursework, or through advanced participation in producing a public performance. Through the capstone experience, students develop and demonstrate, in a hands-on, real world context, the skills, knowledge and competencies required in their area of emphasis. Students in the School of Performing Arts develop a diverse portfolio of experiences, materials and intellectual properties through a broad offering of applied experiences in their four years. The capstone project provides a practical context for academic, experiential and personal growth through the college experience. The final, real product of the SPA's program of applied learning is a young professional prepared for the future.

BFA in Dance

Admission

All Dance BFA majors must audition and perform in the faculty dance company, Wichita Contemporary Dance Theatre.

For all dance BFA majors, advancement in technique is not automatic and is possible only with faculty consent and approval. Students will be placed at the technical level the dance faculty deem appropriate for individual growth and development. Students with a developed skill in one dance technique should not expect that ability to translate into the same level of skill in other dance techniques. The dance faculty works with each student to create the best fit between student goals and interests and faculty appraisal of each student's needs for true artistic

development. The faculty seeks to produce graduates who will be competitive in the professional arena.

Program Requirements

General Requirements

- Total credit hours for graduation — 120 minimum, overall GPA 2.000 (2.500 in major); and
- Must complete the 36 credit hours of the WSU General Education Program (p. 57), the requirements of the College of Fine Arts, and must have 45 credit hours of upper-division credits.

Major Requirements

- 67 credit hours in dance;
- 8 credit hours performing arts core courses; and
- 9 credit hours of electives based on plan of study.

Course	Title	Hours
Core Curriculum courses		
DANC 180E	Performing Arts Seminar	1
DANC 370	Professional Practices for the Performing Artist	3
DANC 580	Capstone Project	1
Technical Theatre Class (THEA 345 recommended; THEA 244 or THEA 253 also accepted)		3
Dance Major Requirements		
DANC 225	Dance History: Ancient Civilization to Early 1900s (Counted in General Education)	
DANC 325	Dance History: 20th and 21st Centuries	3
DANC 415	Dance Kinesiology	3
DANC 227	Mime/Physical Theatre 1	2
DANC 215	Dance Improvisation	1
DANC 305	Choreography 1	2
DANC 405	Choreography 2	2
DANC 505	Choreography 3	2
DANC 545	Methods of Teaching Dance	2
DANC 645	Practicum in Teaching Dance	1
DANC 320	Dance Repertoire (two enrollments of 0.5 credit hours)	1
DANC 580	Capstone Project (in addition to the semester counted in the core)	2
DANC 380	Dance Conditioning (two enrollments of 2 credit hours)	4
DANC 381	Dance Somatics	2
DANC 490	Dance Audition Techniques	1
Dance Technique		
Note: Faculty advisor approval is required for advancement into **all** dance technique classes above level 1		
Select 15 credit hours of Ballet Technique from the following:		15
DANC 310	Ballet Technique 2	
DANC 410	Ballet Technique 3	
Select 15 credit hours in Modern Dance Technique from the following:		15
DANC 301	Modern Technique 2	
DANC 401	Modern Technique 3	
Select 4 credit hours in Jazz Technique from the following:		4
DANC 335	Jazz Technique 2	
DANC 435	Jazz Technique 3	
Select 4 credit hours in Senior Modern and Ballet Technique:		4
DANC 501	Senior Modern Technique 4 (two enrollments of 1 credit hours)	
DANC 510	Senior Ballet Technique 4 (two enrollments of 1 credit hours)	
Electives based on plan of study		9
Total Credit Hours		83

BFA dance majors culminate their studies with a Capstone Project (DANC 580). BFA majors present both a group choreographic work and solo performance with a paper component. Two semesters of capstone courses are required for BFA majors in the fall and spring of their senior year. In the first semester of the Capstone Project, students research and develop an initial proposal and theoretical framework for their project. In the second semester of the Capstone Project, students implement, analyze and present their final works. BFA Capstone Projects culminate in a final oral defense with the dance faculty.

Applied Learning

All students in a School of Performing Arts bachelor degree track or concentration are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a formal capstone project. Students create a major project whether self-generated, an extension of coursework, or through advanced participation in producing a public performance. Through the capstone experience, students develop and demonstrate, in a hands-on, real world context, the skills, knowledge and competencies required in their area of emphasis. Students in the School of Performing Arts develop a diverse portfolio of experiences, materials and intellectual properties through a broad offering of applied experiences in their four years. The capstone project provides a practical context for academic, experiential and personal growth through the college experience. The final, real product of the SPA's program of applied learning is a young professional prepared for the future.

Minor in Dance

A minor in dance consists of the following: 21 total credit hours.

Course	Title	Hours
Dance Technique (introductory classes)		
Select three courses in dance technique (one in each discipline) from the following		
DANC 201	Modern Technique 1	2
DANC 301	Modern Technique 2	3
DANC 210	Ballet Technique 1	2
DANC 310	Ballet Technique 2	3
DANC 235	Jazz Technique 1	2
DANC 335	Jazz Technique 2	2
Dance Technique (further study)		
Select two courses in two different disciplines from the following		
DANC 301	Modern Technique 2	3
DANC 401	Modern Technique 3	3
DANC 310	Ballet Technique 2	3
DANC 410	Ballet Technique 3	3
DANC 335	Jazz Technique 2	2
DANC 435	Jazz Technique 3	2
Dance History		
Select one of the following courses		
DANC 225	Dance History: Ancient Civilization to Early 1900s	3
DANC 325	Dance History: 20th and 21st Centuries	3
Electives		

Select electives from the following to bring total to 21 credit hours		
DANC 130A	Ballroom/Swing	1
DANC 240	Tap 1	2
DANC 340	Tap 2	2
DANC 130V	Hip Hop I	2
DANC 140	Art of The Dance	3
DANC 130D	Ballroom/Latin	2
DANC 215	Dance Improvisation	1
DANC 227	Mime/Physical Theatre 1	2
DANC 225	Dance History: Ancient Civilization to Early 1900s	3
DANC 332	Music Theatre Dance 1	2
DANC 305	Choreography 1	2
DANC 320	Dance Repertoire	0.5
DANC 325	Dance History: 20th and 21st Centuries	3
DANC 380	Dance Conditioning	2
DANC 381	Dance Somatics	2
DANC 415	Dance Kinesiology	3

Certificate in Commercial Dance

The certificate in commercial dance is designed to prepare qualified students for advancement in a career as a performer in the art and entertainment industry. The certificate intends to enhance and broaden student career opportunities in genres such as film, music videos, cruise ship entertainment and professional musicals. Students use the present resources of Wichita State University through instruction in music, theatre and dance techniques. The specialized certificate allows students to expand their professional career prospects while deepening their creative, artistic experiences.

Program Requirements

Course	Title	Hours
DANC 310	Ballet Technique 2 (two enrollments of 2 credit hours)	4
DANC 201	Modern Technique 1	2
DANC 335	Jazz Technique 2	2
DANC 432	Music Theatre Dance 2	2
DANC 435	Jazz Technique 3	2
DANC 130V	Hip Hop I (two enrollments of 2 credit hours)	4
DANC 240	Tap 1	2
or DANC 340	Tap 2	
MUSA 432O	Applied Music Instruction for Majors - Voice for Musical Theatre	2
Total Credit Hours		20

Music Theatre

The music theatre department offers the following programs:

- BA in Music Theatre (p. 172)
- BFA in Music Theatre (p. 173)
- Minor in Music Theatre (p. 174)

BA in Music Theatre

The Bachelor of Arts (BA) in music theatre emphasizes music theatre techniques and related studies and a complimentary course of study chosen from a wide variety of fields in consultation with the student's advisor. These studies can include, but are not limited to, fields such as business, entrepreneurship, personal selling or other areas of interest.

Program Requirements

- Total credit hours for graduation 120 minimum, overall GPA 2.000 (2.500 in major); and
- Must complete the WSU General Education Program (p. 57) and the College of Fine Arts requirements as well as the required courses listed below.

Course	Title	Hours
Core		8
Theatre		18
Dance		18
Music		15
Electives		10
Non-English courses or outside of performing arts		15
General Education		36
Total Credit Hours		120

Major Requirements

Course	Title	Hours
Core Curriculum Courses		
THEA 180E	Performing Arts Seminar	1
THEA 555	Capstone Project	1
Technical Theatre Class (costuming, stagecraft, lighting; THEA 253, 244 or 345)		3
THEA 370	Professional Practices for the Performing Artist	3
Theatre Requirements		
THEA 243	Acting I	3
THEA 254	Stage Makeup	2
THEA 260	History of Musical Theatre	3
THEA 330	Musical Theatre Laboratory	2
THEA 342	Advanced Acting	3
THEA 530	Musical Theatre Scene Study	2
THEA 610	Directing the Musical	3
Dance Requirements		
DANC 210	Ballet Technique 1 (four semesters as advised)	8
or DANC 310	Ballet Technique 2	
DANC 201	Modern Technique 1 (as advised)	2
DANC 235	Jazz Technique 1 (as advised)	2
or DANC 335	Jazz Technique 2	
DANC 240	Tap 1	2
DANC 332	Music Theatre Dance 1 [1]	2
DANC 130V	Hip Hop I	2
Music Requirements		
Take six semesters of the following (as advised):		12
MUSA 232Y	Applied Music Instruction for Majors - Voice	
or MUSA 432Y	Applied Music Instruction for Majors - Voice	
MUSA 113P	Piano Class Level I - Music Majors	1
Take two semesters of the following:		2
MUSP 212_	Choir	
Additional Courses		
Non-English language proficiency courses or outside of performing arts with advisor approval (9 minimum credit hours required at 300+ upper division)		15

Electives based on plan of study with advisor approval (3 minimum credit hours required at 300+ upper division)	10
Total Credit Hours	84

[1] Either DANC 235 or instructor's consent is a prerequisite for DANC 332.

Applied Learning

All students in a School of Performing Arts bachelor degree track or concentration are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a formal capstone project. Students create a major project whether self-generated, an extension of coursework, or through advanced participation in producing a public performance. Through the capstone experience, students develop and demonstrate, in a hands-on, real world context, the skills, knowledge and competencies required in their area of emphasis. Students in the School of Performing Arts develop a diverse portfolio of experiences, materials and intellectual properties through a broad offering of applied experiences in their four years. The capstone project provides a practical context for academic, experiential and personal growth through the college experience. The final, real product of the SPA's program of applied learning is a young professional prepared for the future.

BFA in Music Theatre

Housed in the School of Performing Arts, and in collaboration with the School of Music, the BFA in music theatre is an intensive, interdisciplinary, performance-oriented major. Admittance into the program is by competitive auditions held twice a year. The program offers equal emphasis in music, theatre and dance skills. Career counseling and an understanding of the business is emphasized. Students interested in music theatre as a profession will gain the training and techniques needed to succeed in this demanding and competitive career.

Program Requirements

- Total credit hours for graduation 120 minimum, overall GPA 2.000 and 2.500 in major (3.000 for scholarship consideration); and
- Must complete the requirements of the WSU General Education Program (p. 57) and the College of Fine Arts as well as the required courses below.

Major Requirements: 84 credit hours including:

Course	Title	Hours
Core Curriculum Courses		
THEA 180E	Performing Arts Seminar (freshman seminar)	1
THEA 555	Capstone Project	1
THEA 370	Professional Practices for the Performing Artist	3
Technical Theatre Class (costuming, stagecraft, lighting; THEA 253, 244 or 345)		3
Theatre Requirements		
THEA 243	Acting I	3
THEA 254	Stage Makeup	2
THEA 260	History of Musical Theatre	3
THEA 330	Musical Theatre Laboratory	2
THEA 342	Advanced Acting	3
THEA 530	Musical Theatre Scene Study	2
THEA 610	Directing the Musical	3
THEA 630	Auditions Class-Musical Theatre	3
THEA 643	Styles In Acting	3
Dance Requirements		
DANC 210	Ballet Technique 1	2
DANC 201	Modern Technique 1	2
DANC 310	Ballet Technique 2 (or as advised) (4 semesters)	8
DANC 235	Jazz Technique 1 (or as advised)	2
DANC 335	Jazz Technique 2 (or as advised) [1]	2
DANC 240	Tap 1	2
DANC 340	Tap 2 [2]	2
DANC 332	Music Theatre Dance 1	2
DANC 432	Music Theatre Dance 2 [3]	2
DANC 130V	Hip Hop I	2
Music Requirement		
Take six semesters of the following:		12
MUSA 232Y & MUSA 432Y	Applied Music Instruction for Majors - Voice and Applied Music Instruction for Majors - Voice	
MUSC 127	Theory I	2
MUSC 128	Theory II	2
MUSC 129	Aural Skills I	2
MUSC 130	Aural Skills II	2
Take two semesters of the following:		2
MUSA 113P & MUSA 114P	Piano Class Level I - Music Majors and Piano Class Level II - Music Majors	
Take two semesters of the following:		2
MUSP 340	Voice Coaching	
Take two semesters of the following:		2
MUSP 212F	A Cappella Choir (two semesters)	
Total Credit Hours		84

[1] Prerequisite: DANC 235.
[2] Prerequisite: DANC 240.
[3] Prerequisite: DANC 332.

Incoming students with previous training in dance will be assessed to determine appropriate class level. With approval from instructors, those with prior training may substitute upper-division courses for entry level classes. Credit hours must still total 120.

Students with prior piano skills may take a proficiency exam and test out of piano class.

Music theatre majors must audition for all department musicals. Students receiving scholarships are required to perform as cast. All majors must obtain departmental approval prior to performing off campus. Permission is granted on a case-by-case basis. With instructor’s consent, students not cast in department musicals are encouraged to audition for roles and internships at the many professional and community theatres that flourish in Wichita. Majors are encouraged to audition for, and participate in theater, dance and opera productions, as well as musicals.

The faculty seeks to produce graduates who will be competitive in the professional performing world.

Applied Learning

All students in a School of Performing Arts bachelor degree track or concentration are required to complete an applied learning or research

experience to graduate from the program. The requirement can be met by completing a formal capstone project. Students create a major project whether self-generated, an extension of coursework, or through advanced participation in producing a public performance. Through the capstone experience, students develop and demonstrate, in a hands-on, real world context, the skills, knowledge and competencies required in their area of emphasis. Students in the School of Performing Arts develop a diverse portfolio of experiences, materials and intellectual properties through a broad offering of applied experiences in their four years. The capstone project provides a practical context for academic, experiential and personal growth through the college experience. The final, real product of the SPA's program of applied learning is a young professional prepared for the future.

Minor in Music Theatre

The minor in music theatre is geared toward theatre and vocal performance majors who would like to enhance their performance techniques in the style of musical theatre. It allows students to explore the basic techniques required to perform in musical theatre in order to broaden their employment opportunities.

The minor in music theatre requires 21 credit hours. No auditions are necessary. No acceptance into the program is required.

Course	Title	Hours
THEA 260	History of Musical Theatre	3
THEA 243	Acting I	3
THEA 342	Advanced Acting	3
DANC 210	Ballet Technique 1	2
DANC 240	Tap 1	2
DANC 235	Jazz Technique 1	2
DANC 332	Music Theatre Dance 1 [1]	2
MUSA 232O	Voice for Musical Theatre (Two semesters of 2 credit hours each) [2]	4

[1] Prerequisite: completion of two 200-level dance courses.

[2] Private voice would satisfy this requirements for vocal performance majors.

Theatre

The theatre program at Wichita State University offers broad academic training to build skills and knowledge, balanced with applied learning in the extensive production schedule of the university's live performance season and film making program.

The Bachelor of Fine Arts (BFA) in theatre is offered as one of two concentrations in either performance or design and technology.

The performance concentration includes studies in acting, voice, specialized movement, improvisation, stage combat, film and audio performance.

The design and technology concentration includes studies in costume, lighting and scenic design and many of the technologies that bring those designs to life.

The Bachelor of Arts (BA) in theatre is offered as a broader theatre studies program that can be tailored to fit a student's interests and curiosities by adding a secondary area of study chosen from the university's 70 undergraduate programs in consultation with the student's academic advisor. These may include fields such as stage management, business, music, entrepreneurship, exercise science, management, women's studies or other areas of interest.

The BA in theatre includes studies in directing, theatre history, script writing, dramatic theory and criticism, theatre as a mirror of contemporary culture, invention, innovation and intellectual creativity.

The theatre program works closely with the media arts program at Shocker Studios as well as local/regional companies and professionals to provide opportunities for students to gain hands-on training in the entertainment arts and industries.

Students who intend to pursue theatre as a major must contact the academic coordinator for theatre upon admission for assignment to a faculty advisor. Students pursuing a minor in theatre are encouraged to consult with the director of theatre for assistance with a course of study and assignment to a minor advisor.

Programs in Theatre

- BA in Theatre (p. 174)
- BFA in Design and Technical Theatre (p. 175)
- BFA in Theatre Performance (p. 176)
- Minor in Theatre (p. 176)
- Certificate in Directing (p. 177)
- Certificate in Physical Performance Studies (p. 177)
- Certificate in Stage Management (p. 177)

Courses in Theatre

- Theatre (THEA) (p. 508)

BA in Theatre

Program Requirements

A minimum total of 120 credit hours is required for the BA in theatre and includes 84 credit hours of major courses that must be completed with a minimum overall grade point average of 2.000 and a minimum major grade point average of 2.500. Students must complete 45 credit hours of upper-division courses. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the School of Performing Arts, students in the BA in theatre must take the following courses:

Course	Title	Hours
Core Curriculum Courses		
THEA 180E	Performing Arts Seminar	1
THEA 370	Professional Practices for the Performing Artist	3
THEA 575	Capstone Project	1
Technical Theatre Class (costuming, stagecraft, lighting; THEA 253, 244 or 345. Credit hours for THEA 244 are counted here.)		3
Requirements for Major		
(in addition to one course that applies to the 8-credit-hour core)		
THEA 180A	Practicum: Stagecraft	1
THEA 180B	Practicum: Costume (taken concurrently with THEA 253)	1
THEA 180C	Practicum: Management	1
THEA 228	Script Analysis	3
THEA 243	Acting I	3
THEA 244	Stagecraft: Applied Technology (credit hours are counted in core courses)	0
THEA 253	Costuming for the Stage and Film (taken concurrently with THEA 180B)	3
THEA 254	Stage Makeup	2
THEA 272	Stage Management	3
THEA 345	Stage Lighting	3

THEA 359	Directing I	3
THEA 623	Theatre History I	3
THEA 624	Theatre History II	3
Theatre Electives		
Theatre electives based on plan of study with advisor approval (12 credit hours minimum required at 300+ upper-division level.)		26
Additional Requirements		
Required, faculty approved electives. These electives may be theatre electives or other university courses		6
Non-English language proficiency courses or courses outside of performing arts with advisor approval (9 credit hours minimum required at 300+ upper division)		15
Total Credit Hours		84

Applied Learning

All students in a School of Performing Arts bachelor degree track or concentration are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a formal capstone project. Students create a major project whether self-generated, an extension of coursework, or through advanced participation in producing a public performance. Through the capstone experience, students develop and demonstrate, in a hands-on, real world context, the skills, knowledge and competencies required in their area of emphasis. Students in the School of Performing Arts develop a diverse portfolio of experiences, materials and intellectual properties through a broad offering of applied experiences in their four years. The capstone project provides a practical context for academic, experiential and personal growth through the college experience. The final, real product of the SPA's program of applied learning is a young professional prepared for the future.

BFA in Design and Technical Theatre

Program Requirements

A minimum total of 120 credit hours is required for the BFA in design and technical theatre and includes 84 credit hours of major courses that must be completed with a minimum overall grade point average of 2.000 and a major grade point average of 2.500. Students must complete 45 credit hours of upper-division courses. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the School of Performing Arts, students in the BFA in design and technical theatre must take the following courses:

Course	Title	Hours
Core Curriculum Courses		
THEA 180E	Performing Arts Seminar	1
THEA 370	Professional Practices for the Performing Artist	3
THEA 575	Capstone Project	1
Technical Theatre Class (costuming, stagecraft, lighting; THEA 253, 244 or 345. Credit hours for THEA 244 can be counted here.)		3
Requirements for Major		
In addition to one course that applies to the 8-credit-hour core		
THEA 180A	Practicum: Stagecraft	1
THEA 180B	Practicum: Costume	1
THEA 180C	Practicum: Management	1
THEA 228	Script Analysis	3
THEA 243	Acting I	3
THEA 244	Stagecraft: Applied Technology (credit hours counted in core) [1]	0
THEA 253	Costuming for the Stage and Film (taken concurrently with THEA 180B) [1]	3
THEA 254	Stage Makeup	2
THEA 272	Stage Management	3
THEA 345	Stage Lighting [1]	3
THEA 359	Directing I	3
THEA 623	Theatre History I	3
THEA 624	Theatre History II	3
Additional Requirements for Design/Technical Option		
ARTF 145	Foundation Drawing	3
THEA 285	Period Styles	3
THEA 300	Drafting and Visual Standards for the Theatre	3
THEA 344	Scene Design I	3
THEA 357	Costume Design I	3
Select 12 credit hours from the following:		12
THEA 375	Directed Projects in Theater	
THEA 380A	Practicum: Stagecraft	
THEA 380B	Practicum: Costume	
THEA 380C	Practicum: Management	
THEA 544	Applied Materials and Process Lab for Production	
THEA 546	Scene Painting	
THEA 647	Scene Design II	
THEA 649	Stage Lighting II and Theatre Sound	
THEA 653	History of Costume	
THEA 675	Directed Study	
Electives		
Select 14 credit hours from the following:		14
THEA 143	The Art of the Theater	
ARTH 125	Introduction to Visual and Material Culture	
THEA 221	Oral Interpretation	
THEA 222	Improving Voice and Diction	
THEA 241	Improvisation and Theatre Games	
THEA 326	Expressive Voice for Stage	
THEA 331	Dialect for the Stage	
THEA 365	Stage Combat	
THEA 385	Theatre as a Mirror of Today's America	
THEA 480	Theatre Internship	
THEA 510	Design Project	
THEA 516	Scriptwriting I	
THEA 517	Scriptwriting II	
THEA 559	Directing II	
THEA 590	Theatre: Special Topics	
THEA 610	Directing the Musical	
FA 301	An Introduction to Entrepreneurship in the Arts	
Or any upper-division theatre elective		
Additional Requirements		
Required, faculty-approved electives. These courses may be theatre electives or other university courses.		6
Total Credit Hours		84

[1] Any one of these courses may count toward the 8 credit hours of core courses. The course counted toward the core, would not count in the requirements for major sub total.

Applied Learning

All students in a School of Performing Arts bachelor degree track or concentration are required to complete an applied learning or research experience to graduate from the program. The requirement can be

met by completing a formal capstone project. Students create a major project whether self-generated, an extension of coursework, or through advanced participation in producing a public performance. Through the capstone experience, students develop and demonstrate, in a hands-on, real world context, the skills, knowledge and competencies required in their area of emphasis. Students in the School of Performing Arts develop a diverse portfolio of experiences, materials and intellectual properties through a broad offering of applied experiences in their four years. The capstone project provides a practical context for academic, experiential and personal growth through the college experience. The final, real product of the SPA's program of applied learning is a young professional prepared for the future.

BFA in Theatre Performance

Program Requirements

A minimum total of 120 credit hours is required for the BFA in theatre performance and includes 84 credit hours of major courses that must be completed with a minimum overall grade point average of 2.000 and a minimum major grade point average of 2.500. Students must complete 45 credit hours of upper-division courses. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the School of Performing Arts, students in the BFA in theatre performance must take the following courses:

Course	Title	Hours
Core Curriculum Courses		
THEA 180E	Performing Arts Seminar	1
THEA 370	Professional Practices for the Performing Artist	3
THEA 575	Capstone Project	1
Technical Theatre Class (costuming, stagecraft, lighting; THEA 253, 244 or 345. Credit hours for THEA 244 can be counted here.)		3
Requirements for Major		
(in addition to one course that applies to the 8-credit-hour core)		
THEA 180A	Practicum: Stagecraft	1
THEA 180B	Practicum: Costume (taken concurrently with THEA 253)	1
THEA 180C	Practicum: Management	1
THEA 228	Script Analysis	3
THEA 243	Acting I	3
THEA 244	Stagecraft: Applied Technology (credit hours may be counted as core course) [1]	0
THEA 253	Costuming for the Stage and Film (taken concurrently with THEA 180B) [1]	3
THEA 254	Stage Makeup	2
THEA 272	Stage Management	3
THEA 345	Stage Lighting [1]	3
THEA 359	Directing I	3
THEA 623	Theatre History I	3
THEA 624	Theatre History II	3
Additional Requirements for Performance Option		
THEA 180D	Practicum:Performance	1
THEA 218	Movement for the Performer	3
THEA 222	Improving Voice and Diction	3
THEA 241	Improvisation and Theatre Games	3
THEA 326	Expressive Voice for Stage	3
THEA 331	Dialect for the Stage	3
THEA 342	Advanced Acting	3
THEA 365	Stage Combat	3
THEA 380D	Practicum: Performance	1
THEA 390	Acting for the Camera	3
THEA 395	Voice Acting	3
THEA 490	Theatre Audition Techniques	3
THEA 643	Styles In Acting	3
THEA 651	Scene Study	3
Theatre Electives		
With required faculty advisor approval, select 3 credit hours from the following:		3
THEA 143	The Art of the Theater	
THEA 221	Oral Interpretation	
THEA 375	Directed Projects in Theater	
THEA 380A	Practicum: Stagecraft	
THEA 380B	Practicum: Costume	
THEA 380C	Practicum: Management	
THEA 385	Theatre as a Mirror of Today's America	
THEA 480	Theatre Internship	
THEA 516	Scriptwriting I	
THEA 517	Scriptwriting II	
THEA 559	Directing II	
THEA 590	Theatre: Special Topics	
THEA 675	Directed Study	
FA 301	An Introduction to Entrepreneurship in the Arts	
Or any upper-division theatre elective		
Additional Program Requirements		
Required, faculty-approved electives. These courses may be theatre electives or other university courses.		6
Total Credit Hours		84

[1] Any one of these courses may count toward the 8 credit hours of core courses. The course counted toward the core, would not count in the requirements for major sub total.

Applied Learning

All students in a School of Performing Arts bachelor degree track or concentration are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a formal capstone project. Students create a major project whether self-generated, an extension of coursework, or through advanced participation in producing a public performance. Through the capstone experience, students develop and demonstrate, in a hands-on, real world context, the skills, knowledge and competencies required in their area of emphasis. Students in the School of Performing Arts develop a diverse portfolio of experiences, materials and intellectual properties through a broad offering of applied experiences in their four years. The capstone project provides a practical context for academic, experiential and personal growth through the college experience. The final, real product of the SPA's program of applied learning is a young professional prepared for the future.

Minor in Theatre

A minor in theatre includes 9 credit hours of required core coursework and 9 credit hours in the theatre area or areas of the student’s choice, including performance, design, technology, directing and management courses. Theatre minors must declare their status to ensure registration privileges in restricted courses.

Course	Title	Hours
Academic Core [1]		
THEA 143	The Art of the Theater	3

THEA 228	Script Analysis	3
Experiential Core [1]		
Select 3 classes from the following [2]		*3*
THEA 350	Workshops in Theatre	
THEA 375	Directed Projects in Theater	
THEA 380A	Practicum: Stagecraft	
THEA 380B	Practicum: Costume	
THEA 380C	Practicum: Management	
THEA 380D	Practicum: Performance	
Individual Areas of Study		
Select three courses from the following for a total of 9 credit hours [2]		9
Performance Options		
THEA 218	Movement for the Performer	
THEA 221	Oral Interpretation	
THEA 241	Improvisation and Theatre Games	
THEA 243	Acting I	
THEA 365	Stage Combat	
Design and Technology Options		
THEA 244	Stagecraft: Applied Technology	
THEA 253	Costuming for the Stage and Film	
THEA 345	Stage Lighting	
Theory, History and Management Options		
THEA 285	Period Styles	
THEA 260	History of Musical Theatre	
THEA 385	Theatre as a Mirror of Today's America	
THEA 272	Stage Management	
THEA 375C	Directed Projects-Stage Management	
Total Credit Hours		18

[1] Core credits are required for all students pursuing the theatre minor.

[2] For coursework requiring special arrangements to enroll, such as Special Topics or Directed Studies courses, minor advisor consultation and instructor approval is required.

Certificate in Directing

The certificate in directing provides an opportunity to focus on the practice of directing for plays, musicals and film. It consists of a balanced combination of required courses and practice that provides a wide range of knowledge and skills in directing and management, as well as practical training essential to directing. In addition to the classroom requirements, students are assigned directing responsibilities on productions.

It is offered as a value added credential in addition to bachelor's degrees in the School of Performing Arts.

Program Requirements

Course	Title	Hours
Course Requirements		
THEA 272	Stage Management	3
THEA 359	Directing I	3
THEA 390	Acting for the Camera	3
THEA 559	Directing II	3
THEA 610	Directing the Musical	3
Other Requirements		
Assistant direct a production		
Direct a production		
Total Credit Hours		15

Certificate in Physical Performance Studies

This rigorous interdisciplinary curriculum consists of a combination of required courses that provide a wide range of knowledge in human anatomy, dance and theatre. The anatomy and kinesiology courses assist the student in knowledge of the human body and kinesthetics and mechanics of human motion. The dance courses help develop physical flexibility, strength, endurance, balance and emotional expression. The theatre courses help develop physical ease, physical expression and clarity, and skills needed to effectively and safely execute and communicate physical conflict (stage combat and stunt work). Although it is not required for the certificate, students of the program are encouraged to broaden their physical training with a personally created workout routine, to study Tai Chi for added development of balance and motor skills, and study some form of martial arts for further training in the field of physical conflict storytelling needed on stage, in film and for motion capture work. Workshops, seminars and lectures by guest professionals provide an essential component in the course progression.

Program Requirements

Course	Title	Hours
DANC 201	Modern Technique 1	2
THEA 218	Movement for the Performer [1]	3
DANC 227	Mime/Physical Theatre 1 [1]	2
THEA 365	Stage Combat [1]	3
HPS 229	Applied Human Anatomy [2, 3]	3
or HS 290	Foundational Human Anatomy and Physiology	
or BIOL 223	Human Anatomy and Physiology	
DANC 415	Dance Kinesiology	3
Total Credit Hours		16

[1] Will satisfy theatre elective.

[2] Will satisfy Tier 2C Introductory course.

[3] This is intended to be a 16 credit-hour certificate. However, if the student takes BIOL 223 or HS 290, it will bump up to 18 credit hours because these two courses are 5 credit hours each (due to a lab component).

Certificate in Stage Management

The certificate in stage management consists of a balanced combination of courses that provides a wide range of knowledge in management, sociology and theatre, as well as practical training essential for a stage management professional. In addition to the classroom requirements, students are assigned to stage management positions in School of Performing Arts productions that reflect increasing responsibilities throughout the plan of study. The program is structured to prepare the student for work in commercial and regional theatre. It also provides a strong basis for learning a variety of artistic skills and management tools essential for employment opportunities in other entertainment areas such as touring, dance, opera, event management and industrials. Workshops, seminars and lectures by guest professionals provide an essential component in the program progression.

Program Requirements

Course	Title	Hours
THEA 180C	Practicum: Management	1
THEA 272	Stage Management	3

THEA 375C	Directed Projects-Stage Management (stage manage a Second Stage production in conjunction with THEA 375C enrollment)	2
THEA 380C	Practicum: Management (assistant stage manage a Mainstage production in conjunction with THEA 380C enrollment)	1
THEA 675C	Directed Study-Stage Management (stage manage a Mainstage production in conjunction with THEA 675C enrollment)	2
MGMT 360	Principles of Management	3
SOC 350	Social Interaction	3
Total Credit Hours		15

Classes required by the certificate program are taken in combination with the student's general education and major studies classes. The certificate is open to all students of Wichita State University. Preference in selection is given to majors in the School of Performing Arts.

Health Professions, College of

Stephen Arnold, *interim dean*
400 Ahlberg Hall • 316-WSU-3600
College of Health Professions Webpage **(**http://wichita.edu/chp/**)**[1]
Voncella McCleary-Jones, *associate dean*
Molly Brown, *assistant dean*

The College of Health Professions was established in 1970. Programs of study are offered in advanced education in general dentistry, communication sciences and disorders, dental hygiene, public health sciences, medical laboratory sciences, nursing, physical therapy and physician assistant. The primary emphasis of the college's health professions programs is the preparation of entry-level health professionals. Additionally, the college provides such services as continuing education and graduate education for health professionals.

The curricula of the health professions programs build upon a foundation of courses from the liberal arts and sciences, education, health sciences and business. In addition to the on-campus academic experience, health professions students learn in clinical and community settings as they care for patients and interact with clients of the health care system. All clinical programs are dependent upon the outstanding health care facilities and community partnerships within Wichita and surrounding areas.

Programs in the college are accredited through the following agencies:

- The Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association;
- The Commission on Dental Accreditation of the American Dental Association;
- The Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association;
- Commission on Collegiate Nursing Education, Kansas State Board of Nursing;
- The National Accrediting Agency for Clinical Laboratory Sciences; and
- Accreditation Review Commission on Education for the Physician Assistant.

Licensing

Many state and national licensing and governing organizations will not grant a license, certification, registration or other similar document to practice one's chosen profession if the applicant has been convicted of a felony, and in some cases a misdemeanor. Prospective applicants are encouraged to consult with their chosen professional governing or licensing organization for more detailed information before applying.

Clinical Learning

As noted above, learning in clinical settings is an important aspect of programs of study in the College of Health Professions. Many health care facilities require information on students engaged in clinical learning opportunities, including, but not limited to: verification of name, address and social security number; personal health information; drug and alcohol testing; criminal background checks; verification of education; listing on any registered sex offender lists; listing on the U.S. Office of Inspector General's Excluded Individual's list; and listing on the U.S. General Services Administration's Excluded Parties List. While the College of Health Professions will assist students in obtaining and gathering the information required by a health care facility, the cost of obtaining such information must be assumed by the student. What information will be required to permit the student to participate in a clinical setting learning experience will depend upon the respective health care facility. If a student is unable to fulfill the clinical experiences required by the program of study, the student may be unable to matriculate and/or graduate.

Essential Functions/Technical Standards

Essential functions/technical standards define the attributes that are considered necessary for students to possess in order to complete their education and training, and subsequently enter clinical practice. These essential functions/technical standards are determined to be prerequisites for entrance to, continuation in, and graduation from a student's chosen discipline in the WSU College of Health Professions.

Students must possess aptitude, ability and skills in five areas:

1. Observation;
2. Communication;
3. Sensory and motor coordination and function;
4. Conceptualization, integration and quantification; and
5. Behavioral and social skills, ability and aptitude.

The essential functions/technical standards described by a student's chosen discipline are critically important to the student and must be autonomously performed by the student. It should be understood that these are essential function/technical standards for minimum competence in a student's discipline. Contact specific programs for detailed essential functions/technical standards. Reasonable accommodation of disability will be provided after the student notifies the department of the disability, and the disability has been documented by appropriate professionals.

[1] Link opens new window.

College of Health Professions Policies

Undergraduate Admission

A new degree-bound student is admitted to the College of Health Professions as a premajor in one of the degree programs offered, a health science major or as a health profession undecided major. However, admission to the college as a premajor does not guarantee acceptance into any of the undergraduate professional programs. To be admitted to a professional program, a student must be admitted to Wichita State University, apply for admission to a particular program, and be accepted by the admissions committee of that program. See individual program information for application requirements and procedures.

Required grade point average for admission to College of Health Professions' undergraduate professional programs: Minimum overall grade point averages are required for each undergraduate professional program. Please consult individual program information for application requirements.

New transfer students must present an earned grade point average required for admission to their program on a 4.000 scale for all prior college work to be admitted to their premajor. An earned grade point average of 3.000 is required for communication sciences and disorders, physical therapy and physician assistant premajors. An earned grade point average of 2.750 is required for premajors in dental hygiene and nursing. An earned grade point average of 2.500 is required for premedical laboratory sciences. An earned grade point average of 2.000 is required for health sciences, health management and health professions undecided majors.

Limitations on Student Credit Hour Load
Premajors in the College of Health Professions who are in good academic standing may enroll for a maximum of 19 credit hours during fall and spring semesters and a maximum of 12 credit hours during the summer session. Students wishing to enroll beyond these limits must request approval from an academic advisor in the College of Health Professions (CHP) Advising Center. Once students are admitted into their major degree programs they will be subject to limitations and requirements set by each program. See the individual majors section of this catalog and the Graduate Catalog for specific information.

Academic Advising
Academic advising is a sustained and comprehensive, developmental process which promotes progressive student responsibility, commitment to the pursuit of intellectual foundations, clarification of an appropriate major, disciplinary competence, academic success, and preparation for career advancement. Advising is coordinated through the CHP Advising Center in 402 Ahlberg Hall. Please call 316-978-3304 to schedule an appointment. Once students are admitted into their professional degree program, academic advising is provided by the program faculty.

Progression
Once the student is accepted into one of the professional programs, progression is determined by the program. Students should check the individual program section of the Undergraduate Catalog for additional program requirements.

Probation and Dismissal
The College of Health Professions adheres to current WSU Probation and Dismissal policies found in the Academic Probation and Dismissal (p. 33) section of the Undergraduate Catalog with some exceptions determined by each professional program and described in student handbooks available in each department.

In addition to meeting academic standards, students are expected to follow the Student Code of Conduct which can be found online in section 8.05 of the *WSU* Policies and Procedures Manual *(*http://wichita.edu/policiesprocedures/*)*[1], and to meet the professional standards governing any organization in which the student is participating as an intern, exchange student or other capacity.

Students who fail to meet these standards are required to work closely with an advisor to explore options and conditions for future readmission.

Exceptions
Students may petition the program, college or university for exception to any requirement and should reference the Exceptions section of this catalog and the student handbook of their professional program.

Graduation Requirements
All health professions students who are pursuing a bachelor's degree must meet university requirements for graduation and fulfill course requirements and graduation requirements specified in the curriculum of the department offering the degree. For specific requirements, consult the individual program sections of the catalog.

General Education Requirements
The College of Health Professions conforms to the policy set forth by the division of academic affairs at Wichita State University. Students should refer to the General Education Program (p. 57) requirements section of the Undergraduate Catalog.

Cooperative Education
The College of Health Professions is one of the participating colleges in the university's cooperative education program. This program is designed to provide off-campus paid employment experiences that integrate, complement and enhance the student's regular academic program while providing academic credit. Students are placed for field study experiences in a variety of health settings, including hospitals and community agencies. Individualized field studies are formulated in consultation with the student and the employer and are approved by the program faculty advisor and the cooperative education coordinator for the college. Participation in the program requires enrollment for credit in specific cooperative education courses designated by the various academic programs in the college. These undergraduate courses may have prerequisites or other specific requirements for enrollment. To enroll in the program or for more information, students should contact the cooperative education office or a College of Health Professions advisor.

Clinical and Nonclinical Affiliation
The college, because of its location in Wichita, has affiliation agreements with various excellent health facilities and community organizations which provide applied learning experiences for students. The affiliates include a wide variety of hospitals, long-term care facilities, public schools, private practitioners and community agencies.

Liability Insurance Requirements, Health Insurance and Health Standards
Most students are required to purchase professional and general liability insurance (the specific level is determined by the professional program) as well as personal health insurance at the beginning of the professional phase of a College of Health Professions program. Additionally, other health standards are required prior to entry into the clinical and community agencies. Students should communicate with individual programs about specific requirements.

Financial Assistance
Scholarships and student loan funds are available for students in health professions. Information on these and other scholarships and loans is available from the WSU Office of Financial Aid and the program from which the student is seeking a degree or certificate.

[1] Link opens new window.

Degrees and Certificates Offered
Undergraduate
Of the programs offered at the undergraduate level, six lead to bachelor's degrees:

- Communication sciences and disorders;
- Dental hygiene;
- Health sciences;
- Health management;
- Medical laboratory sciences; and
- Nursing.

Graduate
Five programs lead to the master's degree — aging studies, communication sciences and disorders, health administration, nursing and physician assistant. Four programs lead to the doctoral degree — audiology, communication sciences and disorders, nursing and physical therapy. Admission to all of these programs requires a bachelor's degree and the fulfillment of additional requirements.

More information on graduate programs is available in the WSU Graduate Catalog.

Certificates
The College of Health Professions offers the following certificates:

- Educational interpreter development certificate program: signing exact English;[1]
- Graduate certificate in aging studies;[2]
- Graduate certificate in health administration;[2]
- Graduate certificate in public health;[2]
- Undergraduate certificate in aging studies;
- Undergraduate certificate in health management;
- Undergraduate certificate in health science;
- Undergraduate certificate in public health science; and
- Postdoctoral certificate in advanced education in general dentistry.

[1] Contact CSD for current program status.

[2] Contact the PHS graduate program for the latest information.

Inter-College Double Major

An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Applied Studies, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 35).

School of Health Sciences

The School of Health Sciences offers programs leading to the Bachelor of Arts in communication sciences and disorders, the Bachelor of Science in health management, the Bachelor of Science in health science, and the Bachelor of Science in medical laboratory sciences. In conjunction with Fairmount College of Liberal Arts and Sciences, students may earn the Bachelor of Arts field major in aging studies, and the Bachelor of General Studies with an emphasis in aging studies.

The School of Health Sciences offers the Master of Arts in communication sciences and disorders, Master of Arts in aging studies, Master in Health Administration, Doctor of Physical Therapy, Master of Physician Assistant, Doctor of Audiology, and PhD in communication sciences and disorders degrees. For more information about the graduate degree programs, refer to the WSU Graduate Catalog.

Specific requirements for each undergraduate degree are described under the appropriate listing. In addition, contact should be made with the CHP Advising Center at 316-978-3304 to be advised of any changes in requirements.

Courses in the School of Health Sciences

- Aging Studies (AGE) (p. 300)
- Communication Sciences and Disorders (CSD) (p. 362)
- Health Administration (HA) (p. 401)
- Health Professions (HP) (p. 417)
- Health Sciences (HS) (p. 426)
- Medical Laboratory Sciences (MLS) (p. 455)
- Public Health Sciences (PHS) (p. 481)
- WSU First-Year Seminar: Health Sciences (WSUH) (p. 519)

Communication Sciences and Disorders

The Department of Communication Sciences and Disorders provides academic and clinical education for students at Wichita State University who wish to work with children and adults who have communication disorders. The undergraduate program offers broad, comprehensive and preprofessional preparation for specialized training, which is offered at the graduate level. Graduate work, culminating in a master's degree (speech-language pathology) or doctoral degree (audiology) is required to obtain professional certification in the public schools, hospitals or rehabilitation centers, or to engage in private practice.

Majors in Communication Sciences and Disorders

- BA in Communication Sciences and Disorders (p. 181)

Minors in Communication Sciences and Disorders

- Minor in Signed Languages (p. 182)

Courses in Communication Sciences and Disorders

- Communication Sciences and Disorders (CSD) (p. 362)

BA in Communication Sciences and Disorders

The preprofessional, undergraduate major places primary emphasis on the general area of communication sciences and disorders. The major involves a combined curriculum in speech-language pathology and audiology. Students should work closely with advisors to ensure proper course selection for certification and degree. A check sheet of requirements is available from the College of Health Professions and the department office, 401 Ahlberg Hall.

All students who intend to pursue a graduate degree in this field (MA or AuD) must have coursework in biological sciences (content area related to human or animal sciences), physical sciences (physics or chemistry), social/behavioral sciences (psychology, sociology, anthropology or public health), and statistics (stand-alone course required). These courses must have received a letter grade of *C* (2.000 points per credit hour) or higher to meet ASHA certification and Kansas licensure requirements. Consult an advisor for appropriate coursework.

Admission

Admission requirements include:

1. An overall GPA of 3.000; and
2. The completion of the following courses with a grade that generates at least 3.000 credit points per credit hour in each course:

Course	Title	Hours
CSD 111	Disorders of Human Communication	2
CSD 301	Anatomy and Physiology of the Speech and Hearing Mechanisms	3
CSD 304	Early Language Development	3
CSD 306 & 306L	Applied Phonetics and Applied Phonetics Lab	3

After a student has completed the four-course sequence above with a grade in each course of B (3.000 points/credit hour) or better, an internal departmental review will begin implementing the student's admission to the major. In addition to completing the sequence above, a student also must complete the following:

- Complete a criminal background check (at one's own expense) and all of the requirements on the College of Health Professions requirement checklist (https://wichita.edu/chp-requirement-checklist/)[1];
- Set up a student health portal (https://www.wichita.edu/services/studenthealth/)[1] to track all of the medical requirements; and
- Complete in-class annual HIPAA training.

Completion of these steps is required for enrollment in CSD 425. A student will not be permitted to enroll in this course prior to completing

these requirements. Students also should consult the beginning of the College of Health Professions section of the undergraduate catalog for additional requirements which may be needed to participate in clinical settings.

[1] Link opens new window.

Program Requirements

Course	Title	Hours
CSD 111	Disorders of Human Communication	2
CSD 251	Auditory Development and Disorders	2
CSD 270	American Sign Language I	3
CSD 301	Anatomy and Physiology of the Speech and Hearing Mechanisms	3
CSD 304	Early Language Development	3
CSD 306 & 306L	Applied Phonetics and Applied Phonetics Lab	3
CSD 351	Introduction to Auditory Assessment	2
CSD 425	Introduction to Clinical Processes	1
CSD 504	Aural Rehabilitation	3
or CSD 504H	Aural Rehabilitation Honors	
CSD 506	Acoustic and Perceptual Phonetics	3
or CSD 506H	Acoustic and Perceptual Phonetics Honors	
CSD 512	Communication in Special Populations: Children	4
or CSD 512H	Communication in Special Populations: Children Honors	
CSD 517	Communication in Special Populations: Aging	3
or CSD 517H	Communication in Special Populations: Aging Honors	
CSD 518	Deaf Culture	3
CSD 519	Genetic and Organic Syndromes	3
or CSD 519H	Genetic and Organic Syndromes Honors	
CSD 521	Genetic and Organic Syndromes Lab	1
HS 570	Neuroscience for Health Professionals: Peripheral Nervous System	1
HS 571	Neuroscience for Health Professionals: Ascending and Descending Pathways	1
HS 572	Neuroscience for Health Professionals: Brainstem and Cerebellum	1
HS 573	Neuroscience for Health Professionals: Forebrain	1
Total Credit Hours		43

Graduation

Students in the communication sciences and disorders program are required to maintain a cumulative grade point average of 2.500, with no individual course grade in the major having a grade that generates less than 2.000 points per credit hour.

To be eligible for graduation from Wichita State University, students must have credit for 120 acceptable credit hours toward their degree and a GPA in the major of 2.500. Students transferring from a two-year college must complete at least 60 credit hours of four-year college work and 45 credit hours of upper-division coursework in order to qualify for graduation.

Honors Program

Scholarship and research are encouraged at the undergraduate level. Students who meet the qualifications should explore adding the honors program to their undergraduate major. Students who are not CSD majors and are involved in the Cohen Honors College, should contact the CSD department for permission to enroll in these courses, as appropriate.

Honors Program Admission

Admission requirements include:

1. Status as a CSD major;
2. An overall GPA of 3.500 in CSD coursework;
3. A one-page, double-spaced letter describing reasons for applying to the honors track, goals and potential benefits to participating in the program; and
4. Agreement by a CSD faculty member to mentor the final project.

Honors Program Requirements

Students admitted to the CSD honors track must complete the following:

1. Maintain a 3.500 cumulative GPA in CSD coursework;
2. Enroll in and complete the honors assignments with a minimum of 12 credit hours of CSD coursework selected from the following options:

Course	Title	Hours
CSD 504H	Aural Rehabilitation Honors	3
CSD 506H	Acoustic and Perceptual Phonetics Honors	3
CSD 512H	Communication in Special Populations: Children Honors	4
CSD 519H	Genetic and Organic Syndromes Honors	3
CSD 517H	Communication in Special Populations: Aging Honors	3

3. Actively participate in facilitated meetings with other CSD honors students;
4. Be a participating member of the WSU Student Speech-Language-Hearing Association (WSUSSLHA) student organization;
5. Maintain a portfolio of assignments, activities and reflections throughout the honors track; and
6. Complete and present a mentored scholarly activity during the last year of the program by enrolling in 1 credit hour of CSD 490H Directed Study in Speech and Language Pathology or Audiology Honors.

Applied Learning

Students in the Bachelor of Arts in CSD program are required to complete an applied learning experience to graduate from the program. The applied learning experience requirement can be met by completing successfully CSD 425 Introduction to Clinical Processes.

Minor in Signed Languages

The CSD minor in signed languages consists of 15 credit hours. Courses include 9 credit hours of ASL courses and 6 credit hours of electives selected from the following:

Course	Title	Hours
Required Courses		
CSD 270	American Sign Language I	3
CSD 370	American Sign Language II	3
CSD 470	American Sign Language III	3
Electives		
Select 6 credit hours from the following		6
CSD 480	American Sign Language IV	
CSD 490D	Intro to Signed Language Interpreting	
CSD 518	Deaf Culture	
CSD 520	ASL: Nonverbal Communication	
Total Credit Hours		15

Medical Laboratory Sciences

The medical laboratory scientist's role in the health care team is to perform laboratory procedures accurately and precisely in order to aid in the prevention, diagnosis and treatment of diseases. Most medical laboratory scientists are employed in medical laboratories in settings such as hospitals, clinics, reference labs and physicians' offices. The medical laboratory scientist also has the skills necessary for employment in related areas such as laboratory and pharmaceutical sales; quality assurance in industries such as food, beverage, chemicals, milling and plastics; office laboratory consulting, forensic medicine, research, molecular diagnostics and veterinary medicine. The bachelor degree may also be used as a foundation for graduate study in health professions.

Majors in Medical Laboratory Sciences

- BS in Medical Laboratory Sciences (p. 183)

Courses in Medical Laboratory Sciences

- Medical Laboratory Sciences (MLS) (p. 455)

BS in Medical Laboratory Sciences

Admission to Professional Curriculum

The deadline for fall semester admission to the professional program is April 1. The deadline for spring semester admission to the professional program is November 1.

To qualify as a candidate for admission to the professional phase, the student must:

1. Be admitted to WSU;
2. Be in the process of completing, or have completed, the preprofessional requirements with grades of *C* (2.000) or better;
3. Submit an application to department;
4. Submit three letters of recommendation;
5. Have a minimum GPA of 2.500; and
6. Complete a professional goal statement.

Acceptance into the professional phase of the program is determined by the medical laboratory sciences admissions committee.

Prerequisite Science Courses

Course	Title	Hours
Select one of the following:		10
CHEM 211 & CHEM 212	General Chemistry I and General Chemistry II	
Or equivalent general chemistry (two semesters at the chemistry major level with lab)		
Select one of the following:		3
MLS 311	Biochemistry for Clinical Scientists	
CHEM 661	Principles of Biochemistry	
Or equivalent biochemistry		
BIOL 210	General Biology I (or equivalent general biology, one semester with lab)	4
Select one of the following:		4-6
HS 290	Foundational Human Anatomy and Physiology	
BIOL 223	Human Anatomy and Physiology	
BIOL 534 & BIOL 535	Human Physiology and Human Physiology Lab	
Or equivalent human or mammalian physiology		
Select one of the following:		4-5
BIOL 220	Introduction to Microbiology	
BIOL 330	General Microbiology	
Or equivalent general or introductory microbiology with lab		
Select one of the following:		3
MLS 405	Medical Immunology	
BIOL 590	Immunobiology	
Or equivalent immunology		
Total Credit Hours		28-31

The Bachelor of Science program in medical laboratory sciences requires a total of 28–31 credit hours of prerequisite science courses, in addition to WSU general education requirements, and 52 credit hours of professional courses. Professional courses include 17 weeks of professional practice in medical laboratories that are affiliated with WSU. The program is accredited by the National Accrediting Agency of Clinical Laboratory Sciences (NAACLS). Upon successful completion of the program, students are eligible to sit for the national certification examination through the American Society for Clinical Pathology (ASCP).

Professional Curriculum

Course	Title	Hours
MLS 400	Clinical Laboratory Management/Education	3
MLS 453	Clinical Chemistry	8
MLS 463	Clinical Hematology	8
MLS 473	Immunohematology	8
MLS 479	Applied Immunohematology [1]	3
MLS 482	Molecular Diagnostic Techniques	3
MLS 488	Core Laboratory Practicum [1]	8
MLS 495	Clinical Microbiology	8
MLS 498	Applied Clinical Microbiology [1]	3
Total Credit Hours		52

[1] Applied learning courses.

Applied Learning

Students in Bachelor of Science program in medical laboratory sciences are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successfully completing MLS 479, MLS 488 and MLS 498.

MLT to MLS Progression

Graduates of an NAACLS-accredited MLT-AD program with documentation of a passing score on a national certification exam and

who have met other admission requirements for the department of medical laboratory sciences program should contact the department office for information concerning degree completion. Other MLT graduates who do not meet the above criteria should contact the department chairperson by email at: mls@wichita.edu.

The MLT to MLS degree completion Bachelor of Science in medical laboratory sciences is available to certified medical laboratory technicians who seek to continue their education in laboratory medicine. The deadline for summer or fall semester admission to the professional program is April 1. The deadline for spring semester admission to the professional programs is November 1.

To qualify as a candidate for admission to the MLT professional phase, the applicant must:

1. Be admitted to WSU;
2. Be in the process of completing, or have completed, the preprofessional requirements with grades of *C* (2.000) or better;
3. Submit an application to department;
4. Submit three letters of recommendation;
5. Have a minimum GPA of 2.500; and
6. Complete a professional goal statement.
7. In addition, the MLT applicant must submit transcripts showing successful completion of an MLT program and verification of certification; and complete challenge exams designed to determine standing in MLS courses.

MLT to MLS Program Requirements

Upon acceptance to the MLS program, a program of study is prepared for the student. Students meet the requirements of the MLS curriculum either through a challenge exam or by completing lectures, student laboratories and practicum experiences in MLS courses.

Course	Title	Hours
HS 400	Introduction to Pathophysiology	4
MLS 400	Clinical Laboratory Management/Education	3
MLS 411	Special Topics [2]	1-6
MLS 458	Advanced Clinical Chemistry	4
MLS 468	Advanced Clinical Hematology	4
MLS 478	Advanced Immunohematology	4
MLS 482	Molecular Diagnostic Techniques	3
MLS 499	Advanced Clinical Microbiology	4
Total Credit Hours		27-32

[2] Applied learning course.

MLT to MLS Program Plan

MLT students (students who have earned an associate degree as medical laboratory technicians) may begin the professional program in the fall, spring or summer semester. Students may individualize the program only upon permission of the program director.

Summer Semester		Credit Hours
MLS 482	Molecular Diagnostic Techniques	3
MLS 400	Clinical Laboratory Management/Education	3
	Credit Hours	6
Fall Semester		
MLS 458	Advanced Clinical Chemistry	4
MLS 468	Advanced Clinical Hematology	4
HS 400	Introduction to Pathophysiology	4
	Credit Hours	12
Spring Semester		
MLS 478	Advanced Immunohematology	4
MLS 499	Advanced Clinical Microbiology	4
	Credit Hours	8
Clinical Semester		
Applied practice is completed in the last semester of study and is offered every semester. Number of required semester hours is dependent on extent of the MLT to MLS student's documented work experience.		
MLS 411	Special Topics [3]	1-6
	Credit Hours	1-6
	Total Credit Hours	27-32

[3] Applied learning course.

Applied Learning

Students in the Medical Laboratory Technician to Medical Laboratory Sciences program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successful completion of MLS 411. Specific credit hour requirement for each student is determined by documentation of completion of applied learning tasks.

Other Requirements of all Students

Students are required to provide their own transportation to the clinical sites. Students are required to purchase health and professional and general liability insurance, and to show compliance with current guidelines of health and immunity protection.

Public Health Sciences

The department of public health sciences offers the Bachelor of Science in health management; the Bachelor of Science in health science; coursework leading to the Bachelor of Arts field major in aging studies and the Bachelor of General Studies with an emphasis in aging studies; minors in public health, health management, health science and aging studies; the Master of Arts in aging studies; a graduate certificate in public health; and the administrator-in-training (AIT) for long-term care administration licensure.

For the most current information or further questions, please refer to the public health sciences department website (http://wichita.edu/phs/)[1].

[1] Link opens new window.

Majors in Public Health Sciences

- Dual/Accelerated BA in Aging Studies to Master of Aging Studies (p. 185)
- Dual/Accelerated BS in Health Management to Master of Health Administration (p. 185)
- BS in Health Management (p. 185)
- BS in Health Science (p. 188)
- Field Major/BGS in Aging Studies (p. 189)

Minors in Public Health Sciences

- Minor in Aging Studies (p. 189)
- Minor in Health Management (p. 190)
- Minor in Health Science (p. 190)
- Minor in Public Health (p. 190)

Certificates in Public Health Sciences

- Certificate in Aging Studies (p. 191)
- Certificate in Health Management (p. 191)
- Certificate in Health Science (p. 192)
- Certificate in Public Health Science (p. 192)

Courses in Public Health Sciences

- Aging Studies (AGE) (p. 300)
- Health Administration (HA) (p. 401)
- Public Health Sciences (PHS) (p. 481)

Dual/Accelerated BA in Aging Studies to Master of Aging Studies

Admission

To be considered for admission to the accelerated program in aging studies, a prospective student must submit a graduate school application and fee, and satisfy the following requirements:

1. An overall undergraduate GPA of 2.750;
2. Completion of at least 60 credit hours of undergraduate study;
3. A letter of recommendation from one faculty member; and
4. A personal goals essay of 500 words or less which clearly articulates the applicant's reason for seeking admission to the accelerated program.

Prospective students apply for admission to the program during the semester prior to the first semester in which he or she intends to enroll in a course for graduate credit.

A student in the dual/accelerated program will be admitted to the MA in aging studies upon being awarded the bachelor's degree if all admission requirements for the master's program are satisfied at that time and the student has made continued satisfactory progress.

The online dual/accelerated bachelor's to master's in aging studies is designed to prepare qualified students for graduate work in aging studies at WSU, while allowing them to earn dual credit towards their bachelor's degree. A student admitted to the accelerated program will be allowed to enroll in courses for graduate credit (up to 9 credit hours) while completing their undergraduate degree requirements. Allowed dual credit hours include AGE 717, AGE 798 and AGE 818.

Program Guidelines

- For each of the dual credit courses, the student must meet the learning outcomes specific to graduate students to apply the course to graduate credit, earning no less than a 3.000 in each course.
- Each course taken for joint credit must be so identified at the time of enrollment in that course and a dual enrollment form must be completed which indicates the courses taken for graduate credit. Allowed dual credit hours include: AGE 717, AGE 798 and AGE 818.
- Continuation in the accelerated program also requires a continuing WSU undergraduate cumulative GPA of at least 2.750.
- A student who has previously been admitted to a graduate degree program at Wichita State may not be admitted to the dual/accelerated program.
- For the purpose of requesting exceptions to the program and university regulations, students in a dual/accelerated degree program are considered undergraduates and thus proceed through the undergraduate process until the bachelor's degree is awarded.

Dual/Accelerated BS in Health Management to Master of Health Administration

The online accelerated bachelor's to master's program in health administration is designed to prepare qualified students for graduate work in health administration at WSU through a coordinated accelerated program leading to both a Bachelor of Science in health management and a Master of Health Administration.

Admission and Application

To be considered for admission to the accelerated program in health administration, a prospective student must submit a graduate school application and fee, and satisfy the following requirements:

1. An undergraduate GPA of 2.750 overall, and 3.250 in PHS courses;
2. Completion of at least 60 credit hours of undergraduate study;
3. Completion of at least four of the six PHS core classes (PHS 325, PHS 344, PHS 356, PHS 410, PHS 642 and/or HP 408);
4. A letter of recommendation from one member of the PHS faculty; and
5. A personal goals essay of 500 words or less which clearly articulates the applicant's reason for seeking admission to the accelerated program.

Prospective students apply for admission to the program during the semester prior to the first semester in which he or she intends to enroll in a course for graduate credit.

A student in the dual/accelerated program will be admitted to the Master of Health Administration upon being awarded the bachelor's degree if all admission requirements for the master's program are satisfied at that time and the student has made continued satisfactory progress.

Program Guidelines

- A student admitted to the accelerated program will be allowed to enroll in courses for graduate credit (up to 9 credit hours) while completing their undergraduate degree requirements for health management.
- For each of the dual credit courses, the student must meet the learning outcomes specific to graduate students to apply the course to graduate credit, earning no less than a 3.000 in each course.
- Each course taken for joint credit must be so identified at the time of enrollment in that course and a dual enrollment form must be completed which indicates the courses taken for graduate credit. Allowed joint degree hours include: PHS 621, PHS 622 and PHS 848. All 9 credit hours may be taken as electives under the Bachelor of Science in health management and are core to the Master of Health Administration.
- Continuation in the accelerated program also requires a continuing WSU undergraduate cumulative GPA of at least 2.750.
- A student who has previously been admitted to a graduate degree program at Wichita State may not be admitted to the dual/accelerated program.
- For the purpose of requesting exceptions to the program and university regulations, students in a dual/accelerated degree program are considered undergraduates and thus proceed through the undergraduate process until the bachelor's degree is awarded.

BS in Health Management

The Bachelor of Science degree in health management establishes a professional degree program that prepares graduates for employment in

health care, public health organizations and aging programs/services. Individuals interested in applying the social and business sciences to a career in the health care sector are well-suited for this program. Students complete a health management core curriculum that serves as the foundation and skill set basic to health services delivery, population health assessment and leadership. Additional elective courses in areas related to aging studies, clinical health care management or public health is required. A capstone seminar and health-related practicum (educational work experience) is required. Students are strongly encouraged to choose a minor to complement their career choice. Graduates go on to manage health clinics, senior living communities, quality improvement departments, infectious disease control programs or community health organizations. The BS in health management also prepares students for graduate education in health care administration, public health or aging studies.

Program Learning Objectives

1. Describe the evolution of public health and its roles and issues across local, national and global health systems.
2. Demonstrate ability to use data to promote, protect and assure improved population health outcomes and knowledge.
3. Explain the relationship between health leadership, management and policy.
4. Illustrate the importance of social, behavioral, cultural and environmental factors that impact community health.
5. Demonstrate professionalism and appraise public health ethics, stewardship, social justice and life-long learning.
6. Exhibit oral and written communication skills for diverse populations and environments.

Preprogram Preparatory Courses

Course	Title	Hours
AGE 100	Introduction to Aging Studies	3
HP 105	Introduction to Public Health	3
HP 203	Medical Terminology	2-3
or HP 303	Medical Terminology	
HP 310	Introduction to the U.S. Health Services System	3
Total Credit Hours		11-12

Program Requirements

Students choosing to study health management are admitted to the Bachelor of Science degree in health management. They are assigned a college advisor and a faculty advisor in the degree program. Students are advised to choose one of the three concentrations (aging studies, public health or health administration) early in their progress toward the degree to avoid taking extra or unnecessary classes. Students should select a concentration before enrolling in any concentration specific courses.

BS in health management concentrations:

- The **aging studies** concentration prepares students for a variety of entry level positions in senior centers, senior living communities and nonprofit or for-profit aging organizations and prepares students for graduate education in aging studies.
- The **public health** concentration prepares students for a variety of entry level positions in state and local health departments or health-related nonprofit and for-profit organizations and graduate education in public health.
- The **health administration** concentration prepares students for a variety of entry level management positions in nonprofit and for-profit clinical health care organizations and graduate education in health administration.

Students must satisfy the health management core course requirements and must be health management majors to take PHS 475, PHS 485 or PHS 495. Students enrolled in PHS 495 are required to purchase professional and general liability insurance coverage. The cost of this insurance is included in the university's comprehensive fee schedule and is part of the fee requirements for this major.

Students in the health management program are required to maintain a cumulative grade point average of 2.000, with no individual program course generating a grade less than 1.700 credit points per credit hour.

Course	Title	Hours
Health Management Core Courses		
HP 408	Leadership in Self and Society	3
PHS 325	Introduction to Epidemiology	3
PHS 344	The Role of Culture in Health and Health Care	3
PHS 356	Introduction to Health Administration and Policy	3
PHS 410	Health Communication	3
Total Credit Hours		15

Aging Studies Concentration

Course	Title	Hours
Aging Studies Required Courses		
AGE 404	Psychology of Aging	3
AGE 405	Sociology of Aging	3
AGE 408	Biology of Aging	3
AGE 422	Introduction to Public Health and Aging	3
AGE 515	Women and Aging	3
AGE 525	Dying, Death and Bereavement	3
Concentration Electives		12
Choose any 4 of the following		
Any AGE or PHS course 300, 400, 500 level not already used in the concentration.		
HP 326	Emerging Health Care Issues of the 21st Century	
PHIL 327	Bioethics	
Culminating Experience		
PHS 485	Health Management Capstone	3
PHS 494	Health Management Practicum Preparation [1]	0
PHS 495	Health Management Practicum	3
Total Credit Hours		36

Total Aging Studies Concentration Hours

Course	Title	Hours
Health Management Core		15
Aging Studies Concentration Required Courses		18
Aging Studies Concentration Required Electives		12
Culminating Experience		6
Total Credit Hours		51

Public Health Concentration

Course	Title	Hours
Public Health Required Courses		
PHS 327	Introduction to Global Health Issues	3
PHS 333	Organizational Behavior and Leadership in Health Organizations	3
PHS 413	Introduction to Social and Behavioral Aspects of Public Health	3
PHS 416	Introduction to Environmental Health	3
PHS 624	Community Development Methods	3
PHS 644	Program Planning and Evaluation	3
Concentration Electives		12
Choose any 4 of the following		
Any AGE or PHS course 300, 400, 500 level not already used in the concentration.		
HP 326	Emerging Health Care Issues of the 21st Century	
PHIL 327	Bioethics	
Culminating Experience		
PHS 485	Health Management Capstone	3
PHS 494	Health Management Practicum Preparation [1]	0
PHS 495	Health Management Practicum	3
Total Credit Hours		36

[1] PHS 494 must be successfully completed for enrollment in PHS 495.

Total Public Health Concentration Credit Hours

Course	Title	Hours
Health Management Core		15
Public Health Concentration Required Courses		18
Public Health Concentration Required Electives		12
Culminating Experience		6
Total Credit Hours		51

Health Administration Concentration

Course	Title	Hours
Health Administration Required Courses		
PHS 333	Organizational Behavior and Leadership in Health Organizations	3
PHS 428	Health Care Organization	3
PHS 448	Quality Improvement in Health and Health Care	3
PHS 478	Health Economics	3
PHS 621	Supervisory Management in Health Care Organizations	3
PHS 622	Human Resource Management in Health Care Organizations	3
PHS 642	Financing Health Care Services	3
Business Required Courses		
MGMT 360	Principles of Management	3
MGMT 460	Designing Effective Organizations	3
MGMT 462	Leading and Motivating	3
MGMT 463	Building Effective Work Teams	3
Culminating Experience		
PHS 475	Leadership Capstone	3
Total Credit Hours		36

Total Health Administration Concentration Credit Hours

Course	Title	Hours
Health Management Core		15
Health Administration Concentration Required Courses		21
Business Required Courses		12
Culminating Experience		3
Total Credit Hours		51

Graduation

Students entering the health management program will be required to complete a professional points component. Points may be earned in the following areas: research and service learning, volunteer participation, professional development and interprofessional education.

To be eligible for graduation from Wichita State University, students must have 120 acceptable credit hours toward their degree and a GPA in the major of 2.000. Students transferring from a two-year college must complete at least 60 credit hours of four-year college work and 45 credit hours of upper-division coursework to qualify for graduation. Departmental policy requires a program cumulative grade point average of 2.000 with no individual program course generating a grade less than 1.700 credit points per credit hour.

For the latest program information and a program handbook, contact the undergraduate coordinator by email: phs@wichita.edu, by phone at 316-978-3060, or visit the department of public health sciences website (http://wichita.edu/phs/).[2]

[2] Link opens new window.

Departmental Honors Program

Scholarship and research are encouraged at the undergraduate level. Students who meet the qualifications should explore adding the honors program to their undergraduate major. Students who are not PHS majors and are involved in the Cohen Honors College, should contact the PHS department for permission to enroll in these courses, as appropriate.

Admission requirements include:

1. Status as a PHS major;
2. An overall GPA of 3.500 in all major coursework;
3. A one-page, double-spaced letter describing reasons for applying to the honors track, goals and potential benefits to participating in the program; and
4. Agreement by a PHS faculty member to mentor the final project.

Honors Program Requirements

Students admitted to the PHS honors track must complete the following:

1. Maintain a 3.500 cumulative GPA in all major coursework;
2. Be a participating member of the Health, Education, Advocates for Leadership, Teamwork, and Humanity (HEALTH) student organization;
3. Maintain a portfolio of assignments, activities and reflections throughout the honors track;

4. Complete and present a mentored scholarly activity during the last year of the program by enrolling in a 1-3 credit hour of PHS 501H Field Research in Public Health Science; and
5. Enroll in and complete the honors assignments with a minimum of 12 credit hours of PHS coursework selected from the following options:

Course	Title	Hours
HP 408H	Leadership in Self and Society Honors	3
PHS 325H	Introduction to Epidemiology Honors	3
PHS 344H	The Role of Culture in Health and Health Care Honors	3
PHS 356H	Introduction to Health Administration and Policy Honors	3
PHS 410H	Health Communication Honors	3

Applied Learning

Students in the BS in health management program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the following program course requirements: PHS 475 Leadership Capstone or, PHS 485 Health Management Capstone and PHS 495 Health Management Practicum.

BS in Health Science

Admission to the College of Health Professions

Students choosing to study health science are admitted to the BS in health science degree program. They are assigned a college advisor who assists them in meeting the requirements for the degree.

The Bachelor of Science degree in health science is a 47- to 48-credit-hour professional degree program that prepares graduates for admission to a clinical education program. Students complete a curriculum that provides a foundation in health services delivery, population health assessment and leadership. Additional program content includes an introduction to public health, health services management, aging studies and ethics. This program requires a mix of science and mathematics courses that support admission requirements for a variety of clinical education programs. Students are required to complete an applied learning professional portfolio prior to graduation. The degree is designed for students interested in pursuing undergraduate or graduate clinical education. Baccalaureate trained graduates often seek further education in clinical programs (i.e. physician assistant, physical therapy, nursing, medical laboratory sciences, dental hygiene).

Program Learning Objectives

1. Communicate public health information, in both oral and written forms and through a variety of media, to diverse audiences.
2. Locate, use, evaluate and synthesize public health information.
3. Exhibit understanding of the evolution of public health and the health care system and their roles and issues across local, national and global health systems.
4. Demonstrate ability to use data to promote, protect and assure improved health outcomes and knowledge.
5. Demonstrate an understanding of health leadership, management and policy using systems thinking.
6. Demonstrate an understanding of social, behavioral, cultural and environmental factors that impact health.
7. Demonstrate understanding of professionalism and health ethics.
8. Demonstrate introductory knowledge of clinical sciences.

Program Requirements

Students in the health science program are required to maintain a cumulative grade point average of 2.000 with no individual program course generating a grade less than 1.700 credit points per credit hour.

Program Curriculum

Course	Title	Hours
Health Science Core Courses		
HP 408	Leadership in Self and Society	3
PHS 325	Introduction to Epidemiology	3
PHS 344	The Role of Culture in Health and Health Care	3
PHS 356	Introduction to Health Administration and Policy	3
PHS 410	Health Communication	3
Health Science Introduction Courses		
AGE 100	Introduction to Aging Studies	3
HP 105	Introduction to Public Health	3
HP 201	Exploring the Health Professions	3
HP 203	Medical Terminology	2-3
or HP 303	Medical Terminology	
HP 310	Introduction to the U.S. Health Services System	3
PHIL 327	Bioethics	3
Program Mathematics and Natural Sciences Electives		
Select a minimum of 15 credit hours from the following (general education courses from this area may also be used to meet general education program requirements). Courses must be passed with a C- or higher.		15
Any BIOL, CHEM, HS and MATH course 200 level or above		
ECON 231	Introductory Business Statistics	
HP 330	Cancer: Perspectives and Controversies	
HPS 490	Physiology of Exercise	
HPS 762	Statistical Concepts in Human Performance Studies	
MLS 311	Biochemistry for Clinical Scientists	
PHYS 111	Introductory Physics	
PHYS 131	Physics for Health Sciences	
PHYS 213	General College Physics I	
PHYS 214	General College Physics II	
PSY 301	Psychological Statistics	
STAT 370	Elementary Statistics	
Required Before Graduation		
Professional Portfolio		
Total Credit Hours		47-48

Total Credit Hours Required for Health Science Major

Course	Title	Hours
Health Science Core Courses		15
Health Science Introduction Courses		17-18
Math and Natural Science Electives		15
Professional Portfolio		
Total Credit Hours		47-48

Requirements for Graduation

Students entering the health science program will be required to complete a professional portfolio component. Activities include:

- Research and service learning;
- Volunteer participation;
- Professional development; and
- Interprofessional education.

To be eligible for graduation from Wichita State University, students must have 120 acceptable credit hours toward their degree and a GPA in the major of 2.000. Students transferring from a two-year college must complete at least 60 hours of four-year college work and 45 hours of upper-division coursework to qualify for graduation. Departmental policy requires a program cumulative grade point average of 2.000, with no individual program course generating a grade less than 1.700 credit points per credit hour.

Departmental Honors Program

Scholarship and research are encouraged at the undergraduate level. Students who meet the qualifications should explore adding the honors program to their undergraduate major. Students who are not PHS majors and are involved in the Cohen Honors College, should contact the PHS department for permission to enroll in these courses, as appropriate.

Admission requirements include:

1. Status as a PHS major;
2. An overall GPA of 3.500 in all major coursework;
3. A one-page, double-spaced letter describing reasons for applying to the honors track, goals and potential benefits to participating in the program; and
4. Agreement by a PHS faculty member to mentor the final project.

Honors Program Requirements

Students admitted to the PHS honors track must complete the following:

1. Maintain a 3.500 cumulative GPA in all major coursework;
2. Be a participating member of the Health, Education, Advocates for Leadership, Teamwork, and Humanity (HEALTH) student organization;
3. Maintain a portfolio of assignments, activities and reflections throughout the honors track;
4. Complete and present a mentored scholarly activity during the last year of the program by enrolling in a 1-3 credit hour of PHS 501H Field Research in Public Health Science; and
5. Enroll in and complete the honors assignments with a minimum of 12 credit hours of PHS coursework selected from the following options:

Course	Title	Hours
HP 408H	Leadership in Self and Society Honors	3
PHS 325H	Introduction to Epidemiology Honors	3
PHS 344H	The Role of Culture in Health and Health Care Honors	3
PHS 356H	Introduction to Health Administration and Policy Honors	3
PHS 410H	Health Communication Honors	3

Applied Learning

Students in the Bachelor of Science in health science program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by successfully completing the applied learning professional portfolio.

For more information and up to date program information and a program handbook, contact the undergraduate coordinator by email: phs@wichita.edu, by phone at 316-978-3060, or visit the department of public health sciences website (http://wichita.edu/phs/)[1].

[1] Link opens new window.

Field Major/BGS in Aging Studies

The instructional mission of the degree programs in aging studies at Wichita State is to provide knowledge of aging and its impact on individuals, families and society to students preparing for or engaged in careers in which they will plan, manage and deliver services for the aging through public- or private-sector organizations, agencies or institutions.

Fairmount College of Liberal Arts and Sciences, in collaboration with the College of Health Professions, offers two 100 percent online undergraduate degree programs in aging studies. The Bachelor of General Studies with an emphasis in aging studies, and the Bachelor of Arts field major in aging studies allow students to build a program of study where the primary area is aging studies. The College of Health Professions offers a minor in aging studies, the Master of Arts in aging studies, and the administrator-in-training (AIT) for long-term care administration licensure.

The College of Liberal Arts and Sciences will continue to offer undergraduate degrees with a concentration in aging studies through the field major and Bachelor of General Studies (p. 213) options. Contact the LAS Advising Center for degree requirements.

Minor in Aging Studies

The undergraduate minor in aging studies consists of at least 15 credit hours of aging studies courses. Students are required to complete AGE 100, as the foundational course for the minor.

Courses for the Minor:

Course	Title	Hours
AGE 100	Introduction to Aging Studies [1]	3
Select at least 12 credit hours from among the following courses:		12
AGE 404	Psychology of Aging	
AGE 405	Sociology of Aging	
AGE 408	Biology of Aging	
AGE 422	Introduction to Public Health and Aging	
AGE 501	Field Experience	
AGE 512	Diversity and Aging	
AGE 515	Women and Aging	
AGE 516	Age, Work and Retirement	
AGE 525	Dying, Death and Bereavement	
AGE 527	Introduction to Sexuality and Aging	
AGE 529	Caregiving and Aging	

AGE 550	Selected Topics in Aging Studies	
AGE 660	Administrator-in-Training Long-Term Care Practicum	
AGE 710	Systems in Long-Term Care	
AGE 717	Health Communications and Aging	
AGE 780	Physical Dimensions of Aging	
Total Credit Hours		15

[1] Required

Please note: If planning to enter the aging studies master's program, courses taken for undergraduate credit cannot be applied to or retaken for graduate credit. Please speak with an adviser and AGE faculty/staff when choosing classes.

Minor in Health Management

A minor in health management requires students to complete a total of 12 credit hours. Students in the minor should maintain a cumulative WSU GPA of 2.000. No individual course will be accepted for credit in the minor with a grade that generates less than 1.700 credit points.

Course	Title	Hours
Select a total of 12 credit hours from the following		12
HP 310	Introduction to the U.S. Health Services System	
HP 408	Leadership in Self and Society	
PHS 333	Organizational Behavior and Leadership in Health Organizations	
PHS 344	The Role of Culture in Health and Health Care	
PHS 356	Introduction to Health Administration and Policy	
PHS 410	Health Communication	
PHS 428	Health Care Organization	
PHS 448	Quality Improvement in Health and Health Care	
PHS 478	Health Economics	
PHS 621	Supervisory Management in Health Care Organizations	
PHS 622	Human Resource Management in Health Care Organizations	
PHS 642	Financing Health Care Services	
Total Credit Hours		12

Minor in Health Science

A minor in health science is available to any student outside the program major. The minor consists of:

Course	Title	Hours
HP 310	Introduction to the U.S. Health Services System	3
PHS 325	Introduction to Epidemiology	3
PHS 344	The Role of Culture in Health and Health Care	3
PHS 356	Introduction to Health Administration and Policy	3
Select 6-7 credit hours of math and natural sciences coursework from the following		6-7
BIOL 106	The Human Organism	
BIOL 107	The Human Organism Laboratory	
BIOL 210	General Biology I	
BIOL 211	General Biology II	
BIOL 220	Introduction to Microbiology	
BIOL 223	Human Anatomy and Physiology	
BIOL 330	General Microbiology	
BIOL 419	Genetics	
BIOL 534	Human Physiology	
BIOL 535	Human Physiology Lab	
CHEM 103	Introductory General, Organic and Biochemistry	
CHEM 211	General Chemistry I	
CHEM 212	General Chemistry II	
CHEM 531	Organic Chemistry I	
CHEM 661	Principles of Biochemistry	
ECON 231	Introductory Business Statistics	
HP 105	Introduction to Public Health	
HP 203	Medical Terminology	
or HP 303	Medical Terminology	
HP 330	Cancer: Perspectives and Controversies	
HPS 490	Physiology of Exercise	
HPS 762	Statistical Concepts in Human Performance Studies	
HS 290	Foundational Human Anatomy and Physiology	
HS 301	Clinical Pharmacology	
HS 331	Principles of Dietetics & Nutrition	
HS 400	Introduction to Pathophysiology	
HS 600	Advanced Clinical Anatomy	
MATH 123	College Trigonometry	
MATH 112	Precalculus Mathematics	
MATH 242	Calculus I	
MLS 311	Biochemistry for Clinical Scientists	
PHYS 111	Introductory Physics	
PHYS 131	Physics for Health Sciences	
PHYS 213	General College Physics I	
PHYS 214	General College Physics II	
PSY 301	Psychological Statistics	
STAT 370	Elementary Statistics	
Total Credit Hours		18-19

Minor in Public Health

A minor in public health requires students to complete a total of 12 credit hours. Students in the minor should maintain a cumulative WSU GPA of 2.000. No individual course will be accepted for credit in the minor with a grade that generates less than 1.700 credit points.

Course	Title	Hours
Select a total of 12 credit hours from the following		12
HP 105	Introduction to Public Health	
PHS 325	Introduction to Epidemiology	
PHS 333	Organizational Behavior and Leadership in Health Organizations	

PHS 344	The Role of Culture in Health and Health Care	
PHS 327	Introduction to Global Health Issues	
PHS 410	Health Communication	
PHS 413	Introduction to Social and Behavioral Aspects of Public Health	
PHS 416	Introduction to Environmental Health	
PHS 624	Community Development Methods	
PHS 644	Program Planning and Evaluation	
Total Credit Hours		12

Certificate in Aging Studies

About the Program

An undergraduate certificate in aging studies (UGC-AGE) allows students and working professionals to expand their knowledge in the fundamental concepts of aging, to better serve an aging population they frequently encounter. The UGC-AGE introduces students to the field of aging and prepares them in specific areas of psychology. Students have an opportunity to focus on content specific to their area of interest as they choose from the rotation of aging studies electives for their final credit hours.

The UGC-AGE can be completed 100 percent online. Students who complete this certificate and then wish to complete the Bachelor of Science in health management concentration in aging studies will have already earned credit hours that can be applied toward the degree.

The curriculum can be completed within one academic year with entry to the program allowed in fall, spring or summer semesters, and may be pursued concurrently with undergraduate degrees such as exercise science, psychology, sociology, social work and clinical disciplines in the College of Health Professions. The certificate may also be completed by a nondegree seeking undergraduate who is a working professional in a field that would benefit from further study of the aging population. Additionally, the UGC-AGE provides quality distance education, enabling students to earn their certificate from anywhere in the state or country.

Admission

To be admitted into the undergraduate certificate in aging studies program, the applicant must:

- Be admitted to Wichita State University in a degree program or in nondegree seeking status. All undergraduate policies relative to admissions apply. International students will not be issued an I-20 for certificate programs alone. International students may obtain this certificate only while concurrently pursuing an undergraduate degree.
- Have a minimum overall GPA of 2.750 (on a 4.000 scale).

Program Requirements

It is possible for a student to complete the requirements for the certificate in one year. Entry to the program is offered fall, spring and summer semesters. The certificate requires 12 credit hours from the following courses:

Course	Title	Hours
Required Courses (6 credit hours)		
AGE 100	Introduction to Aging Studies	3
AGE 404	Psychology of Aging	3
Electives		
Select a total of 6 credit hours from the following		6
AGE 405	Sociology of Aging	
AGE 408	Biology of Aging	
AGE 422	Introduction to Public Health and Aging	
AGE 512	Diversity and Aging	
AGE 515	Women and Aging	
AGE 516	Age, Work and Retirement	
AGE 525	Dying, Death and Bereavement	
AGE 527	Introduction to Sexuality and Aging	
AGE 529	Caregiving and Aging	
AGE 660	Administrator-in-Training Long-Term Care Practicum	
Total Credit Hours		12

Assessment Measure: Students must complete a reflection describing how the certificate prepared them for work within the aging professions and expanded their knowledge of aging studies.

Certificate in Health Management

Admission

In order to be admitted into the certificate program, the applicant must:

- Be admitted to Wichita State University in a degree program or in nondegree category A status. All policies relative to admissions apply. International students will not be issued an I-20 for certificate programs alone. International students may obtain this certificate only while concurrently pursuing an undergraduate degree.
- Have a minimum overall GPA of 2.000 (on a 4.000 scale).

Program Requirements

An undergraduate certificate in health management (UGC-HM) allows undergraduate students and working professionals to expand their knowledge in the fundamental concepts of administration in the health care system. The UGC-HM prepares students in navigating the health care system and provides an introduction to health management.

The UGC-HM comprises 12 total credit hours. Students who complete this certificate will have earned 12 of the required 51 program credit hours toward a Bachelor of Science in health management. This is equivalent to one full-time semester of coursework. The certificate may also be pursued concurrently with degree programs such as business management, general business, premedicine, social work and clinical disciplines in the College of Health Professions.

Assessment Measure: Students must complete a reflection describing how the certificate prepared them in navigating the health care system and expanded their knowledge of health management.

The certificate requires 12 credit hours of the following courses:

Course	Title	Hours
Required Courses		
PHS 356	Introduction to Health Administration and Policy	3
PHS 428	Health Care Organization	3
Electives		
Select a total of 6 credit hours from the following		6
HP 310	Introduction to the U.S. Health Services System	

HP 408	Leadership in Self and Society
PHS 333	Organizational Behavior and Leadership in Health Organizations
PHS 344	The Role of Culture in Health and Health Care
PHS 410	Health Communication
PHS 448	Quality Improvement in Health and Health Care
PHS 478	Health Economics
PHS 621	Supervisory Management in Health Care Organizations
PHS 622	Human Resource Management in Health Care Organizations
PHS 642	Financing Health Care Services
Total Credit Hours	12

Certificate in Health Science

Admission

In order to be admitted into the certificate program, the applicant must:

- Be admitted to Wichita State University in a degree program or in nondegree seeking status. All policies relative to admissions apply. International students will not be issued an I-20 for certificate programs alone. International students may obtain this certificate only while concurrently pursuing a graduate degree.
- Have a minimum overall GPA of 2.000 (on a 4.000 scale).

Program Requirements

An undergraduate certificate in health science (UGC-HS) allows undergraduate students and working professionals to expand their knowledge in the fundamental concepts of clinical health science and the health care system. The UGC-HS prepares students in navigating the health care system and provides an introduction to the health sciences.

The UGC-HS comprises 12 total credit hours. Students who complete this certificate will have earned 12 of the required 47 to 48 program credit hours toward a Bachelor of Science in health science. This is equivalent to one full-time semester of coursework. The certificate may be completed entirely online through a specific selection of courses. The certificate may also be pursued concurrently with degree programs such as biology, chemistry, physics, exercise science, premed, social work and clinical disciplines in the College of Health Professions and WSU Tech.

Course	Title	Hours
Required Courses		
AGE 100	Introduction to Aging Studies	3
HP 105	Introduction to Public Health	3
HP 310	Introduction to the U.S. Health Services System	3
Electives		
Select a total of three 3 credit hours from the following		3
PHIL 327	Bioethics	
BIOL 106	The Human Organism	
BIOL 220	Introduction to Microbiology	
BIOL 223	Human Anatomy and Physiology	
BIOL 330	General Microbiology	
BIOL 419	Genetics	
BIOL 534	Human Physiology	
CHEM 103	Introductory General, Organic and Biochemistry	
CHEM 211	General Chemistry I	
CHEM 212	General Chemistry II	
CHEM 531	Organic Chemistry I	
HP 330	Cancer: Perspectives and Controversies	
HPS 490	Physiology of Exercise	
HP 570BA	Care of Populations Badge: Public Health Science	
HP 570BB	Care of Populations Badge: Care Leadership & Systems Thinking	
HP 570BC	Care of Populations Badge: Financial Planning & Management	
HP 570BD	Care of Populations Badge: Community Dimensions of Practice	
HP 570BE	Care of Populations Badge: Cultural Competency	
HP 570BF	Care of Populations Badge: Policy Development & Program Planning	
HPS 490	Physiology of Exercise	
HPS 762	Statistical Concepts in Human Performance Studies	
HS 290	Foundational Human Anatomy and Physiology	
HS 301	Clinical Pharmacology	
HS 331	Principles of Dietetics & Nutrition	
HS 600	Advanced Clinical Anatomy	
MLS 311	Biochemistry for Clinical Scientists	
PHYS 111	Introductory Physics	
PHYS 131	Physics for Health Sciences	
PHYS 213	General College Physics I	
PHYS 214	General College Physics II	
Total Credit Hours		12

Assessment Measure: Students must complete a reflection describing how the certificate prepared them in navigating the health care system and expanded their knowledge of health sciences.

Certificate in Public Health Science

Admission

In order to be admitted into the certificate program, the applicant must:

- Be admitted to Wichita State University in a degree program or in nondegree seeking A status. All policies relative to admissions apply. International students will not be issued an I-20 for certificate programs alone. International students may obtain this certificate only while concurrently pursuing a graduate degree.
- Have a minimum overall GPA of 2.000 (on a 4.000 scale).

Program Requirements

An undergraduate certificate in public health science (UGC-PHS) allows undergraduate students and working professionals to expand their knowledge in the fundamental concepts of public health. The UGC-PHS introduces the field and practice of public health.

The UGC-PHS comprises 12 total credit hours. Students who complete this certificate will have earned 12 of the required 51 program credit

hours towards a Bachelor of Science in health management. This is equivalent to one full-time semester of coursework. It may be completed entirely online by selecting online-only course options. The certificate may also be pursued concurrently with degree programs such as anthropology, biology, business management, general business, premed, social work and clinical disciplines in the College of Health Professions.

Course	Title	Hours
Required Course		
HP 105	Introduction to Public Health	3
Electives		
Select a total of 9 credit hours from the following		9
PHS 325	Introduction to Epidemiology	
PHS 333	Organizational Behavior and Leadership in Health Organizations	
PHS 344	The Role of Culture in Health and Health Care	
PHS 327	Introduction to Global Health Issues	
PHS 410	Health Communication	
PHS 416	Introduction to Environmental Health	
HP 570BA	Care of Populations Badge: Public Health Science	
HP 570BB	Care of Populations Badge: Care Leadership & Systems Thinking	
HP 570BC	Care of Populations Badge: Financial Planning & Management	
HP 570BD	Care of Populations Badge: Community Dimensions of Practice	
HP 570BE	Care of Populations Badge: Cultural Competency	
HP 570BF	Care of Populations Badge: Policy Development & Program Planning	
PHS 624	Community Development Methods	
PHS 644	Program Planning and Evaluation	
Total Credit Hours		12

Assessment Measure: Students must complete a reflection describing how the certificate expanded their knowledge of the field and practice of public health.

School of Nursing

The School of Nursing offers:

- The Bachelor of Science in Nursing (BSN);
- The Master of Science in Nursing (MSN); and
- The Doctor of Nursing Practice (DNP).

For more information about the graduate degrees, refer to the WSU Graduate Catalog.

Majors in Nursing

- Bachelor of Science in Nursing (BSN) (p. 193)
  - Bachelor of Science in Nursing - Accelerated Program (p. 193)
  - Bachelor of Science in Nursing - RN to BSN Online Degree Completion Program (p. 195)
  - Bachelor of Science in Nursing - Traditional Program (p. 196)

Courses in the School of Nursing

- Nursing (NURS) (p. 474)

BS in Nursing

The Bachelor of Science in Nursing program is designed to prepare students for the practice of professional nursing. The graduate is prepared for beginning positions in nursing in any health care delivery system, for further study at the master and doctoral levels, and for advancement to nursing positions of increasing responsibility and leadership.

Students are admitted to the School of Nursing at the junior year after completing 66 credit hours of coursework. Persons interested in the Bachelor of Science in Nursing may direct inquiries to:

Undergraduate Nursing Office, School of Nursing
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0041
Email: nursing.undergraduate@wichita.edu

BSN - Accelerated Program

The accelerated program prepares students to graduate with a Bachelor of Science in Nursing degree. Graduates of the program are prepared to take the RN licensure examination, and for entry-level nursing positions in all health care settings. The program provides a foundation for graduate study in nursing. The curriculum is the same as the traditional BSN in a compressed format. A new class of students will begin in May and finish in June of the following year. Instruction is intense with courses offered full time with few breaks between sessions. There may be weekend clinical time. Students will receive the same number of clinical hours as their counterparts in the traditional program.

The rigorous 13-month curriculum recognizes each person's past experiences and success and is geared toward students who are capable of undertaking this course of study. This program is recommended for students who have senior standing (90+ credits) or have a previous bachelor's degree or higher.

Tuition and fees for the accelerated program are approximately double of the cost of the traditional four-semester program.

Preprofessional Curriculum

A minimum total of 120 credit hours is required for the Bachelor of Science in Nursing and includes 54 credit hours of major (professional) courses. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Health Professions, students in the Bachelor of Science in Nursing must take the following prerequisite (preprofessional) courses. All preprofessional courses must be completed with a minimum grade of *C* (2.000). Prior to enrolling in the professional courses, students must have completed all preprofessional and general education courses.

Course	Title	Hours
Foundation Courses		
MATH 111	College Algebra	3
or MATH 112	Precalculus Mathematics	
ENGL 101	College English I	3
ENGL 102	College English II	3

COMM 111	Public Speaking	3
Humanities and Fine Arts		
Select one of the following:		3
PHIL 100	Meaning of Philosophy	
PHIL 125	Introductory Logic	
PHIL 144	Moral Issues	
PHIL 327	Bioethics	
Social and Behavioral Sciences		
PSY 111	General Psychology	3
PSY 325	Developmental Psychology	3
SOC 111	Introduction to Sociology	3
Natural Sciences and Mathematics		
BIOL 220	Introduction to Microbiology (applies as general education course for the BSN degree only)	4
CHEM 103	Introductory General, Organic and Biochemistry	5
or CHEM 211	General Chemistry I	
Other Prerequisites		
BIOL 223	Human Anatomy and Physiology	5
or HS 290	Foundational Human Anatomy and Physiology	
HS 301	Clinical Pharmacology	3
HS 331	Principles of Dietetics & Nutrition	3
HS 400	Introduction to Pathophysiology	4
Medical Terminology		1-3
Statistics with approval		3
PSY 301	Psychological Statistics	
or STAT 370	Elementary Statistics	
Total Credit Hours		52-54

Admission to Accelerated BSN Program

Students should request application materials from the School of Nursing, or obtain application materials online, prior to enrolling in their last semester of prerequisite courses. Applications for summer semester admission are required by February 1. To qualify as a candidate for admission to the School of Nursing, students must:

1. Be enrolled in, or admitted to, WSU;
2. Have completed, or have plans to complete, the prerequisite requirements prior to beginning the professional curriculum;
3. Have an overall grade point average of at least 3.000 in all courses completed and no grade lower than a 2.000 in any of the specified required courses;
4. Submit application materials including expected semester of enrollment; and
5. Complete the standardized TEAS test with a minimum percentage score, or achieve an ACT score # 27 points, or an SAT score # 1125.

GPA requirements to finalize admission and prior to starting BSN courses:

- Cumulative GPA for all science classes (chemistry, microbiology, anatomy, physiology, pathophysiology and pharmacology) must be # 3.000
- Cumulative GPA must remain # 3.000
- All prerequisites must be successfully completed with a grade of *C* (2.000) or higher.

Other Requirements

Uniforms are required for all applied learning. Students are required to provide their own transportation to and from health care agencies used for these experiences. Students are required to purchase professional and general liability insurance in the amount of $1 million per single claim/$3 million aggregate per year. The insurance must be renewed annually.

Students must successfully complete a background check prior to beginning any nursing course.

Students must provide evidence of personal health insurance and evidence of a completed physical examination prior to clinical laboratory experiences each academic year. Additional costs for instructional materials, testing and lab experiences may be required throughout the program. CPR certification is required. Information related to these requirements is available from the School of Nursing.

Accelerated Program Progression

First Year		
Summer Semester		**Credit Hours**
NURS 302	Professional Nursing Practice	3
NURS 309 & NURS 312	Fundamentals of Nursing Care and Fundamentals of Nursing Lab	4
NURS 325	Introduction to Evidence-Based Practice	2
NURS 344 & NURS 347	Health Assessment and Health Assessment Lab	4
NURS 349	Therapeutic Nutrition	1
NURS 362	Clinical Care Lab	1
NURS 375	Health Care Informatics	1
	Credit Hours	16
Fall Semester		
NURS 320	Nursing Care of Adults I	4
NURS 341 & NURS 343	Mental Health Nursing Care and Mental Health Practicum	3
NURS 361	Care of Adults I Practicum	2
NURS 366	Health Care of Older Adults	2
NURS 380 & NURS 381	Maternal/Newborn Nursing Care and Maternal/Newborn Practicum	3
NURS 401	Nursing Care of Adults II	4
NURS 431 & NURS 432	Pediatric Nursing and Pediatric Nursing Practicum	3
	Credit Hours	21
Spring Semester		
NURS 407	Foundations of Quality Improvement and Patient Safety	1
NURS 412	Care of Adults II Praticum	2
NURS 452	Nursing Care of Populations	2
NURS 462	Nursing Leadership Management	3
NURS 479 & NURS 471	Complex Care of Adults and Complex Care of Adults Practicum	5
NURS 497	Capstone	2
NURS 498	Senior Seminar	2
	Credit Hours	17
	Total Credit Hours	54

Applied Learning

Students in the accelerated nursing program are required to complete an applied learning or research experience to graduate from the program.

The requirement can be met by completing all required coursework culminating with the NURS 499 Clinical Capstone course.

BSN - RN to BSN Online Degree Completion Program

The RN to BSN program offers advanced placement to registered nurses seeking a Bachelor of Science in Nursing degree. The program is completely online, is accessible 24 hours a day, and can be completed in as little as one calendar year or up to six years of part-time study. Up to 30 credit hours of retroactive credit or credit by exam in nursing courses can be applied to the degree. This value added program builds on the skills of the registered nurse's previous nursing educational program. The BSN expands an RN's knowledge base to provide a means for continued advancement in the profession, and to meet the necessary requirements for pursuing a graduate degree in nursing. Students interested in more information should visit the RN to BSN webpage (http://wichita.edu/RNtoBSN/)[1] or contact the RN to BSN advisor at:

Email: RNtoBSN@wichita.edu
Phone: 316-978-7332
Toll free: 844-827-3828

[1] Link opens new window.

Admission

Registered Nurses must:

1. Apply to Wichita State University and submit official transcripts of college courses and records verifying completion of an accredited registered nurse program;
2. Submit verification of current license to practice as a registered nurse in their state of residence; and
3. Submit an application to the RN to BSN program.

Transcript evaluation will determine the exact general education required for the Bachelor of Science in Nursing degree. Students with an Associates Degree in Nursing (ADN) from an accredited university will meet WSU's General Education Program (p. 57) requirements.

Prerequisite Courses

A minimum total of 120 credit hours is required for the Bachelor of Science in Nursing and includes 65 credit hours of major (professional) courses and 38 credit hours of prerequisite courses. Students must meet the requirements of the WSU General Education Program (p. 57). All prerequisite courses must be completed with a minimum grade of *C* (2.000).

Course	Title	Hours
Foundation Courses		
ENGL 101	College English I	3
ENGL 102	College English II	3
COMM 111	Public Speaking	3
MATH 111	College Algebra	3
Social and Behavioral Sciences		
PSY 111	General Psychology	3
PSY 325	Developmental Psychology	3
SOC 111	Introduction to Sociology	3
Mathematics and Natural Sciences		
CHEM 103	Introductory General, Organic and Biochemistry	5
or CHEM 211	General Chemistry I	
BIOL 220	Introduction to Microbiology	4
BIOL 223	Human Anatomy and Physiology	5
or HS 290	Foundational Human Anatomy and Physiology	
STAT 370	Elementary Statistics	3
Total Credit Hours		38

Professional Curriculum

Professional curriculum 35 credit hours. (Nursing courses offered in eight-week blocks.)

Courses are sequenced and must be taken in order as listed below. Some courses may be taken concurrently; contact the School of Nursing for individualized plan of study.

Course	Title	Hours
NURS 346	Health Assessment for the Practicing RN	3
NURS 329	Evidence-Based Nursing for the Practicing RN (STAT 370 is a course prerequisite)	3
NURS 337	Foundations of Nursing Leadership for the Practicing RN	4
NURS 451	Care of Populations for the Practicing RN	3
NURS 490	Healthcare Leadership for the Practicing RN	3
NURS 496	Nursing Leadership Practicum for the Practicing RN	2
Intro to Pathophysiology		4
Clinical Pharmacology		3
Intro to Health Care Ethics (recommended, not required)		1
Upper-division elective		3
Select two courses from the following list [1]		6
HP 310	Introduction to the U.S. Health Services System	
HP 326	Emerging Health Care Issues of the 21st Century	
HP 408	Leadership in Self and Society	
HP 430	Impact of Disease Upon Global Events	
FA 321	Avant-Garde Art, Film, Rock Music and Subcultures	
BIOL 370	Introductory Environmental Science	
PSY 534	Psychology of Women	
SOC 316	Men and Masculinities	
SOC 319	Sociology of Sexualities	
SOC 326	Sociology of Race & Ethnicity	
SOC 346	Sociology of Globalization	
THEA 385	Theatre as a Mirror of Today's America	
IB 333	International Business	
ID 301	Leadership is Essential Seminar	
Upper-division nursing credits awarded retroactively on the basis of associates degree in nursing or credit by exam (up to 30 credit hours)		30
Total Credit Hours		65

[1] Students wishing to explore alternative courses not listed, must contact the RN to BSN academic advisor.

Graduation and Program Requirements

1. All prerequisite and professional courses must be completed with a *C* (2.000) or higher.
2. Graduation requirements:
   a. 60 credit hours must be from a four-year university (up to 30 of these awarded via retroactive credit or credit by exam);
   b. 30 credit hours must be taken from WSU;
   c. Last 24 of 30 credit hours *must* be at WSU;
   d. 45 upper-division credit hours (up to 30 of these awarded via retroactive credit or credit by exam); and
   e. 120 total credit hours required for Bachelor of Science in Nursing.
3. 2.500 cumulative GPA for admission to the School of Nursing.
4. Licensed RN (must be obtained within the first eight weeks of beginning the program).

Credit Awarded for Previous Nursing Experience

The Associate Degree (ADN) RN student is eligible to receive nursing credit for 30 credit hours of ADN coursework upon successful completion of the degree requirements. During the final semester of coursework, the student will pay an administrative fee of $50 for receiving the credit. To avoid the award of duplicate credit toward graduation, the associate degree nursing coursework will be parenthesized on the transcript at the time the up to 30 credit hours of upper-division nursing coursework are posted.

Applied Learning

Students in the RSN to BSN degree completion program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing all required coursework culminating with the NURS 496 Nursing Leadership Practicum for the Practicing RN course.

Dual/Accelerated Bachelor's to Master's Degree Program (RN to MSN Program)

The RN to MSN Dual/Accelerated Program offers the opportunity for outstanding registered nurse (RN) undergraduate students, who are admitted to and enrolled in the BSN program at WSU, to advance their careers in a significant way by pursuing the BSN and MSN degrees in a coordinated program that provides the student with the high level of academic advising necessary for program success. A cumulative grade point average (GPA) of 3.250 or higher is required at the time of admission to the BSN program and must be maintained throughout the BSN and MSN programs.

Note: Significant curriculum developments that affect the requirements for the RN to MSN program are anticipated. Contact the School of Nursing for the latest information or to speak with an academic advisor.

BSN Traditional

Preprofessional Curriculum

A minimum total of 120 credit hours is required for the Bachelor of Science in Nursing and includes 54 credit hours of major (professional) courses. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of the College of Health Professions, students in the Bachelor of Science in Nursing must take the following prerequisite (preprofessional) courses. All preprofessional courses must be completed with a minimum grade of *C* (2.000). Prior to enrolling in the professional courses, students must have completed preprofessional courses and all but 6 credit hours of the required general education courses.

Course	Title	Hours
Foundation Courses		
MATH 111	College Algebra	3
or MATH 112	Precalculus Mathematics	
ENGL 101	College English I	3
ENGL 102	College English II	3
COMM 111	Public Speaking	3
Humanities and Fine Arts		
Select one of the following:		3
PHIL 100	Meaning of Philosophy	
PHIL 125	Introductory Logic	
PHIL 144	Moral Issues	
PHIL 327	Bioethics	
Social and Behavioral Sciences		
PSY 111	General Psychology	3
PSY 325	Developmental Psychology	3
SOC 111	Introduction to Sociology	3
Natural Sciences and Mathematics		
BIOL 220	Introduction to Microbiology (applies as general education course for the BSN degree only)	4
CHEM 103	Introductory General, Organic and Biochemistry	5
or CHEM 211	General Chemistry I	
Other Prerequisites		
BIOL 223	Human Anatomy and Physiology	5
or HS 290	Foundational Human Anatomy and Physiology	
HS 301	Clinical Pharmacology	3
HS 331	Principles of Dietetics & Nutrition	3
HS 400	Introduction to Pathophysiology	4
Medical Terminology		1-3
Statistics with approval		3
STAT 370	Elementary Statistics	
or PSY 301	Psychological Statistics	
Total Credit Hours		52-54

Admission to School of Nursing

Students should request application materials from the School of Nursing, or obtain application materials online, prior to enrolling in their last semester of prerequisite courses. Applications for fall semester admission are required by February 1; for spring semester admission, by September 1. To qualify as a candidate for admission to the School of Nursing, students must:

1. Be enrolled in, or admitted to, WSU;
2. Have completed, or have plans to complete, the prerequisite requirements prior to beginning the professional curriculum;
3. Have an overall grade point average of at least 2.750 in all courses completed and no grade lower than a 2.000 in any of the specified required courses;

4. Submit application materials including expected semester of enrollment; and
5. Complete the standardized TEAS test with a minimum percentage score, or achieve an ACT score # 27 points, or an SAT score # 1125.

GPA requirements to finalize admission and prior to starting BSN courses:

- Cumulative GPA for all science classes (chemistry, microbiology, anatomy, physiology, pathophysiology and pharmacology) must be # 3.000
- Cumulative GPA must remain # 2.750
- All prerequisites must be successfully completed with a grade of *C* (2.000) or higher.

LPN to BSN Progression Plan

The LPN to BSN plan offers advanced placement to licensed practical nurses seeking a Bachelor of Science in Nursing degree. Up to 4 credit hours of credit via examination can be applied to the degree. LPNs seeking admission must meet undergraduate admission requirements, be a graduate of a state-approved LPN education program, pass a standardized test, have an active LPN license in Kansas, and have the equivalent of 1,000 hours of clinical practice as an LPN within the last year. Students seeking admission to this program should contact the School of Nursing.

MICT to BSN Progression Plan

The MICT to BSN progression plan offers advanced placement to paramedics seeking a Bachelor of Science in Nursing degree. Up to 7 hours of credit for previous coursework can be applied to the degree. Paramedics seeking admission must meet undergraduate admission requirements, be a graduate of a certified paramedic education program, be nationally certified as an EMT-P, and have the equivalent of 1,000 hours of documented EMT-P work experience within the last three years. Students seeking admission into this program should contact the School of Nursing.

Professional Curriculum

A minimum total of 120 credit hours is required for the Bachelor of Science in Nursing and includes 54 credit hours of major (professional) courses. The following courses in the School of Nursing are required for the Bachelor of Science in Nursing:

Semester 5		**Credit Hours**
NURS 302	Professional Nursing Practice	3
NURS 309 & NURS 312	Fundamentals of Nursing Care and Fundamentals of Nursing Lab	4
NURS 325	Introduction to Evidence-Based Practice	2
NURS 344 & NURS 347	Health Assessment and Health Assessment Lab	4
NURS 349	Therapeutic Nutrition	1
NURS 375	Health Care Informatics	1
	Credit Hours	15
Semester 6		
NURS 320	Nursing Care of Adults I	4
NURS 341 & NURS 343	Mental Health Nursing Care and Mental Health Practicum	3
NURS 361 & NURS 362	Care of Adults I Practicum and Clinical Care Lab	3
NURS 366	Health Care of Older Adults	2
NURS 380 & NURS 381	Maternal/Newborn Nursing Care and Maternal/Newborn Practicum	3
	Credit Hours	15
Semester 7		
NURS 401	Nursing Care of Adults II	4
NURS 407	Foundations of Quality Improvement and Patient Safety	1
NURS 412	Care of Adults II Praticum	2
NURS 431 & NURS 432	Pediatric Nursing and Pediatric Nursing Practicum	3
NURS 452	Nursing Care of Populations	2
	Credit Hours	12
Semester 8		
NURS 462	Nursing Leadership Management	3
NURS 479 & NURS 471	Complex Care of Adults and Complex Care of Adults Practicum	5
NURS 497	Capstone	2
NURS 498	Senior Seminar	2
	Credit Hours	12
	Total Credit Hours	54

Other Requirements

Uniforms are required for applied learning. Students are required to provide their own transportation to and from health care agencies used for these experiences. Students are required to purchase professional and general liability insurance in the amount of $1 million per single claim/$3 million aggregate per year. The insurance must be renewed annually.

Students must successfully complete a background check prior to beginning any nursing course.

Students must provide evidence of personal health insurance and evidence of a completed physical examination prior to clinical laboratory experiences each academic year. Additional costs for instructional materials, testing and lab experiences may be required throughout the program. CPR certification is required. Information related to these requirements is available from the School of Nursing.

Applied Learning

Students in the traditional BSN program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing all required coursework culminating with the NURS 499 Clinical Capstone course.

School of Oral Health

The School of Oral Health consists of the department of dental hygiene and the advanced education in general dentistry residency program. The School of Oral Health offers degree programs leading to a Bachelor of Science (BS) in dental hygiene, and a postdoctoral certificate in advanced education in general dentistry.

Dental Hygiene

Majors in Dental Hygiene

- BS in Dental Hygiene - Entry Level Program (p. 198)
- BS in Dental Hygiene - Degree Completion (p. 198)

Courses in Dental Hygiene

- Dental Hygiene (DH) (p. 367)

BS in Dental Hygiene - Degree Completion

The degree completion Bachelor of Science in dental hygiene is available to dental hygienists who seek to expand their professional role in such areas as community dental hygiene, teaching in a dental hygiene program, alternative practice settings, or in preparation for a graduate degree. The program is completely online, accessible 24 hours a day, and can be completed in as little as 12–15 months (full time) or up to six years (part time). In addition to the flexibility and convenience of the program, the comprehensive curriculum advances knowledge base and experiences to provide a gateway to advanced career opportunities and to meet the necessary requirements for pursuing a graduate degree in dental hygiene.

Students interested in more information should visit the degree completion webpage (http://wichita.edu/dhonline/)[1], or contact the BSDH degree completion advisor:

- Email: dhonline@wichita.edu
- Phone: 316-978-7332

[1] Link opens new window.

Admission to Degree Completion

1. Have an overall cumulative GPA of 2.500.
2. Submit an application to the university. WSU Online Gateway Application (http://wichita.edu/apply/)[1].
   a. Former Wichita State students need to fill out a reactivation form with the registrar's office.
   b. Applicants should check information about State Authorization before continuing with the application to confirm that WSU is authorized to offer courses and programs in their state.
3. Request that official transcripts of previous college courses, and records verifying completion of an accredited dental hygiene program, be sent to Wichita State University.
4. Connect with an advisor to evaluate transcripts, verify dental hygiene license, and determine an individualized plan of study by email (dhonline@wichita.edu).

Note: Please refer to the dental hygiene department website (http://wichita.edu/dhonline/)[1] with questions, and for the most current and complete information.

[1] Link opens new window.

Professional Curriculum

Twenty-eight (28) credit hours of retroactive credit in dental hygiene courses can be applied to the degree.

Course	Title	Hours
Core		
DH 360	Fundamentals of Advanced Professional Roles [1]	2
DH 420	Educational Methodology in Dental Hygiene	3
DH 430	Curriculum Design, Evaluation and Management in Dental Hygiene Education	3
DH 452	Population Health Management in Dental Hygiene	3
DH 456	Special Care Populations	3
DH 465	Research and Evidence-Based Practice in Dental Hygiene	3
DH 470	Issues in Dental Hygiene	3
HP 408	Leadership in Self and Society	3
or PHS 333	Organizational Behavior and Leadership in Health Organizations	
STAT 370	Elementary Statistics [1]	3
Electives		
Select 6 credit hours from the following:		6
AGE 404	Psychology of Aging	
DH 462	Special Projects in Dental Hygiene	
HP 310	Introduction to the U.S. Health Services System	
HP 326	Emerging Health Care Issues of the 21st Century	
HP 430	Impact of Disease Upon Global Events	
Total Credit Hours		32

[1] Sequencing: DH 360 must be taken the first semester of enrollment in the degree completion program. STAT 370 must be taken in the first or second semester of enrollment and prior to DH 465.

Graduation and Program Requirements

1. A 2.500 cumulative GPA for admission to the BSDH degree completion program.
2. A current, unencumbered dental hygiene license for admission and progression.
3. All professional courses must be completed with a *C* (2.000) or higher.
4. Graduation requirements:
   a. 60 credit hours must be from a four-year university;
   b. 30 credit hours must be taken from WSU;
   c. Last 24 of 30 credit hours must be at WSU;
   d. 45 upper-division credit hours (28 of these awarded via retroactive credit); and
   e. 120 total credit hours required for Bachelor of Science in dental hygiene.

Applied Learning

Students in the degree completion Bachelor of Science in dental hygiene program are required to complete an applied learning experience to graduate from the program. The requirement can be met by applying the knowledge gained in the didactic portion of DH 452 Population Health Management in Dental Hygiene to systematically assess, plan, develop, implement and evaluate an oral health promotion project for an underserved target population. Program implementation occurs outside of the classroom through professional collaboration with a community partner.

BS in Dental Hygiene - Entry Level Program

The baccalaureate entry level program in dental hygiene provides students with knowledge of the social, dental and clinical sciences and

competencies needed by the dental hygienist in contributing to the attainment of optimum oral health for individuals through the life span. The graduate is prepared for beginning positions in dental hygiene and for further study at the graduate level.

Students are admitted to the program in the junior year after completing the prerequisite courses and general education requirements. Upon completion of the degree, students are eligible to take the appropriate examinations for licensure as dental hygienists. The Wichita State University dental hygiene program is accredited by the Commission on Dental Accreditation.

Preprofessional Curriculum

Students applying for admission to the entry level baccalaureate program must have completed the 40-41 credit hours of prerequisite courses and the requirements of the WSU General Education Program (p. 57). Students should consider taking 15 credit hours per semester or attending summer school.

Course	Title	Hours
Prerequisite Courses		
ENGL 101	College English I	3
ENGL 102	College English II	3
MATH 111	College Algebra	3
or MATH 112	Precalculus Mathematics	
COMM 111	Public Speaking	3
Social and Behavioral Sciences		
PSY 111	General Psychology	3
SOC 111	Introduction to Sociology	3
Natural Sciences and Mathematics		
CHEM 103	Introductory General, Organic and Biochemistry	5
BIOL 220	Introduction to Microbiology	4
or BIOL 330	General Microbiology	
Other Prerequisites		
BIOL 223	Human Anatomy and Physiology	5
or HS 290	Foundational Human Anatomy and Physiology	
HS 301	Clinical Pharmacology	3
HS 331	Principles of Dietetics & Nutrition	3
HP 203	Medical Terminology	2-3
or HP 303	Medical Terminology	
Total Credit Hours		40-41

Admission to the Entry Level Baccalaureate Degree

Persons interested in the dental hygiene program should direct their inquiries to:

Department of Dental Hygiene
Wichita State University
Wichita, Kansas 67260-0144
Phone: 316-978-3614

Acceptance into the College of Health Professions does not guarantee admission into the dental hygiene program. To qualify for admission to the dental hygiene program students must:

1. Be enrolled in, or admitted to, WSU;
2. Have completed, or have plans to complete, the prerequisite requirements the spring semester before beginning the program;
3. Have an overall grade point average of at least 2.750 in all courses completed and no grade lower than a grade that generates 2.000 credit points per credit hour in any of the specified required courses; and
4. Submit application materials by the established deadline.

Professional Curriculum

The following courses are required in the entry level Bachelor of Science in dental hygiene program. Program courses total 58 credit hours. A total of 120 credit hours of university credit is required for graduation.

Semester 1		Credit Hours
DH 311	Preclinical Dental Hygiene	5
DH 317	Clinical Radiology	4
DH 318	Oral Anatomy, Histology and Embryology	3
DH 319	Dental Materials	3
	Credit Hours	15
Semester 2		
DH 314	Introduction to Periodontics	3
DH 331	Dental Hygiene Concepts I	3
DH 332	Dental Hygiene Clinic I	3
DH 334	Introduction to Evidence-Based Practice	2
DH 335	General and Oral Pathology	3
HS 315	Head and Neck Anatomy	2
	Credit Hours	16
Semester 3		
DH 333	Dental Hygiene Clinic II	2
	Credit Hours	2
Semester 4		
DH 410	Community Oral Health Management I	3
DH 416	Pain Management	2
DH 431	Dental Hygiene Concepts II	3
DH 434	Dental Hygiene Clinic III	4
	Credit Hours	12
Semester 5		
DH 407	Ethics and Jurisprudence	3
DH 432	Dental Hygiene Concepts III	3
DH 435	Dental Hygiene Clinic IV	4
DH 440	Community Oral Health Management II	3
	Credit Hours	13
	Total Credit Hours	58

Special Requirements

Students are required to purchase uniforms, loupes and instruments needed during clinical learning experiences. Students are required to purchase professional and general liability insurance coverage. The cost of this insurance is included in the university's comprehensive fee schedule and is part of the fee requirements for this major. In addition, students are required to provide their own transportation to and from the health care agencies used for clinical experiences.

Students must successfully complete a background check prior to beginning any dental hygiene course.

Information related to special requirements is available to students at:

Department of Dental Hygiene
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0144

Applied Learning

Students in the entry-level Bachelor of Science in dental hygiene program are required to complete an applied learning experience to

graduate from the program. The requirement can be met by completing a series of clinical courses with DH 435 Dental Hygiene Clinic IV being the final clinical course of their curriculum. Students use knowledge and skills from courses across the curriculum to assess, plan, implement and evaluate dental hygiene care for their patients. Students must demonstrate competency in their clinical skills for a variety of patients through supervised clinical evaluations.

Honors College, Dorothy and Bill Cohen

Kimberly S. Engber, *dean*
A1180 Shocker Hall • 316-WSU-3375
Dorothy and Bill Cohen Honors College Webpage (http://wichita.edu/honors/)[2]

The Dorothy and Bill Cohen Honors College aims to prepare students for innovative work in a complex society, to engage students across campus in intellectual inquiry and debate and to support exploration, discovery and community engagement. Honors students pursue meaningful work in honors seminars and interdisciplinary tracks to earn honors distinctions on the transcript or diploma. They apply what they have learned in class to honors research and creative activity, internships, student exchange and study abroad.

Students are encouraged to meet with the Cohen Honors College dean, faculty and advisors to design an honors course of study that meets their academic needs and professional goals or passions. Visit the college website to find a form to petition for an exception to honors curriculum requirements.

Opportunities for all Undergraduate Students
In cooperation with academic departments across campus and the Office of Student Involvement, Honors also facilitates several programs open to all undergraduate students including:

- The Undergraduate Student Research and Creative Activity grants program,
- The First-Year Research Experience program,
- Credit for applied learning through Student Involvement Alternative Breaks and Leadership programs, and
- Mentorship for competitive postgraduate scholarship applications such as the Fulbright, Marshall, Truman, and Rhodes.

Honors Values

Members of the Dorothy and Bill Cohen Honors College community uphold four pillars, aiming to be:

Innovative

Innovative people solve problems creatively. They spot needs and take risks that their proposals will satisfy those needs. Innovation often requires bringing together the people, resources and expertise to develop new solutions, a sense of entrepreneurship. Innovation frequently involves interdisciplinary applications — borrowing from one field of endeavor to solve problems in another.

Professional

Professionals get results while committing themselves to high standards. Professionals do a good job for the sake of it. Professionals persevere in passionate pursuit of long-term goals.

Intellectual

The intelligent person masters the knowledge of a chosen specialty but also knows the value of knowledge from many other disciplines. A true intellectual is not simply a person who knows a lot or gets good grades. An intellectual is an intelligent person with a passion for and interest in knowledge, wisdom and inquiry.

Transformational

Transformational people strive to make a positive difference for a better world, a better community. Transformational people commit themselves passionately to a cause larger than themselves, put themselves in service to others, and practice good citizenship. They open their minds to the diverse views of others and deliberate the issues.

Policies

Admission Requirements

Admission to Honors is determined by a competitive application process that requires:

- For students with fewer than 24 college credit hours: a minimum high school GPA of 3.700, or a composite ACT score of 27[1] or better.
- For students with 24 or more college credit hours: a minimum GPA from college credit hours of 3.500, or a composite ACT score of 27[1] or better.

Students who have a passion for learning but who do not meet the admission requirements may indicate on the Honors application that they would like to be considered for special exception.

[1] SAT scores (critical reading and math only) are converted to ACT scores by the WSU admissions office.

Normal Progress

To maintain active Honors status, students take a minimum of 3 honors credit hours each year and maintain an overall GPA of 3.250. Students should take at least 6 credit hours in honors seminars (HNRS prefix) or departmental honors courses (H following the course number) each year in order to graduate within four years with the minor in university honors or the honors baccalaureate diploma. Many of the university's general education program requirements can be fulfilled by taking HNRS or H courses.

Probation and Dismissal

The Dorothy and Bill Cohen Honors College adheres to current WSU Probation and Dismissal policies found in the Academic Probation and Dismissal (p. 33) section of the Undergraduate Catalog with the following exceptions: Honors College students must maintain a GPA of 3.250 and enroll in at least one honors course each year.

In addition to meeting academic standards, students are expected to follow the Student Code of Conduct which can be found online in section 8.05 of the WSU Policies and Procedures Manual (http://wichita.edu/policiesprocedures/)[2], and to meet the professional standards governing any organization in which the student is participating as an intern, exchange student or other capacity.

Students who fail to meet these standards are required to work closely with an advisor to explore options. Dismissal from the Cohen Honors College constitutes dismissal from the university only if a student is an Honors Baccalaureate major. For all other students, dismissal from Honors does not constitute dismissal from the university.

Honors Living-Learning Community

All students admitted to the Dorothy and Bill Cohen Honors College may apply to live in the Honors College Living-Learning Community in Shocker Hall. Students who live in the Living-Learning Community:

- Take at least 3 credit hours in honors courses in your first year to start on the path to earn honors distinction;
- Participate in the social, cultural, academic and service programs offered; and
- Abide by the rules set by housing and residence life.

The Honors Living-Learning Community is designed to promote close interactions among honors students and to create an environment

that maximizes learning, social development, civic engagement and personal growth.

Undergraduate Research and Creative Activity Grants

The Cohen Honors College offers opportunities for all undergraduate students across campus to receive funding, recognition and guidance for faculty-mentored research and creative activity. For more information, stop by the Cohen Honors College office or visit the undergraduate research webpage (http://wichita.edu/undergradresearch/)[2].

Self-directed research and creative activity guided by a faculty mentor prepares students for professional advancement or graduate study and fosters an innovation-oriented intellectual culture across the university. Individual students or small groups of students learn to formulate a relevant question or articulate a creative problem, design research methodology or project timeline, and present results to a disciplinary or diverse audience. Students from all majors and backgrounds are eligible to pursue undergraduate research and creative activity. Past student research grant winners have undertaken any number of tasks, including library research, designing and administering surveys, interviewing, conducting laboratory or field experiments, entering and verifying data, analyzing data, writing reports, establishing connections to arts communities outside of Wichita, presenting at regional and national conferences, and working in national archives.

Curriculum Overview: Honors Distinctions

Cohen Honors College students are expected to develop broad perspectives and/or engage in deep analysis through a curriculum comprising General Studies (breadth of study) and Advanced Scholarship (depth of study) tracks.

Students may choose to complete one or more tracks to earn transcript- and/or diploma-level distinctions.

General Studies: The General Studies Emory Lindquist Honors Scholar track exposes student to foundational concepts and recent developments in the arts, humanities, social sciences and/or sciences. This breadth of study track calls for students to engage in inquiry-based learning in at least one special-topics honor seminar or science lab, and engage in independent or collaborative research or creative activity. Completing this track earns a transcript distinction.

Most general studies track requirements fulfill university general education requirements or meet prerequisites or requirements for the major.

Advanced Scholarship: Interdisciplinary Honors (Law and Public Policy, Leadership, or General Interdisciplinary) and Departmental Honors tracks engage students in depth of study and are traditionally undertaken during junior and senior years.

- Interdisciplinary tracks, whether in a determined area of study or proposed by the student, require coursework in two or more areas of academic interest. Completing this track earns a transcript distinction.
- Honors in the student's major (Departmental Honors) provides additional coursework and/or development of professional capacities with the guidance of faculty mentors in the department. Completing this track earns a diploma distinction.

All honors advanced scholarship tracks include either an applied learning experience and reflection or a thesis or capstone project completed by the end of the senior year.

University Honors: The University Honors minor and diploma notation is awarded to students who complete both a General Studies and Interdisiplinary Honors Advanced Scholarship track. Some advanced scholarship track requirements overlap with general education requirements and major requirements.

Honors Baccalaureate: The Honors Baccalaureate is a unique degree program that gives highly motivated and self-directed students the opportunity to design their own major. As an alternative to traditional majors, the HB allows students to select two or three concentrations in any existing area of study. Students, with the help of faculty advisors, select courses on the basis of a unifying issue, topic or career goal. The HB includes a thesis or capstone project completed by the end of the senior year.

Transfer Students

Students who transfer to WSU having completed all or part of an honors program at another university, college or community college should speak to the Honors College dean or advisor about having those credits counted toward an honors award at WSU.

Honors Course Offerings

Students can earn honors credits for a range of courses and experiences:

Honors Seminars (HNRS-prefix courses)

Small, discussion-based seminars that fulfill general education requirements are offered every semester. These courses are open to all Cohen Honors College students. Students not in the Honors College may request permission to take one honors course.

Departmental Honors Courses

Many departments offer honors sections of traditional courses, as well as innovative courses designed specifically for Cohen Honors College and departmental honors students. These courses are marked with an H after the course number.

Honors Research Seminar (HNRS 485 or HNRS 486)

The Honors Research Seminar presents methods of inquiry and research concepts from several academic disciplines and provides students with opportunities to participate directly in research projects.

Applied Learning

Honors College students are encouraged to engage beyond the classroom in applied learning such as service learning and internships, including the following honors courses:

Course	Title	Hours
HNRS 398	Travel Seminar (up to 4 credit hours)	
HNRS 410	Independent Study (repeatable up to 6 credit hours)	
HNRS 481	Cooperative Education (up to 4 credit hours)	
HNRS 481I	Noncredit Internship	
HNRS 481N	Internship (up to 4 credit hours)	

Honors Option Agreement Courses

A student may petition to receive honors credit for any course taught by a full-time faculty member by submitting an honors option agreement. Each honors option agreement must be approved by the instructor and the Cohen Honors College dean or advisor. A student may take only one honors option each academic year.

An honors option requires a student to design meaningful work to supplement regular course material. Examples include, but are not limited to, more in-depth research and writing assignments, presenting

additional material to the class, and service projects with written reflection. Students are required to:

- Meet with the instructor before the end of the third week of classes to design a special assessment or project;
- Fill out and turn in the honors option agreement form to the Cohen Honors College dean by the end of the third week of classes;
- Schedule at least two additional meetings with the instructor, with at least one meeting before midterm; and
- Complete all requirements for the honors option two weeks before the final day of class.

When a student has completed the honors option requirements, the instructor notifies the Honors College, and the college asks the registrar's office to update the student's transcript to show that the student earned honors credit for the course. There is no penalty if the student does not complete the additional work.

Course Descriptions

Courses in the Dorothy and Bill Cohen Honors College are offered in three formats. Because course descriptions are listed in numerical sequence, the following summary is presented to assist in locating courses by format:

Introductory Honors Courses

Course	Title	Hours
HNRS 101	Introduction to the University	
HNRS 300	Introduction to the University for Transfer Students	

General Education Seminars

Course	Title	Hours
HNRS 104	Seminar I: Fine Arts	
HNRS 105	Seminar I: Humanities	
HNRS 106	Seminar I: Social and Behavioral Sciences	
HNRS 107	Seminar I: Mathematics and Natural Sciences	
HNRS 150	Seminar II: Fine Arts	
HNRS 151	Seminar II: Humanities	
HNRS 152	Seminar II: Social and Behavioral Sciences	
HNRS 153	Seminar II: Mathematics and Natural Sciences	
HNRS 304	Seminar III: Fine Arts	
HNRS 305	Seminar III: Humanities	
HNRS 306	Seminar III: Social and Behavioral Sciences	
HNRS 307	Seminar III: Mathematics and Natural Sciences	
HNRS 351	Survey of Leadership	
HNRS 352	Survey of Law & Public Policy	
HNRS 404	Seminar in Fine Arts	
HNRS 405	Seminar in Humanities	
HNRS 406	Seminar in Social and Behavioral Sciences	
HNRS 407	Seminar in Mathematics and Natural Sciences	

Applied Learning and Research

Course	Title	Hours
HNRS 398	Travel Seminar	
HNRS 410	Independent Study	
HNRS 481	Cooperative Education	
HNRS 481I	Noncredit Internship	
HNRS 481N	Internship	
HNRS 485	Honors Research and Creative Activity Seminar	

[2] Link opens new window.

Degrees and Program Tracks Offered by the Dorothy and Bill Cohen Honors College

- Honors Baccalaureate (p. 203) (63 credit hours)
- Minor in University Honors (p. 204) (24 credit hours)
- Honors Track - Departmental (p. 204)
- Honors Track - Emory Lindquist Honors Scholar (p. 205) (12 credit hours)
- Honors Track - General Interdisciplinary (p. 205) (12 credit hours)
- Honors Track - Law and Public Policy (p. 205) (12 credit hours)
- Honors Track - Leadership (p. 205) (12 credit hours)

Courses in the Dorothy and Bill Cohen Honors College

- Honors (HNRS) (p. 410)
- WSU First-Year Seminar: Honors (WSUN) (p. 520)

Honors Baccalaureate

The Honors Baccalaureate (HB) degree is conferred by the Dorothy and Bill Cohen Honors College. The degree is designed for students with diverse interests in academic areas across campus. It can prepare students for careers such as university teaching, medicine, law or management. A student who wishes to receive the HB degree works closely with a Cohen Honors College advisor or dean to select two or three academic disciplines from at least two of the six other colleges on campus. The Cohen Honors College advisor coordinates with faculty and advisors from the colleges and major departments to select a program of study that provides the student with a rigorous academic experience.

Admission

Admission to Honors is determined by a competitive application process that requires a personal statement and:

- For students with fewer than 24 college credit hours: a minimum high school GPA of 3.700 or a composite ACT score of 27[1] or better.
- For students with 24 or more college credit hours: a minimum GPA from college credit hours of 3.500 or a composite ACT score of 27[1] or better.
- Students who have a passion for learning but do not meet the admission requirements may indicate on the honors application that they would like to be considered for special exception.

[1] SAT scores (critical reading and math only) are converted to ACT scores by the WSU admissions office.

Program Requirements

To receive the Honors Baccalaureate, students must maintain a cumulative GPA of 3.250 and complete the following 63 credit hours:

Course	Title	Hours
College Requirements		
Complete 24 honors credit hours to earn the following honors track distinctions:		
Emory Lindquist Honors Scholar Program		*12*
HNRS general education seminar (HNRS-prefix course) for 3 credit hours		
HNRS 485	Honors Research and Creative Activity Seminar	
or HNRS 486	Honors Collaborative Research and Creative Activity Seminar	
Electives chosen from honors seminars (HNRS-prefix courses) or departmental honors courses (6 credit hours)		
Honors Interdisciplinary Track		*12*
Interdisciplinary track topics include leadership and law and public policy. Students may petition to create their own interdisciplinary track course requirements. Each track must include a core course and electives as well as a service activity, internship, exchange/study abroad, or research/creative project.		
Total Credit Hours		24

Course	Title	Hours
Major Requirements (39 credit hours)		
Select one of the following:		36
Complete at least 18 credit hours in each of two departmental majors/disciplines from at least two colleges (for a total of at least 36 credit hours)		
Complete at least 12 credit hours in each of three departmental majors/disciplines from at least two colleges (for a total of at least 36 credit hours)		
HNRS 491	Honors Thesis (The student works with a faculty mentor who supervises a capstone thesis project during the student's last year. The faculty mentor must approve the final thesis and submit approval to the Honors College dean. The dean reviews all theses before submitting certification to the registrar's office, and the honors thesis is kept in the honors library archive with permission of the student and faculty supervisor.) [2]	3
Total Credit Hours		39

Electives: To fulfill the 120 credit hours required for an undergraduate degree at WSU, the HB student completes elective courses selected with the help of the Cohen Honors College advisor or dean.

[1] SAT scores (critical reading and math only) are converted to ACT scores by the WSU admissions office.

[2] All Honors Baccalaureate students must enroll in at least 3 credit hours of HNRS 491 and successfully complete a thesis to complete requirements for the degree. At the discretion of the thesis supervisor, students may register for thesis project credit over one or two semesters, e.g. register for 1 credit hour in the first semester of their senior year and 2 credit hours in the second/final semester of their senior year. Students may be required by the thesis supervisor to register for more than 3 credit hours for HNRS 491. The honors dean reviews all theses before submitting certification to the registrar's office, and the honors thesis is kept in the honors library archive with permission of the student and faculty supervisor.

Applied Learning

Students in the Honors Baccalaureate program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by successful completion of a thesis or capstone project and registration in HNRS 491 Honors Thesis.

Honors Thesis (The student works with a faculty mentor who supervises a capstone thesis project during the student's last year. The faculty mentor must approve the final thesis and submit approval to the Honors College dean. The dean reviews all theses before submitting certification to the registrar's office, and the honors thesis is kept in the honors library archive with permission of the student and faculty supervisor.) [2]

Minor in University Honors

To receive a diploma distinction of *minor in university honors*, a student must maintain a cumulative GPA of 3.250 and complete 24 honors credit hours comprising:

Course	Title	Hours
Emory Lindquist Honors Scholars track		12
Honors interdisciplinary track		12
Total Credit Hours		24

Students who complete the requirements for a minor in university honors receive an Emory Lindquist Honors Scholar transcript designation, an honors interdisciplinary track transcript designation, and the diploma designation *University Honors*. A student must complete 3 unduplicated credit hours (credit hours not used toward general education or toward the student's major requirements) in a minor program of study.

Honors Track - Departmental

Some departments and colleges at WSU offer students the opportunity to receive departmental honors through their major. Departmental honors tracks are currently offered in aerospace engineering, communication sciences and disorders, health management, modern and classical languages and literatures, mathematics, political science and psychology.

Admission

To enroll as a candidate for departmental honors, a student must have junior standing and a cumulative grade point average of 3.250 (higher if department requirements so specify).

Program Requirements

Departmental honors tracks consist of at least 12 credit hours of upper-division coursework, including a senior thesis, senior project, senior recital, or equivalent capstone experience. Each department or college specifies requirements for satisfactory completion of the honors track, but a minimum grade point average of 3.500 for work in the honors track is required.

Students who complete all requirements for departmental honors receive a diploma designation. Up to 3 honors credit hours counted toward the student's major may be counted toward the minor in university honors. For current information about departmental honors requirements, check individual department information in the Undergraduate Catalog.

Honors Track - Emory Lindquist Honors Scholar

The Emory Lindquist Honors Scholar track is designed particularly for first-year and second-year students, but is open to qualified continuing and transfer students. The Emory Lindquist Honors Scholars curriculum leads students to explore intersections among academic disciplines and professions and to participate in academic research and creative activity.

To receive the transcript designation *Emory Lindquist Honors Scholar*, a student must maintain a cumulative GPA of 3.250 and complete 12 honors credit hours comprising:

Course	Title	Hours
One honors general education seminar (HNRS-prefix course) or WSUN honors first-year seminar		3
HNRS 485	Honors Research and Creative Activity Seminar	3
or HNRS 486	Honors Collaborative Research and Creative Activity Seminar	
Electives chosen from honors seminars (HNRS-prefix courses) or departmental honors courses		6
Total Credit Hours		12

Honors Track - General Interdisciplinary

Considering a career in neurosciences or ethnomusicology? With approval from the dean, students may complete an interdisciplinary track around a topic of interest to them. Visit the Honors College website to find the petition for an exception to curriculum requirements to request a self-designed interdisciplinary track.

Program Requirements

To receive an honors interdisciplinary track transcript designation, a student must maintain an overall GPA of 3.250 and complete 12 credit hours in one of several interdisciplinary tracks. Interdisciplinary track topics include law and public policy, leadership and general (self-designed). Each 12-credit-hour track consists of a core course (or courses) and electives as well as applied learning such as service-learning, internship, exchange/study abroad or research/creative project.

An interdisciplinary track must include the following:

Course	Title	Hours
Core Course		
Choose a 3-credit-hour introductory course (or courses) that will shape the rest of the track.		3
Electives		
Choose 6-8 credit hours of electives that will enhance interdisciplinary knowledge of the topic		6-8
Applied Learning		
Select one of the options below. [1]		
HNRS 398	Travel Seminar	1-3
or HNRS 481	Cooperative Education	
or HNRS 481N	Internship	

[1] A student may petition the Cohen Honors College for exceptions to these applied learning curriculum requirements.

Honors Track - Law and Public Policy

Students who complete the requirements for the law and public policy track earn a notation on their transcript. A student may petition the Cohen Honors College to count an alternative course toward the track requirements. Faculty may submit courses to the Cohen Honors College faculty council to be considered for inclusion in the track. Contact honors@wichita.edu for more information.

Program Requirements

Course	Title	Hours
Core Course		
HNRS 352	Survey of Law & Public Policy	3
Electives		
Select one course from each of the following sections: [1]		6
Theory		
HIST 517	Constitutional History of the United States	
HIST 518	Constitutional History of the United States	
HIST 599W	Law in American History	
HIST 599AA	Law and Modern American Civil Rights	
PHIL 311H	Philosophy of Law Honors	
PHIL 313	Political Philosophy	
POLS 232	Political Theory and Philosophy	
Applied		
BLAW 431	Legal Environment of Business	
CJ 315	Criminal Law	
CJ 320	Criminal Procedure	
POLS 356	Civil Liberties	
POLS 357	Supreme Court	
SCWK 300	Policy I: Understanding Social Welfare Policy	
SOC 534	Urban Sociology	
Experience-Based Learning		
Select one of the following:		3
HNRS 398	Travel Seminar	
HNRS 481	Cooperative Education	
HNRS 481N	Internship	
HNRS 410	Independent Study	
Total Credit Hours		12

[1] No more than one course can be taken from the same academic department. If a course on this list is not offered during an academic year, the student may request a substitute course from the same academic department, by petitioning the Honors College for an exception.

Honors Track - Leadership

Goal: Upon completion of the Honors Leadership track, students will have developed contemporary leadership skills in order to contribute effectively to their profession and community and work effectively in diverse groups.

Objectives: Upon completion of the leadership track, students are able to:

1. Identify leadership theories and concepts;
2. Differentiate leadership practices across settings, organizations, disciplines and systems;
3. Identify cultural strengths and differences through a leadership framework;
4. Develop leadership skills based on personal strengths and professional interests;

And demonstrate one or more of the Honors curriculum outcomes:

1. Communicate effectively across disciplines and/or professions;
2. Address an urgent intellectual question, creative debate or real-world problem through research or creativity activity;
3. Contribute to an intellectual, creative or civic community;
4. Reflect on individual development.

Program Requirements

In order for students to receive the leadership track distinction on the transcript, students must:

1. Complete 12 credit hours of leadership courses and applied learning.
   a. Core Course
   b. Directed Elective
   c. Directed Elective
   d. Applied Learning
2. Submit a portfolio that includes at least two class projects/assignments of their choice, a two-page reflection essay about their applied learning, and a cover letter (up to one page). These materials give students the opportunity to synthesize experience and learning. They also will be used to assess the effectiveness of the track:
   a. In the reflection, make connections between concepts and skills learned, academic coursework, career plans and/or personal development.
   b. In the cover letter, address the following questions:
      i. What were the main benefits (strengths) of the leadership track?
      ii. What would you tell others about your experience?
      iii. How do you plan to use the skills learned in the leadership track in your future?
      iv. How would you improve the leadership track?

Course Requirements

Course	Title	Hours
Core Course		
Select one of the following three options for a total of 3 credit hours		3
HNRS 351	Survey of Leadership	
MGMT 462H	Leading and Motivating Honors	
Or select 3 credit hours chosen from		
HNRS 310S	Honors Tutorial - Emerging Leaders	
HNRS 310R	Honors Tutorial - Evolving Leaders	
HNRS 310Q	Honors Tutorial - Engaging Leaders	
HNRS 310V	LeaderShape Institute	
Directed Electives		
Select 6 credit hours from the following		6
ENGR 501H	The Engineer as Leader Honors	
POLS 315H	The Presidency Honors	
MGMT 462H	Leading and Motivating Honors	
HP 408H	Leadership in Self and Society Honors	
or HNRS 152F	Leadership Challenge	
or PSY 413H	Leadership in Self and Society Honors	
HNRS 310S	Honors Tutorial - Emerging Leaders	
HNRS 310R	Honors Tutorial - Evolving Leaders	
HNRS 310Q	Honors Tutorial - Engaging Leaders	
HNRS 310V	LeaderShape Institute	
HNRS 306G	Alternative Break: Service Leadership	
HNRS 406B	Leading for Change in an Unpredictable World	
ID 506	Leadership Development for Innovation	
Applied Learning		
Select one of the following courses		3
HNRS 398	Travel Seminar	
HNRS 481	Cooperative Education	
HNRS 481N	Internship	
HNRS 306G	Alternative Break: Service Leadership	
Total Credit Hours		12

The interdisciplinary leadership track culminates in an internship, study abroad, or service-learning experience and reflection essay. Ideally, a student would intern with a leader in his or her area of interest. For example, a student interested in volunteer leadership might intern with a food bank organizer. A student interested in governmental leadership might intern with a congressional representative or senator. A student interested in educational leadership might intern with a university president, and a student interested in religious leadership might intern with a clerical leader.

Petition for Exceptions to Requirements

Any student may petition to count an alternate course or an applied learning experience toward requirements for the leadership track. In such cases, the student shall petition for Honors College approval by submitting a proposal before or during the semester in which the course or applied learning experience is undertaken. If approved, the student shall provide documentation of successful completion of the applied learning along with the required reflection essay.

Interdisciplinary Innovation, Institute for

Jeremy Patterson, *dean*
316-WSU-3010
Institute for Interdisciplinary Innovation Website (http://wichita.edu/iii/)[1]

Overview

The Institute for Interdisciplinary Innovation at Wichita State University (WSU) administers and supervises interdisciplinary degrees, certificates and other credentials (e.g., badges). The institute provides opportunities for faculty across campus to come together in a collaborative environment to develop/participate in academic programs and related research and creative projects in support of interdisciplinarity.

The primary goals of the Institute for Interdisciplinary Innovation are to encourage independent scholarship and to develop competence in collaborative research and creative activity. Students are expected to master special fields as well as to develop appropriate methods of inquiry for future professional growth.

Program Representatives to the Institute

The Institute for Interdisciplinary Innovation works closely with individual program areas to ensure that program operations function in compliance with university policies and regulations. As part of this process, and on a voluntary basis, a faculty member can be recommended by his or her department chair to the institute dean to serve as the program representative to the institute in matters of interdisciplinary education. Although the nature of responsibilities varies throughout program areas, they have a primary role in working with students and faculty in their academic programs. As a standard of expectation, program representatives are charged with the responsibility for overseeing the evaluation of applications for admission, and the transmittal of recommendations for admission, academic performance, degree completion and exceptions to graduate and undergraduate regulations. Program representatives also have a primary role in coordinating information between their programs and the institute office, working with their departmental chairs or other administrators in maintaining the quality and viability of their graduate programs, and serving as the local agent for the faculty in their program areas.

Probation and Dismissal

The Institute for Interdisciplinary Innovation adheres to current WSU Probation and Dismissal policies found in the Academic Probation and Dismissal (p. 33) section of the Undergraduate Catalog.

[1] Link opens new window.

Programs in the Institute for Interdisciplinary Innovation

- Master of Innovation Design (MID). Look for more information in the Graduate Catalog.

Certificates in the Institute for Interdisciplinary Innovation

- Certificate in Leadership (p. 207)

Courses in the Institute for Interdisciplinary Innovation

- Innovative Design (ID) (p. 428)

Certificate in Leadership

Upon completion of the leadership certificate, students will have gained contemporary leadership skills in order to effectively contribute more to their profession and community. They will be able to:

1. Identify leadership theories and concepts;
2. Differentiate leadership practices across settings, organizations, disciplines and systems;
3. Identify cultural strengths and differences through a leadership framework;
4. Develop leadership skills based on personal strengths and professional interests; and
5. Lead individuals in teamwork exercises.

For more information, contact Jan Hudson.

Office of Academic Affairs
Morrison Hall, Room 109
Email: janis.hudson@wichita.edu
Phone: 316-978-3010

Program Requirements

Students are required to complete 12 credit hours, and must take courses that cover objectives 1–5. These courses may include courses required for certain undergraduate degrees. However ID 300, ID 301 or HNRS 351 is required to satisfy objective one. Additionally, honors students must select courses designated as honors courses. Most courses meet multiple objectives.

Objective One Course

Course	Title	Hours
HNRS 351	Survey of Leadership	3
ID 300	Design Thinking & Innovation	3
ID 301	Leadership is Essential Seminar	3

Objective Two Courses

Course	Title	Hours
CI 795	Change, Creativity and Innovation	3
CI 796	Family and Professional Collaboration	3
COMM 325	Speaking in Business and the Professions	3
COMM 328	Teamwork, Leadership and Group Communication	3
HP 408	Leadership in Self and Society [1]	3
PHS 333	Organizational Behavior and Leadership in Health Organizations	3
HNRS 310S	Honors Tutorial - Emerging Leaders	1
HNRS 310T	Summer Leadership Institute	1
HNRS 351	Survey of Leadership	3
HPS 310	Organization and Administration of Physical Education Program	3
HPS 442	Administration of Athletic Training	3
HPS 510	Coaching Principles	3
HPS 750L	Motivation	3
MGMT 360	Principles of Management	3
MGMT 462	Leading and Motivating	3

NURS 337	Foundations of Nursing Leadership for the Practicing RN	4
NURS 460	Leadership and Clinical Decision Making	4
NURS 490	Healthcare Leadership for the Practicing RN	3
NURS 496	Nursing Leadership Practicum for the Practicing RN	2
PSY 413	Leadership in Self and Society [1]	3
SCWK 702	Foundations of Generalist Practice II	3
SMGT 465	Psychology of Sport and Physical Activity	3
SMGT 545	Sport Governance and Policy	3

Objective Three Courses

Course	Title	Hours
CI 794	Diversity and Culture in a Global Society	3
CI 796	Family and Professional Collaboration	3
COMM 325	Speaking in Business and the Professions	3
COMM 328	Teamwork, Leadership and Group Communication	3
HP 408	Leadership in Self and Society [1]	3
PHS 333	Organizational Behavior and Leadership in Health Organizations	3
PHS 621	Supervisory Management in Health Care Organizations	3
PHS 622	Human Resource Management in Health Care Organizations	3
HNRS 310S	Honors Tutorial - Emerging Leaders	1
HNRS 310T	Summer Leadership Institute	1
HNRS 351	Survey of Leadership	3
HPS 310	Organization and Administration of Physical Education Program	3
MGMT 360	Principles of Management	3
MGMT 662	Managing in Diverse Organizations	3
NURS 337	Foundations of Nursing Leadership for the Practicing RN	4
NURS 460	Leadership and Clinical Decision Making	4
NURS 490	Healthcare Leadership for the Practicing RN	3
NURS 496	Nursing Leadership Practicum for the Practicing RN	2
PSY 413	Leadership in Self and Society [1]	3

Objective Four Courses

Course	Title	Hours
CI 795	Change, Creativity and Innovation	3
CI 796	Family and Professional Collaboration	3
COMM 325	Speaking in Business and the Professions	3
COMM 328	Teamwork, Leadership and Group Communication	3
ENGR 501	The Engineer as Leader	3
HP 408	Leadership in Self and Society [1]	3
PHS 333	Organizational Behavior and Leadership in Health Organizations	3
PHS 621	Supervisory Management in Health Care Organizations	3
PHS 622	Human Resource Management in Health Care Organizations	3
HNRS 310Q	Honors Tutorial - Engaging Leaders	1
HNRS 310R	Honors Tutorial - Evolving Leaders	1
HNRS 310T	Summer Leadership Institute	1
HPS 302	Administration in Exercise Science	3
HPS 442	Administration of Athletic Training	3
HPS 510	Coaching Principles	3
HPS 750L	Motivation	3
MGMT 360	Principles of Management	3
NURS 337	Foundations of Nursing Leadership for the Practicing RN	4
NURS 460	Leadership and Clinical Decision Making	4
NURS 490	Healthcare Leadership for the Practicing RN	3
NURS 496	Nursing Leadership Practicum for the Practicing RN	2
PSY 413	Leadership in Self and Society [1]	3
SCWK 702	Foundations of Generalist Practice II	3
SMGT 465	Psychology of Sport and Physical Activity	3
SMGT 750D	Sociology of Coaching	3

Objective Five Courses

Course	Title	Hours
CI 794	Diversity and Culture in a Global Society	3
COMM 325	Speaking in Business and the Professions	3
COMM 328	Teamwork, Leadership and Group Communication	3
ENGR 501	The Engineer as Leader	3
HP 408	Leadership in Self and Society [1]	3
PHS 333	Organizational Behavior and Leadership in Health Organizations	3
PHS 621	Supervisory Management in Health Care Organizations	3
PHS 622	Human Resource Management in Health Care Organizations	3
HNRS 310Q	Honors Tutorial - Engaging Leaders	1

HNRS 310R	Honors Tutorial - Evolving Leaders	1
HNRS 310T	Summer Leadership Institute	1
HPS 302	Administration in Exercise Science	3
HPS 310	Organization and Administration of Physical Education Program	3
HPS 750L	Motivation	3
MGMT 360	Principles of Management	3
MGMT 463	Building Effective Work Teams	3
NURS 337	Foundations of Nursing Leadership for the Practicing RN	4
NURS 460	Leadership and Clinical Decision Making	4
NURS 490	Healthcare Leadership for the Practicing RN	3
NURS 496	Nursing Leadership Practicum for the Practicing RN	2
PSY 413	Leadership in Self and Society [1]	3
SMGT 465	Psychology of Sport and Physical Activity	3
SMGT 545	Sport Governance and Policy	3
SMGT 750D	Sociology of Coaching	3

[1] Cross-listed courses

A cumulative grade point average of at least 2.000 is required for all courses comprising the certificate program and no grades below *C*.

Additional courses can be added to this list as approved by the certificate coordinator.

A maximum of one course (3 credit hours) may be transferred from another institution if an articulation exists for one of the courses listed above.

Leadership Certificate Checklist

In order for students to receive the leadership certificate, they must:

1. Complete 12 credit hours covering objectives 1–5;
2. Submit a portfolio for assessment purposes; and
3. Complete the exit reflection.

This certificate program is not eligible for Title IV (Federal financial aid) funding unless the certificate is part of the degree program the student is pursuing or the certificate has been specified as a gainful employment (aid eligible) program.

Liberal Arts and Sciences, Fairmount College of

Andrew Hippisley, ***dean***
200 Lindquist Hall • 316-WSU-6659
Fairmount College of Liberal Arts and Sciences Webpage **(**http://wichita.edu/las/**)**[1]
Brien Bolin, *associate dean*
David Eichhorn, *associate dean*
Cheryl Miller, *senior assistant dean*

LAS Advising Center
115 Grace Wilkie Hall
316-WSU-4757
Advising Webpage **(**http://wichita.edu/lasadvising/**)**[1]

The mission of Fairmount College of Liberal Arts and Sciences is to cultivate intellectual curiosity and foster contemplation of the human experience and the natural world. Faculty members are dedicated to creating, expanding, applying and preserving knowledge, and to introducing students to the scholarship, theories, methods and perspectives of their diverse disciplines. A liberal arts and sciences education develops transferable analytical skills — the capacity to gather and interpret information, think critically and communicate effectively — and stimulates a lifelong love of learning that enriches graduates and their communities.

Fairmount College offers undergraduate majors in natural sciences, social sciences, humanities and programs of professional training. An education in these disciplines helps students develop knowledge and appreciation of our physical and biological world; the arts and different cultures; and an awareness of civic responsibilities, as well as professional preparation. Fairmount College provides foundation coursework, as well as general education, and courses required for graduation from other colleges at WSU. These provide students with skills that are intrinsically valuable and often fundamental to professional training and the needs of the workplace.

[1] Link opens new window.

Fairmount College of Liberal Arts and Sciences Policies

Admission

Students are admitted to Fairmount College of Liberal Arts and Sciences upon meeting the general admission requirements for Wichita State University and declaring one of three categories:

1. *Degree-bound*. These students enter with the intention of pursuing one of the degree programs offered by Fairmount College;
2. *Degree-bound as an exploratory student.* These students have not yet decided on a major area of study when they enter WSU; and
3. *Nondegree-bound.* These students enroll in classes or programs for purposes other than achieving a degree.

Admissions details are in the Admissions (p. 10) section of this catalog.

Probation and Dismissal Standards

1. Students are placed on probation whenever their overall or institutional grade point average falls below 2.000 and they have attempted at least 6 credit hours at Wichita State University.
2. Probation is removed when the overall and institutional grade point averages reach the required 2.000 level.
3. Students continue on probation when they earn a 2.000 or better semester average but their overall or institutional grade point average remains below 2.000.
4. Students will be dismissed at the end of any semester on probation if they fail to earn a semester grade point average at or above the minimum required, and have an overall or institutional grade point average also below the minimum required. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.
5. When dismissed, students may re-enroll only with the permission of the university's Committee on Admissions and Exceptions, which considers petitions forwarded by the Fairmount College Admissions and Exceptions Committee.

Students who have been dismissed for academic reasons may seek readmission to the university by filing a written petition with the Fairmount College Admissions and Exceptions Committee. Cases for readmission must be developed by the student after consultation with an advisor. The petition is then considered by the Fairmount College committee and forwarded to the university's committee for final action.

Because advising and advance planning require careful attention and much time, students must meet the published deadlines to have their petitions considered.

Enrollment Limits

Students in good academic standing may enroll for a maximum of 21 credit hours during fall and spring semesters and a maximum of 12 credit hours during the summer session. Students wishing to enroll beyond these limits must request approval from an academic advisor in the LAS Advising Center (LASAC).

Academic Advising

Academic advising is an ongoing educational partnership between the student and the academic advisor. Advising promotes student academic success, supports diverse and equitable educational experiences, encourages students to become self-directed learners, responsible decision makers and knowledgeable global citizens. Academic advisors assist students in clarifying self-defined academic goals, selecting a major, understanding academic procedures, and using campus resources to their advantage. The Liberal Arts and Sciences Advising Center (LASAC) assists students who are degree-bound, exploratory or nondegree-bound.

Degree-Bound Students in Fairmount College Programs

Degree-bound students who have declared interest in any of Fairmount College's programs receive advising from department faculty. Students with early and sustained involvement in their major departments develop methods of inquiry, peer and mentoring relationships, and intellectual and social perspectives which deepen and enrich their Fairmount College experience. Students with interdisciplinary or preprofessional interests also benefit from contact with faculty advisors qualified to discuss educational programs leading to the exercise of civic and social responsibility, enjoyment of intellectual pursuits, and realization of career fulfillment.

Degree-Bound Exploratory Students

LASAC advisors help degree-bound exploratory students make academic choices that allow for flexibility while pursuing general education requirements so that they may transfer to any college within WSU once a major is declared. Students develop educational planning skills, develop effective college-level study skills, choose an academic major, develop personalized academic and career/life plans, and complete part of the general education requirements. When a student declares a major field of study, an immediate transfer occurs to the college and department that sponsors that program. Exploratory students must declare a major or a degree preference within the first 48 credit hours of enrollment. Those students transferring 48 credit

hours or more must declare a major or degree preference during the first semester of enrollment. Advising is then provided through the student's academic major department. General education questions are answered by LASAC academic advisors. Advice on the major is given by the main department.

Nondegree-Bound Students

The nondegree-bound category includes students from other colleges who attend WSU for a short time period, high school guests who attend classes and earn credit on the WSU campus, and high school students in concurrent enrollment partnerships who earn WSU credit while taking classes in their high schools. Other nondegree students take courses to pursue their education with no immediate degree plans. This may involve self-enrichment, job advancement, career change, skills updating or professional certification. Students in this latter category are admitted as *open admissions* students. (See the information in the Undergraduate Admission (p. 10) section of the catalog.) LASAC advisors can assist students in defining their academic goals and in making the transition to a degree-earning status where that is appropriate. Students in this category are not eligible for financial aid.

Application for Graduation

Students apply for graduation when they have completed 80 credit hours of coursework that counts toward the degree. Applying at this time facilitates scheduling required courses for the three or four semesters that typically remain before graduation.

Two documents are required of all students graduating with a degree from Liberal Arts and Sciences:

- The Senior Form and
- The online Application for Degree.

The Senior Form is a written list of all remaining requirements for graduation. Students begin in the LAS Advising Center in 115 Grace Wilkie Hall. The student and the academic advisor complete the general education portion of the form. The student takes the form to the faculty advisor for their major. The faculty advisor completes the academic major portion of the form. The student is responsible for returning that form to the LAS Advising Office.

The online Application for Degree (AFD) is the only document that alerts the college of the semester and year in which the student intends to graduate. A student who does not complete this document will not graduate, because the student's name will not appear on the graduation list generated by the AFD.

How to complete the AFD: The online application for degree link can be found in the myWSU portal. Students are able to complete the application for a bachelor's degree once they have earned 80 hours. Students may apply for a graduation date for the current semester, or for any of the three semesters beyond the current semester. The correct graduation date is determined by the length of time needed to complete remaining requirements as listed on the Senior Form.

Students who wish to have their names listed in the official commencement program must complete both the Senior Form and the online Application for Degree by March 1, for a May graduation, and October 1, for a December graduation.

Additional application process for students earning the Bachelor of General Studies degree: Students declare their intention to earn this degree and create a plan of study for completion no later than 30 credit hours before the degree is granted. Students are advised by the academic department of the primary concentration or by an LASAC advisor.

Additional BGS requirements are listed under Section XII. BGS: Area of Concentration (p. 213).

Assessment of Academic Programs

Fairmount College participates in a university-wide program to assess the effectiveness of all curricula and instruction within the university. Individual departments within Fairmount College have established assessment strategies which are shared with their students. Assessment activities involving students occur throughout enrollment.

Cross-Listed Courses

Selected courses in the university curriculum are cross-listed because course content is suitable to more than one academic area. Every department or program which offers cross-listed courses provides a separate catalog description. When enrolling in cross-listed courses, students — in consultation with their advisors — may select the listing under which they wish to receive credit, but credit may be earned under only one of the course listings.

Field Trips

Attendance on field trips is mandatory in any course that includes in its catalog description a statement that field trips are required or in which the instructor states that field trips are essential for earning credit. Absences are permitted only with the instructor's approval. Students may have credit withheld for a course if they do not complete the required field trips.

Credit for Life Experience

Fairmount College awards life experience credit. LAS requires that the learning from life experience fits the approved curriculum of the college. Students must be fully admitted to WSU. The College of Liberal Arts and Sciences is conservative in protecting the autonomy of the faculty and the goals of the curriculum. Credit for life experience is granted only when a student's learning from life experiences duplicates the content of a course described in the catalog. Students pay for Life Credit on a course by course basis. The student begins by contacting an advisor in the LASAC to obtain the Credit for Life Experience form. The student contacts the faculty member who teaches the course that duplicates the student's life experience. That faculty member must certify that the life experience is the same as the content of the course. The student returns the signed form to the LASAC, which facilitates the process for student payment and posting the credit to the student's transcript.

Cooperative Education and Internships

Fairmount College participates in the cooperative education program which matches paid internships with undergraduate and graduate students who wish to combine their classroom studies with academically related employment. In LAS, a maximum of 12 credit hours of cooperative education may be applied to baccalaureate degree requirements.

Interested students should contact the Career Development Center, located in Brennan Hall III, at the corner of 17th Street and Yale Avenue. The telephone number is 316-978-3688, or register online (http://wichita.edu/careerdevelopment/)[1].

Academic Honesty and Code of Conduct

The faculty of Fairmount College strongly endorses the statement on academic honesty, the student code of conduct and the appeals procedure outlined in policy 2.17/Student Academic Honesty of the WSU Policies and Procedures Manual (https://wichita.edu/policiesprocedures/)[1]. Also see Student Academic Honesty, (p. 37)

Student Code of Conduct (p. 37) and Court of Student Academic Appeals (p. 36) in this catalog.

[1] Link opens new window.

Degrees and Certificates Offered

Undergraduate

The Associate of Arts, Bachelor of Arts, Bachelor of Science and Bachelor of General Studies degrees are conferred by Fairmount College of Liberal Arts and Sciences. Each baccalaureate degree requires the completion of a minimum of 120 credit hours, the attainment of an overall grade point average of 2.000 including transfer work, a grade point average of 2.000 in the major and minor fields of study, and a 2.000 WSU grade point average. Some majors may require a higher GPA.

The Associate of Arts degree requires completion of a minimum of 60 credit hours including 15 credit hours in residency at Wichita State University and 48 of the 60 credit hours from liberal arts and sciences departments. This degree must include the 36 credit hours required in the university's general education program (described in the General Education section of this catalog), and students must be enrolled in one of the university's degree-granting colleges. An overall grade point average of 2.000 is required for both the degree and for WSU academic work.

Bachelor of Arts degrees are offered in anthropology, biological sciences, chemistry, communication, economics, English, geology, history, mathematics, modern and classical languages and literatures (French and Spanish), philosophy, physics, political science, psychology, social work, sociology and women's studies. Concentrations in communication sciences and disorders, ethnic studies, geography, German and religion may be designed with the Bachelor of Arts or the Bachelor of General Studies degrees.

The Bachelor of Science is available in biological sciences, chemistry, criminal justice, forensic sciences, geology, mathematics and physics.

The Bachelor of General Studies requires breadth in distribution of coursework and allows for the development of areas of concentration which may be thematically or occupationally related. This degree is available through every college department.

Graduate

Graduate programs are offered through the Graduate School in many liberal arts and sciences areas. The Master of Arts (MA) may be earned in anthropology, communication (interdisciplinary), criminal justice, English, history, psychology, social work, sociology and Spanish. The Master of Science (MS) may be obtained in biological sciences, chemistry and mathematics.

The Master of Fine Arts (MFA) in creative writing, the Master of Arts in Liberal Studies (MALS) in interdisciplinary studies, the Master of Public Administration (MPADM) in public administration, and the Master of Social Work (MSW) in social work.

The Doctor of Philosophy (PhD) degree is offered in chemistry, applied mathematics and psychology — human factors and community/clinical.

For more information, consult the Wichita State University Graduate Catalog.

Certificate Programs

Certificate programs in Fairmount College are available to members of the community, to students who have already earned degrees, and to students pursuing degrees in Fairmount College or other degree-granting colleges. A certificate is awarded acknowledging a student's completion of a disciplinary or interdisciplinary focus consisting of courses which provide thematic coherence in a unique area of applied or theoretical work. Specific requirements for the following certificate programs may be reviewed in the relevant departmental sections:

- Museum Studies (graduate) — Anthropology
- Film Studies — English, Interdisciplinary
- Medieval and Renaissance Studies — English, Interdisciplinary
- Asian Studies — Interdisciplinary Liberal Arts and Sciences
- Global Competency — Interdisciplinary Liberal Arts and Sciences
- Great Plains Studies (graduate and undergraduate) — Interdisciplinary Liberal Arts and Sciences
- Tilford Diversity Studies — Interdisciplinary Liberal Arts and Sciences
- Spanish for the Professions — Modern and Classical Languages and Literatures
- Community Psychology — Psychology
- Human Factors Psychology — Psychology
- Social Work and Addiction — Social Work
- City and County Management, Economic Development, Nonprofit Management, Public Finance (graduate) — Hugo Wall School of Public Affairs

Graduation Requirements

Bachelor of Arts, Bachelor of Science, Field Major and Bachelor of General Studies

The following Fairmount College requirements must be met in order for students to receive the Bachelor of Arts (BA), the Bachelor of Science (BS), or the Bachelor of General Studies (BGS) degrees from Fairmount College. Courses taken to fulfill these requirements also satisfy the university's general education distribution requirements.

1. Foundation courses — The following courses must be completed in the first 48 Fairmount College credit hours with a grade of *C*- or above.

Course	Title	Hours
ENGL 100	English Composition	3
or ENGL 101	College English I	
ENGL 102	College English II	3
COMM 111	Public Speaking	3
MATH 111	College Algebra	3
or MATH 131	Contemporary Mathematics	

2. Upper-Division — at least 45 credit hours in courses numbered 300+ and taken at a four-year institution;
3. Residence — at least 30 hours of course credit at Wichita State. At least 24 of the last 30 credit hours or 50 of the last 60 credit hours must be completed at Wichita State;
4. Four-year institution — a minimum of 60 credit hours must be completed in a four-year, degree-granting college or university; and
5. *D* Grades — no students are allowed credit toward graduation for *D* grade work in excess of one-quarter of the total credit hours needed for the degree.

The Schedule of Courses produced each semester outlines specific courses approved in each of the following categories:

I. Fine Arts and Humanities

Candidates for the BA, BS and BGS degrees must take 12 credit hours of courses with the following distribution:

1. One course from a fine arts discipline listed below;
2. One course from two different humanities disciplines listed below; plus
3. A 300 or above general education course in fine arts or humanities.

Fine Arts: art history, dance (history), musicology-composition, theater, other approved discipline for a 300 or above course.

Humanities: communication (excluding foundation courses), English (excluding foundation courses), history, linguistics, modern and classical languages and literature, philosophy, religion, women's studies or other approved discipline for a 300 or above course.

Note: A total of 24 credit hours must be taken in the fine arts/humanities and social and behavioral sciences disciplines by candidates for the BA and BGS degrees.

II. Literature

All BA, BS and BGS candidates must complete at least one course in English or foreign language literature. Inclusion of this course should be considered in general education course planning in humanities.

III. American Political System

All BA, BS and BGS candidates must demonstrate proficiency in the field of the American political system and institutions by passing either HIST 131 or HIST 132 (humanities) or POLS 121 (social sciences). Inclusion of one of these three courses should be considered in general education course planning.

IV. Social and Behavioral Sciences

Candidates for the BA and BGS degrees must take 12 credit hours in three different departments with the following distribution:

1. One course from two different social and behavioral sciences disciplines listed below; plus
2. An upper-division course in the social and behavioral sciences;
3. One additional course may come from the student's major or from any other elective courses within social sciences departments of the college.

Candidates for the BS degree must take a minimum of three courses (9 credit hours) following the first two distributions above. Courses within the student's major may not apply to this university general education requirement.

Social and Behavioral Sciences: anthropology, criminal justice, economics, ethnic studies, geography, political science, psychology, social work, sociology or other approved discipline for an upper-division course.

Other Social and Behavioral Sciences for elective use: aging studies.

Note: A total of 24 credit hours must be taken in the fine arts/humanities and social and behavioral sciences disciplines by candidates for the BA and BGS degrees.

V. Natural Sciences and Mathematics

Candidates for the BA, BS and BGS degrees who have completed at least two years of high school laboratory science classes (exclusive of general and physical science) must take a minimum of 9 credit hours of courses with the following distribution:

1. One course from two different natural sciences disciplines listed below (one of which must be a biological science and the other a physical science); plus
2. An upper-division course in natural sciences.

One of the above courses must include a laboratory experience.

Candidates for the BA, BS and BGS degrees who have not completed at least two years of high school laboratory science must take 12 credit hours following the minimum distribution given above. Should a fourth course be necessary to complete the 12 credit hours, this class may come from any of the elective disciplines indicated below.

Natural Sciences and Mathematics: biology, chemistry, geology, physics or other approved discipline for an upper-division course.

Other Natural Sciences and Mathematics: for elective use: ANTH 101 and ANTH 106 (count as biology); GEOG 235 (counts as physical sciences).

VI. 300 or Above General Education Courses

Students must complete 9 credit hours of 300 or above courses to fulfill university general education program requirements. In addition, courses within the student's major discipline do not count toward Fairmount College graduation requirements.

VII. Foreign Languages

Candidates for any BA degree and for the BS degree in criminal justice must demonstrate proficiency at a level equivalent to 5 credit hours beyond the 112 course in one foreign language or equivalent to the completion of the 112 course in two foreign languages. This proficiency may be demonstrated in the following ways:

1. Students may successfully complete 111 and 112, plus 5 additional credit hours in one foreign language, or 111 and 112 in two foreign languages;
2. Other foreign language experience, or high school foreign language study at the rate of one high school unit for each college semester, may apply toward the required proficiency;
3. Students who have completed three or more years of one language in high school may fulfill the foreign language requirement by successfully completing a 3-credit-hour intermediate-level class in the same language;
4. Students who wish to fulfill their foreign language requirement with American Sign Language may seek permission to do so by submitting a written request to the LAS exceptions committee. This request should include a justification and a list of the courses to be taken. If the committee approves the plan, a copy is put in the student's file; and
5. Students with English as their second language have met the college's foreign language requirement for a baccalaureate degree.

Language 210 classes, although approved to count toward humanities requirements in the university general education program, will not fulfill a humanities course requirement for Fairmount College students. Any language course from the 220 or above level will count as general education humanities credit if on the approved list of classes published in this catalog.

Students with sufficient high school background in language study to merit placement in a Fairmount College language class beyond the 111 level may qualify for retroactive credit in language. Please see guidelines for retroactive credit outlined in the modern and classical languages and literatures departmental section of the catalog.

A student who has credit in two years of a high school foreign language may enroll in 111 and 112 for credit without departmental consent.

A student who has credit in three or more years of high school foreign language may take 111 and 112 for credit only if departmental consent has been received in writing. Otherwise, a student who has credit in

three or more years of a high school foreign language may enroll in any 200-level course for credit without departmental consent.

Candidates for the BS within the division of natural sciences and mathematics have no foreign language requirement unless it is required by the department.

The BGS also has no foreign language requirement.

Enrollment in Spanish courses may require a placement exam. See individual course descriptions.

VIII. BA, BS: Major
All specific departmental major courses and requirements are listed in the catalog by department. While the department controls its own requirements for the major, the following expectations apply to all majors:

1. A minimum 2.000 grade point average is required in the major.
2. No more than 6 credit hours from the major may be used to satisfy the Fairmount College distribution requirements.
3. Of the 45 credit hours of upper-division credit required for each degree, a minimum of 12 upper-division credit hours are required in the major or area of concentration.
4. No more than 48 credit hours in the major may be used for graduation with a BA degree, and no more than 50 credit hours in the major may be used for graduation with a BS degree.
5. A minimum of 9 credit hours in the major discipline must be taken from Wichita State University.

IX. Field Major
Students may select a major that correlates three or more fields of study to receive a broad appreciation of the cultural and dynamic factors of human conduct. The selection of courses must be made with an advisor from the primary department of interest and with the dean's office approval. Although such a major cuts across departmental lines and is determined by the field of specific interest, the combination of courses must be acceptable to the college. Thirty-six (36) credit hours are required for the field major, with 18 credit hours in the major department and at least 9 credit hours in each of the two allied departments. Twelve (12) of the 36 credit hours must be upper-division, and the first two departments must be LAS. Students may work with an academic advisor in developing an appropriate field major or may use one of the predesigned field majors indicated below. Students must meet BA graduation requirements for all field majors except biochemistry and chemistry/business which lead to the BS degree.

For the purposes of the field major, LAS courses can include the academic majors and disciplines housed historically in the College of Liberal Arts and Sciences, including aging studies (AGE) (formerly gerontology), art history (ARTH), communication sciences and disorders (CSD), economics (ECON), music composition (MUSC), and theatre (THEA).

All 18 credit hours in the primary department of interest must be courses approved for the major or minor as defined for that department in the Undergraduate Catalog.

X. Minor
Minors are offered in all fields of study in which a major may be earned as well as in ethnic studies, geography, German, linguistics and religion. The number of credit hours required for a minor is set by each department. A 2.000 minimum grade point average is required in the minor. Minors from other colleges are acceptable and must meet minimum requirements of those colleges.

XI. BGS: Area of Concentration
The Bachelor of General Studies (BGS) degree allows students to design a major plan of study crossing departmental or even college lines. The BGS degree allows generalists, preprofessionals or nontraditional career students greater flexibility in planning their academic major plans.

For the purposes of the BGS major, LAS courses can include the academic majors and disciplines housed historically in the College of Liberal Arts and Sciences, including aging studies (AGE) (formerly gerontology), art history (ARTH), communication sciences and disorders (CSD), economics (ECON), music composition (MUSC), and theatre (THEA).

With the assistance of the advisor in the department of primary interest, each student develops a major plan of study consisting of a minimum of 33 credit hours, divided into three areas. The primary and secondary areas must be in LAS departments. The tertiary area may cross departmental or college lines or be thematically or occupationally related. The primary area will consist of 15 to 21 credit hours. The remaining 12 to 18 credit hours must be divided between two other departments. At least 6 credit hours must be in each of the secondary and tertiary areas. All courses used in the primary area must be courses approved for an academic major or minor as defined by that academic department in the Undergraduate Catalog. A minimum of 12 LAS upper-division credit hours must be included in the major plan.

Additional limits to the minimum credit hours required for the BGS degree include: no more than 30 credit hours from one department, no more than 60 credit hours in one division (humanities, social and behavioral sciences, natural sciences and mathematics), and no more than 26 out-of-college credit hours.

XII. Non Liberal Arts and Sciences Courses
Students may count only 20 credit hours of non liberal arts and sciences courses toward either the BA or BS degree. Twenty-six (26) credit hours of non liberal arts and sciences courses may count toward the BGS degree. Any non liberal arts and sciences courses required by a major within Fairmount College will apply to LAS credit hours required for the degree.

Communication Sciences and Disorders
Students desiring an emphasis in applied language study through Fairmount College should see requirements and curriculum for a major in communication sciences and disorders listed in the College of Health Professions section of the catalog.

Special Preprofessional Programs
Advisors in the LASAC or in various preprofessional academic departments provide specific information regarding courses and requirements.

Prelaw
The Association of American Law Schools states that students interested in pursuing a law degree should get a broad undergraduate education that provides "comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and creative power in thinking." These qualities are to be achieved through disciplined study in fields of the student's choice. Requirements for the bachelor's degree provide students with both a general education and a concentration in a major field of study.

Law school admission requires completion of a baccalaureate degree. Many majors provide appropriate foundation for the study of law. LAS academic advisors offer prelaw students assistance in contacting appropriate academic departments.

Premedical Professions – Medicine, Dentistry, Optometry, Pharmacy, Veterinary Medicine, Podiatry, Chiropractic Medicine

Academic advising for premedical professions is coordinated through the LASAC. A four-year bachelor's degree is required for admission to medical and osteopathic schools and is strongly encouraged for other premedical professional programs. Any academic major is acceptable, as long as the degree includes the prerequisite core of courses in math and sciences. Medical and professional schools expect candidates to demonstrate the intellectual, analytical and problem-solving skills necessary to succeed in medical school. Students are strongly advised to balance coursework in the natural sciences with coursework in humanities and social sciences. The general education component of a liberal arts degree provides a sound foundation for demonstrating an interest in and knowledge of a diverse and global society. Candidates should also consider coursework in areas such as anthropology, communication, economics, ethics, logic, psychology, sociology and statistics.

Preparation for Secondary Education

A professional teaching field in foreign language Pre-K through 12 may be obtained through the College of Liberal Arts and Sciences. A professional teaching field for middle and secondary school teachers is offered through the College of Applied Studies as are teaching fields in all other areas.

Aging Studies

The aging studies program has transitioned from Fairmount College of Liberal Arts and Sciences to the College of Health Professions. The College of Health Professions offers an undergraduate minor in aging studies and the Master of Arts in aging studies as well as instructing all the courses. See Aging Studies (p. 184).

The College of Liberal Arts and Sciences will continue to offer undergraduate degrees with a concentration in aging studies through the field major and Bachelor of General Studies (p. 213) options. Contact the LAS Advising Center for degree requirements.

Anthropology

Anthropology offers perspectives on issues of the origins, history and diversity of the dynamics of culture and behavior, people and places, personal and community identity, origins and the biological history of humankind in all of its manifestations in all times. Anthropology is holistic and explores psychological, biological, social and cultural — including technological, economic, religious, political and artistic — aspects of human action.

Anthropologists examine the vast diversity of human cultures, striving to understand and appreciate the myriad ways of life that constitute alternative solutions to the universal problems of human existence. By combining the perspective of science and the humanities, archaeologist, socio-cultural, linguistic and biological anthropologists take an interdisciplinary, evolutionary and humanistic approach to the study of human beings and human societies.

The department offers a broad range of courses for majors, minors and general education requirements. The curriculum spans socio-cultural, archaeological and biological emphases, but also includes complementary courses in medical, linguistic and museum studies in anthropology. The coursework provides students with opportunities to learn about, appreciate and understand the values and perspectives of people from cultural traditions other than their own and also addresses their abilities to interact cross-culturally.

The program offers a Bachelor of Arts (BA) degree major, an interdisciplinary field major, and a minor in anthropology. The BA in anthropology prepares students for a variety of professional careers in and outside anthropology. The minor effectively complements a diverse number of majors within Fairmount College and across colleges. Elective and general education courses in anthropology seek to broaden the students' Fairmount College experience by offering them an opportunity to appreciate the strength of human cultural and biological history and diversity through socio-cultural, bio-cultural and cultural-historical perspectives to understanding the living world in the framework of its past and present circumstance.

Majors in Anthropology

- BA in Anthropology (p. 216)
- Field Major - Anthropology (p. 217)
- Field Major - Global Studies (p. 217)

Minors in Anthropology

- Minor in Anthropology (p. 217)

Courses in Anthropology

- Anthropology (ANTH) (p. 301)

BA in Anthropology

A major in anthropology consists of at least 30 credit hours:

Course	Title	Hours
ANTH 101	Biological Anthropology	3
ANTH 102	Cultural Anthropology	3
ANTH 103	Introduction to Archaeology	3
Select one upper-level biological anthropology course from the following:		3
ANTH 356	Human Variability and Adaptation	
ANTH 555	Paleoanthropology and Human Paleontology	
ANTH 557	Human Osteology	
ANTH 600	Forensic Anthropology	
Select one upper-level cultural anthropology course from the following:		3
ANTH 303	World Cultures	
ANTH 318	Psychological Anthropology	
ANTH 327	Magic, Witchcraft and Religion	
ANTH 344	Ecological Anthropology	
ANTH 361	Law, Politics and Society	
ANTH 511	The Indians of North America	
ANTH 522	Art and Culture	
ANTH 528	Medical Anthropology	
ANTH 540	The Indians of the United States: Conquest and Survival	
ANTH 542	Women in Other Cultures	
Select one upper-level archaeology course from the following:		3
ANTH 305	World Archaeology	
ANTH 335	Archaeology of North America	
ANTH 612	Indians of the Great Plains	
ANTH 613	Archaeology of the Great Plains	
ANTH 647	Theories of Culture (all majors must take a course in method and theory)	3

Select an additional 9 credit hours of electives which can be distributed across catalog listings for anthropology to match the student's interest in a particular sub-discipline(s)	9
Total Credit Hours	30

A maximum of 6 credit hours of certain coursework in related departments can be counted toward an anthropology major if the student meets discipline-specific requirements and if approved by a committee of the anthropology department faculty.

Field Major - Anthropology

A field major in anthropology allows undergraduate students to combine studies from three separate departments. The anthropology field major consists of 18 credit hours in anthropology, including:

Course	Title	Hours
ANTH 101	Biological Anthropology	3
ANTH 102	Cultural Anthropology	3
ANTH 103	Introduction to Archaeology	3
Select at least 9 credit hours of related coursework in two departments other than anthropology		9
Total Credit Hours		18

All anthropology and nonanthropology courses must be chosen in consultation with the student's anthropology advisor.

Field Major - Global Studies

In recent years the world has rapidly become more closely connected and interdependent in virtually every facet of life. As a result, traditional American and Western academic perspectives alone are no longer sufficient to make sense of complex global realities. Therefore, many scholars have found it necessary to construct and include a global perspective in their teaching, and many students have sought to gain this perspective in their learning.

The global studies field major is an interdisciplinary program which allows students to pursue their course of study in a broad, complex and interconnected way, and helps them discover the area of global studies which most interests them (e.g., literature, health, business, environment). This major provides direction for those interested in pursuing a further graduate course of study or for those who will search for employment. It will also prepare students to become well-informed global citizens.

Students choosing the global studies field major will select from an approved list of courses that have a global focus. These courses are offered on the basis of two criteria: either they address their subjects from a world or global perspective, or they address geographic areas of the world outside of the United States. The major consists of 36 credit hours, 18 of which must be selected from a set of core courses, and the other 18 from a set of elective courses. Each student will conclude the requirements of the major by completing a final project, such as an internship or research paper, which must be approved by their advisor. Students interested in pursuing this major should contact the global studies field major advisor in the department of anthropology.

Minor in Anthropology

A minor in anthropology consists of 15 credit hours:

Course	Title	Hours
Select 15 credit hours in anthropology (including at least 6 credit hours of upper-division work) chosen in consultation with the student's anthropology advisor. Students minoring in anthropology are encouraged to take the following:		15
ANTH 101	Biological Anthropology	
ANTH 102	Cultural Anthropology	
ANTH 103	Introduction to Archaeology	
Total Credit Hours		15

Biological Sciences

The department of biological sciences offers a broad and flexible curriculum leading to the Bachelor of Arts (BA), the Bachelor of Science (BS), the field major in biochemistry (BS), and the bachelor degree programs (BA and BS) to teach in secondary education. Students interested in an interdisciplinary program with a biological focus are encouraged to consider the Fairmount College field major (BA) or the Bachelor of General Studies (BGS) programs. All students who intend to pursue one of the programs within the department of biological sciences should contact the department as early in their educational career as possible for assignment to a faculty academic advisor.

Candidates for all degrees are required to take the Field Achievement Test in Biology during the senior year and contribute examples of their coursework to the department's assessment program. All candidates must maintain a grade point average of 2.000 in all biological sciences coursework.

Nonmajor Courses

The department of biological sciences offers courses designed primarily to meet the needs of students in other departments. These are listed below as nonmajor courses. These courses, or their equivalents at other institutions, cannot be used to satisfy the biological sciences coursework requirements for the major or the minor.

Course	Title	Hours
These nonmajor courses may not be used to satisfy the requirements for a biological sciences major		
BIOL 103	Microbes and You	
BIOL 106	The Human Organism	
BIOL 107	The Human Organism Laboratory	
BIOL 220	Introduction to Microbiology	
BIOL 223	Human Anatomy and Physiology	
BIOL 309	Foundations of Human Heredity	
BIOL 309H	Foundations of Human Heredity Honors	
BIOL 310	Human Reproduction: Issues and Perspectives	
BIOL 370	Introductory Environmental Science	
BIOL 408	Biology of Aging	

Majors in Biological Sciences

- BA in Biological Sciences with Biological/Biomedical Emphasis (p. 218)
- BA in Biological Sciences with Ecological/Environmental/ Organismal Emphasis (p. 218)
- BS in Biological Sciences with Biological/Biomedical Emphasis (p. 218)
- BS in Biological Sciences with Ecological/Environmental/ Organismal Emphasis (p. 219)
- Biochemistry Field Major (p. 219)
- Field Major (BA) or Bachelor of General Studies (BGS) (p. 220)
- Major in Biological Sciences: Secondary Education (p. 220)

Minors in Biological Sciences

- Minor in Biological Sciences (p. 220)

Courses in Biological Sciences

- Biology (BIOL) (p. 317)

BA in Biological Sciences with Biological/Biomedical Emphasis

Program Requirements

A minimum total of 120 credit hours is required for the BA in biological sciences with a biological/biomedical emphasis. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of Fairmount College of Liberal Arts and Sciences, students must meet the following requirements:

A major in biological sciences leading to the BA with a biological/biomedical emphasis requires a minimum of 30 credit hours of biological sciences coursework; up to 40 credit hours may be taken for credit. Students must maintain a grade point average of 2.000 in all biological sciences coursework.

Course	Title	Hours
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 418	General Ecology	4
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4
BIOL 497	Biology Colloquium	1-2
or BIOL 499	Undergraduate Research	
Select one of the following:		*3-5*
BIOL 330	General Microbiology	
BIOL 502	Vascular Plants	
BIOL 503	Field Botany	
BIOL 523	Freshwater Invertebrates	
BIOL 524	Vertebrate Zoology	
BIOL 528	Parasitology	
Select additional approved major level biology electives [1]		*3-6*
Minimum Biological Sciences Credit Hours		30

Course	Title	Hours
Additional Science Requirements for Biological Sciences (BA)		
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 531	Organic Chemistry I	5
CHEM 532	Organic Chemistry II	5
Total Credit Hours		20

[1] See list of excluded courses (p. 217) (nonmajor courses may not be used to satisfy the requirements for the major).

Applied Learning

Students in the BA in biological sciences with biological/biomedical emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by BIOL 418 and/or BIOL 499.

BA in Biological Sciences with Ecological/Environmental/Organismal Emphasis

Program Requirements

A minimum total of 120 credit hours is required for the BA in biological sciences with an ecological/environmental/organismal emphasis. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of Fairmount College of Liberal Arts and Sciences, students must meet the following requirements:

A major in biological sciences leading to the BA in biological sciences with an ecological/environmental/organismal emphasis requires 35 credit hours of biological sciences coursework. Students must maintain a grade point average of 2.000 in all biological sciences coursework.

Course	Title	Hours
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 418	General Ecology	4
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4
BIOL 497	Biology Colloquium	1-2
or BIOL 499	Undergraduate Research	
Select one of the following		3-5
BIOL 330	General Microbiology	
BIOL 502	Vascular Plants	
BIOL 503	Field Botany	
BIOL 523	Freshwater Invertebrates	
BIOL 524	Vertebrate Zoology	
BIOL 528	Parasitology	
Select 5 additional credit hours from among those approved for the ecological/environmental/organismal emphasis (see academic advisor or departmental offices for approved courses)		5
Select additional approved major level biology electives [1]		3-6
Total Credit Hours		*35*

Course	Title	Hours
Additional Science Requirements for Biological Sciences (BA-Ecological/Environmental/Organismal)		
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 531	Organic Chemistry I	5
Total Credit Hours		15

[1] See list of excluded courses (p. 217) (nonmajor courses may not be used to satisfy the requirements for the major).

Applied Learning

Students in the BA in biological sciences with ecological/environmental/organismal emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing BIOL 418 and/or BIOL 499.

BS in Biological Sciences with Biological/Biomedical Emphasis

Program Requirements

A minimum total of 120 credit hours is required for the BS in biological sciences with a biological/biomedical emphasis. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of Fairmount College of Liberal Arts and Sciences, students must meet the following requirements:

A major in the BS in biological sciences with a biological/biomedical emphasis requires a minimum of 40 credit hours of biological sciences coursework; up to 50 credit hours may be taken for credit. Students must maintain a grade point average of 2.000 in all biological sciences coursework.

Course	Title	Hours
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 418	General Ecology	4
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4
BIOL 497	Biology Colloquium	1-2
or BIOL 499	Undergraduate Research	
Select one of the following		*3-5*
BIOL 330	General Microbiology	
BIOL 502	Vascular Plants	
BIOL 503	Field Botany	
BIOL 523	Freshwater Invertebrates	
BIOL 524	Vertebrate Zoology	
BIOL 528	Parasitology	
Select additional approved major level biology electives. [1]		13-16
Total Credit Hours		*40*

Course	Title	Hours
Additional Science Requirements for Biological Sciences (BS-Biological/Biomedical Emphasis)		
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 531	Organic Chemistry I	5
CHEM 532	Organic Chemistry II	5
PHYS 213	General College Physics I	5
PHYS 214	General College Physics II	5
Total Credit Hours		30

[1] See list of excluded courses (p. 217) (nonmajor courses may not be used to satisfy the requirements for the major).

Applied Learning

Students pursing the BA/BS programs in the department of biological sciences are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing BIOL 418 General Ecology (4 credit hours) or BIOL 499 Undergraduate Research (2 credit hours minimum).

BS in Biological Sciences with Ecological/Environmental/Organismal Emphasis

Program Requirements

A minimum total of 120 credit hours is required for the BS in biological sciences with an ecological/environmental/organismal emphasis. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of Fairmount College of Liberal Arts and Sciences, students must meet the following requirements:

A major in biological sciences leading to the BS in biological sciences with an ecological/environmental/organismal emphasis requires 50 credit hours of biological sciences coursework. Students must maintain a grade point average of 2.000 in all biological sciences coursework.

Course	Title	Hours
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 418	General Ecology	4
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4
BIOL 497	Biology Colloquium	1-2
or BIOL 499	Undergraduate Research	
Select one of the following		3-5
BIOL 330	General Microbiology	
BIOL 502	Vascular Plants	
BIOL 503	Field Botany	
BIOL 523	Freshwater Invertebrates	
BIOL 524	Vertebrate Zoology	
BIOL 528	Parasitology	
Select 15 additional elective credit hours from approved EEO electives.		15
Select additional approved major level biology electives. [1]		8-11
Total Credit Hours		50

Course	Title	Hours
Additional Science Requiremetns for Biological Sciences (BS-Ecological/Environmental/Organismal Emphasis)		
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 531	Organic Chemistry I	5
PHYS 213	General College Physics I	5
Total Credit Hours		20

[1] See list of excluded courses (p. 217) (nonmajor courses may not be used to satisfy the requirements for the major).

Applied Learning

Students in the BS in biological sciences with ecological/environmental/organismal emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing BIOL 418 and/or BIOL 499.

Biochemistry Field Major

The departments of biological sciences and chemistry participate jointly in this program. Students selecting this major should seek the advice of one of the departmental chairpersons as early as possible.

Program Requirements

A minimum total of 120 credit hours is required for the field major in biochemistry. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of Fairmount College of Liberal Arts and Sciences, students in the field major in biochemistry must take the following courses:

Course	Title	Hours
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 523	Analytical Chemistry	4
CHEM 531	Organic Chemistry I	5
CHEM 532	Organic Chemistry II	5
CHEM 662	Biochemistry I	3
CHEM 663	Biochemistry II	3
CHEM 664	Biochemistry Laboratory	3
CHEM 666	Special Topics in Biochemistry	3
or BIOL 666	Special Topics in Biochemistry	
CHEM 669	Research In Biochemistry	2
or BIOL 669	Research In Biochemistry	
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4

Select 21 credit hours of biochemistry electives chosen in consultation with a biochemistry academic advisor	21
Total Credit Hours	75

Course	Title	Hours
Additional science requirements for the Biochemistry field major		
Select either Option A or Option B below		5-6
Option A (6 credit hours)		
MATH 111	College Algebra	
MATH 123	College Trigonometry	
Option B (5 credit hours)		
MATH 112	Precalculus Mathematics	
PHYS 213	General College Physics I	5
PHYS 214	General College Physics II	5
Total Credit Hours		15-16

Applied Learning

Students in the biochemistry field major program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by BIOL 669 or CHEM 669 (2 credit hours minimum).

Field Major (BA) or Bachelor of General Studies (BGS)

Students interested in such interdisciplinary programs should consult with a departmental advisor early to design a curriculum with a focus in biological sciences that will satisfy Fairmount College requirements for these degrees.

Major in Biological Sciences: Secondary Education

This major allows for the completion of the requirements for a degree in biological sciences and the certification requirements to teach biology in grades 6–12. Students selecting this option should work closely with the teacher education advisor.

Major Requirements

Course	Title	Hours
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 330	General Microbiology	5
BIOL 418	General Ecology	4
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4
BIOL 502	Vascular Plants	4
or BIOL 503	Field Botany	
Select one of the following		3-5
BIOL 523	Freshwater Invertebrates	
BIOL 524	Vertebrate Zoology	
BIOL 527	Comparative Anatomy	
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 531	Organic Chemistry I	5
PHYS 213	General College Physics I	5
PHYS 502	Science Investigations: Physics	3-5
GEOL 300	Energy, Resources and Environment	3
Professional Education Requirements [1]		
Additional hours [2]		
Total Credit Hours		58-62

[1] The professional education requirements for majors in science as outlined by the College of Applied Studies (p. 67).

[2] Additional hours to complete the requirements for either the Bachelor of Arts or the Bachelor of Science with an emphasis in either biological/biomedical biology or ecological/environmental/organismal biology.

Applied Learning

Students in the biological sciences: secondary education program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successfully completing BIOL 418 General Ecology.

Minor in Biological Sciences

Candidates for the minor in biological sciences must complete four biology courses including:

Course	Title	Hours
Required Courses		
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
Select either option A or option B:		7-9
Option A:		
Select two of the following:		
BIOL 418	General Ecology	
BIOL 419	Genetics	
BIOL 420	Molecular Cell Biology	
Option B:		
Select one of the following and a course from the additional course list below:		
BIOL 418	General Ecology	
BIOL 419	Genetics	
BIOL 420	Molecular Cell Biology	
Additional courses for option B (choose one):		
BIOL 330	General Microbiology	
BIOL 502	Vascular Plants	
BIOL 503	Field Botany	
BIOL 523	Freshwater Invertebrates	
BIOL 524	Vertebrate Zoology	
BIOL 528	Parasitology	
Total Credit Hours		15-17

Chemistry

The chemistry department offers a broad and flexible curriculum leading to a variety of degrees and options: The ACS-certified Bachelor of Science (BS) in chemistry, with an available biochemistry option; the Bachelor of Science (BS) in chemistry — premedicine; and the biochemistry field major (BS), all include undergraduate research (CHEM 669 or CHEM 690) which satisfies the WSU applied learning requirement. Also available are the Bachelor of Arts (BA) in chemistry; and chemistry/business field major (BS). Students should consult a chemistry advisor for assistance in choosing the most appropriate degree program.

All programs require additional courses to satisfy general education curriculum requirements and the graduation requirements in Fairmount College of Liberal Arts and Sciences.

Advising

All students pursuing one of the above degrees should consult closely with the department of chemistry in planning their program.

Majors in Chemistry
- BA in Chemistry (p. 221)
- BS in Chemistry - Biochemistry Option (p. 221)
- BS in Chemistry - Chemistry Option (p. 221)
- BS in Chemistry - Premedicine (p. 223)
- Biochemistry Field Major (p. 223)
- Chemistry/Business Field Major (p. 223)

Minors in Chemistry
- Minor in Chemistry (p. 224)

Courses in Chemistry
- Chemistry (CHEM) (p. 328)

BA in Chemistry

Program Requirements

This degree requires:

Course	Title	Hours
CHEM 211 & CHEM 212	General Chemistry I and General Chemistry II	10
CHEM 523 & CHEM 524	Analytical Chemistry and Instrumental Methods of Chemical Analysis [1]	8
CHEM 531 & CHEM 532	Organic Chemistry I and Organic Chemistry II	10
CHEM 545 & CHEM 546	Physical Chemistry I and Physical Chemistry II [1]	6
CHEM 547	Physical Chemistry Lab [1]	2
Select 5 credit hours of foreign language beyond 111–112 in one language or equivalent to 112 in two languages.		5
Prerequisites for the required chemistry courses include the following courses (or their equivalents).		
MATH 112	Precalculus Mathematics	5
MATH 242	Calculus I	5
MATH 243	Calculus II	5
MATH 344	Calculus III	3
PHYS 313	Physics for Scientists I	4
PHYS 314	Physics for Scientists II	4
PHYS 315	University Physics Lab I	1
PHYS 316	University Physics Lab II	1
Total Credit Hours		69

[1] Students who wish to take biochemistry or inorganic chemistry may satisfy the BA requirements with one of the following three alternatives:

1. Replace CHEM 524 with CHEM 514 and CHEM 661; or
2. Replace CHEM 547 and either CHEM 545 or CHEM 546 with CHEM 514 and CHEM 661; or
3. Replace CHEM 524, CHEM 547 and either CHEM 545 or CHEM 546 with CHEM 662, CHEM 663 and CHEM 664.

Applied Learning

Students in the BA in chemistry program are required to complete an applied learning or research experience to graduate from the program. The requirements can be met by enrollment in two credit hours of CHEM 690 or CHEM 481.

BS in Chemistry - ACS Biochemistry Option

The curriculum for the BS in chemistry (either the chemistry or biochemistry option) is approved by the American Chemical Society for the professional training of chemists. It is strongly recommended that students interested in advanced study in chemistry or biochemistry should pursue this degree. Students completing the program receive certification from the American Chemical Society.

In agreement with the American Chemical Society Committee on Professional Training, the chemistry department strongly encourages students studying for the BS degree to select courses in computer science, economics, marketing and business, and to use every opportunity to develop competence in technical writing and oral communication.

This program requires:

Course	Title	Hours
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 523	Analytical Chemistry	4
CHEM 524	Instrumental Methods of Chemical Analysis	4
CHEM 531	Organic Chemistry I	5
CHEM 532	Organic Chemistry II	5
CHEM 545	Physical Chemistry I	3
CHEM 546	Physical Chemistry II	3
CHEM 547	Physical Chemistry Lab	2
CHEM 615	Advanced Inorganic Chemistry [1]	3
CHEM 616	Inorganic Chemistry Lab	2
CHEM 662	Biochemistry I	3
CHEM 663	Biochemistry II	3
CHEM 664	Biochemistry Laboratory	3
CHEM 690	Independent Study and Research	2
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 420	Molecular Cell Biology	4
MATH 242	Calculus I	5
MATH 243	Calculus II	5
MATH 344	Calculus III	3
PHYS 313	Physics for Scientists I	4
PHYS 314	Physics for Scientists II	4
PHYS 315	University Physics Lab I	1
PHYS 316	University Physics Lab II	1
Total Credit Hours		87

[1] CHEM 514 is a prerequisite for CHEM 615.

Applied Learning

Students in the BS in chemistry — ACS biochemistry program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing at least one semester of undergraduate research, by enrollment in CHEM 690.

BS in Chemistry - Chemistry Option

The curriculum for the BS in chemistry (either the chemistry or biochemistry option) is approved by the American Chemical Society for the professional training of chemists. It is strongly recommended that students interested in advanced study in chemistry or biochemistry should pursue this degree. Students completing the program receive certification from the American Chemical Society.

In agreement with the American Chemical Society Committee on Professional Training, the chemistry department strongly encourages students studying for the BS degree to select courses in computer

science, economics, marketing and business, and to use every opportunity to develop competence in technical writing and oral communication.

A minimum total of 120 credit hours is required for the BS in chemistry and includes the 82-88 credit hours of major courses that must be completed with a minimum grade point average of 2.000. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of Fairmount College of Liberal Arts and Sciences, students in the BS in chemistry must take the following courses:

Required Courses

Course	Title	Hours
CHEM 211 & CHEM 212	General Chemistry I and General Chemistry II	10
CHEM 514	Inorganic Chemistry	3
CHEM 523 & CHEM 524	Analytical Chemistry and Instrumental Methods of Chemical Analysis	8
CHEM 531 & CHEM 532	Organic Chemistry I and Organic Chemistry II	10
CHEM 545 & CHEM 546	Physical Chemistry I and Physical Chemistry II	6
CHEM 547	Physical Chemistry Lab	2
CHEM 615	Advanced Inorganic Chemistry	3
CHEM 616	Inorganic Chemistry Lab	2
Select one of the following: [1]		3, 6
CHEM 661	Principles of Biochemistry	
CHEM 662 & CHEM 663	Biochemistry I and Biochemistry II	
CHEM 690	Independent Study and Research	2
BIOL 210	General Biology I	4
PHYS 313	Physics for Scientists I	4
PHYS 314	Physics for Scientists II	4
PHYS 315	University Physics Lab I	1
PHYS 316	University Physics Lab II	1
MATH 112	Precalculus Mathematics	5
MATH 242	Calculus I	5
MATH 243	Calculus II	5
MATH 344	Calculus III	3
Professional electives as approved below [1]		1, 4
CHEM 600–799 (excluding CHEM 700 and CHEM 701)		
BIOL 419, BIOL 420 or BIOL 590 with their necessary prerequisites		
Mathematics courses with MATH 344 prerequisite, or MATH 555		
Physics courses with PHYS 314 prerequisite		
One academic year of German or French		
Other courses as approved by the Undergraduate Affairs Committee		
Total Credit Hours		82-88

[1] If both CHEM 662 and CHEM 663 are taken, only 1 credit hour of professional electives is required.

Representative Course Sequence

Freshman		
Semester 1		**Credit Hours**
CHEM 211	General Chemistry I	5
MATH 112	Precalculus Mathematics [2]	5
ENGL 101	College English I	3
COMM 111	Public Speaking	3
	Credit Hours	16
Semester 2		
CHEM 212	General Chemistry II	5
MATH 242	Calculus I	5
ENGL 102	College English II	3
General Education course in fine arts, humanities or social sciences [3]		3
	Credit Hours	16
Sophomore		
Semester 1		
CHEM 531	Organic Chemistry I [4]	5
MATH 243	Calculus II	5
PHYS 313	Physics for Scientists I	4
PHYS 315	University Physics Lab I	1
	Credit Hours	15
Semester 2		
CHEM 532	Organic Chemistry II	5
PHYS 314	Physics for Scientists II	4
PHYS 316	University Physics Lab II	1
MATH 344	Calculus III	3
General Education course in fine arts, humanities or social sciences [3]		3
	Credit Hours	16
Junior		
Semester 1		
CHEM 523	Analytical Chemistry	4
CHEM 545	Physical Chemistry I	3
BIOL 210	General Biology I	4
General Education course in fine arts, humanities or social sciences [3]		3
	Credit Hours	14
Semester 2		
CHEM 524	Instrumental Methods of Chemical Analysis	4
CHEM 546	Physical Chemistry II	3
CHEM 661	Principles of Biochemistry	3
General Education course in fine arts, humanities or social sciences [3]		3
General Education course in fine arts, humanities or social sciences [3]		3
	Credit Hours	16
Senior		
Semester 1		
CHEM 514	Inorganic Chemistry	3
CHEM 547	Physical Chemistry Lab	2
CHEM 690	Independent Study and Research	2-3
Professional electives		3-4
General Education course in fine arts, humanities or social sciences [3]		3
	Credit Hours	13-15
Semester 2		
CHEM 615	Advanced Inorganic Chemistry	3
CHEM 616	Inorganic Chemistry Lab	2
Electives		6
General Education course in fine arts, humanities or social sciences [3]		3
	Credit Hours	14
	Total Credit Hours	120-122

[2] Not needed if two years of high school algebra, one year of high school geometry and one-half year of high school trigonometry taken.

[3] Please see WSU general education requirements (p. 57).

[4] CHEM 531, CHEM 514 and CHEM 523 all have CHEM 212 as a prerequisite and can be taken in any order.

Applied Learning

Students in the BS in chemistry program are required to complete an applied learning or research experience to graduate from the program.

The requirement can be met by completing at least one semester of undergraduate research, by enrollment in CHEM 690.

BS in Chemistry - Premedicine

This program is designed for students intending to pursue postgraduate education in medicine, pharmacy, optometry, dentistry, veterinary medicine, or other health professions. Students who intend to pursue graduate studies in chemistry or biochemistry should consider the BS in chemistry degree program (either the chemistry or biochemistry option).

The following courses[1] are required for the BS in chemistry — premedicine:

Course	Title	Hours
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 523	Analytical Chemistry	4
CHEM 531	Organic Chemistry I	5
CHEM 532	Organic Chemistry II	5
CHEM 662	Biochemistry I	3
CHEM 663	Biochemistry II	3
CHEM 664	Biochemistry Laboratory	3
CHEM 690	Independent Study and Research	2
Select one of the following (CHEM 605 strongly recommended):		3
CHEM 605	Medicinal Chemistry	
HS 301	Clinical Pharmacology	
Select one additional chemistry course numbered above 500 (except 700/701)		3
Select a one-year sequence of physics courses, including lab, numbered above 200		10
MATH 242	Calculus I	5
MATH 243	Calculus II	5
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 419	Genetics	4
BIOL 223 & 223L	Human Anatomy and Physiology and Human Anatomy/Physio Lab	5
Select one of the following courses		4-5
BIOL 220	Introduction to Microbiology	
BIOL 330	General Microbiology	
BIOL 420	Molecular Cell Biology	
HS 600	Advanced Clinical Anatomy	5
STAT 370	Elementary Statistics	3
PSY 111	General Psychology	3
Total Credit Hours		93-94

[1] And their necessary prerequisites.

Applied Learning

Students in the BS in chemistry — premedicine program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing at least one semester of undergraduate research, by enrollment in CHEM 690.

Biochemistry Field Major

The departments of biological sciences and chemistry participate jointly in this program. Students selecting this major should seek the advice of one of the departmental advisors or chairpersons as early as possible.

The required courses are:

Course	Title	Hours
CHEM 211 & CHEM 212	General Chemistry I and General Chemistry II	10
CHEM 523	Analytical Chemistry	4
CHEM 531 & CHEM 532	Organic Chemistry I and Organic Chemistry II	10
CHEM 662 & CHEM 663	Biochemistry I and Biochemistry II	6
CHEM 664	Biochemistry Laboratory	3
CHEM 666	Special Topics in Biochemistry	3
or BIOL 666	Special Topics in Biochemistry	
CHEM 669	Research In Biochemistry	2
or BIOL 669	Research In Biochemistry	
BIOL 210 & BIOL 211	General Biology I and General Biology II	8
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4
Select one of the following:		5-6
MATH 112	Precalculus Mathematics	
MATH 111 & MATH 123	College Algebra and College Trigonometry	
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	10
Biochemistry Electives — select 21 credit hours in consultation with a biochemistry academic advisor		21
Total Credit Hours		90-91

Applied Learning

Students in the BS — field major in biochemistry program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing at least one semester of undergraduate research, by enrollment in CHEM 669.

Chemistry/Business Field Major

The Charles M. Buess program in chemistry/business is designed for students who wish to pursue careers in pharmaceutical or chemical sales, management, advertising and other related areas, and may be appropriate for those intending to open private practices in medicine, dentistry, veterinary medicine, etc. Students selecting this option should contact an advisor in the department of chemistry as early as possible.

This program requires:

Course	Title	Hours
CHEM 211 & CHEM 212	General Chemistry I and General Chemistry II	10
CHEM 523	Analytical Chemistry	4
CHEM 514	Inorganic Chemistry	3-4
or CHEM 524	Instrumental Methods of Chemical Analysis	
CHEM 531 & CHEM 532	Organic Chemistry I and Organic Chemistry II	10
Select one of the following:		3-6
CHEM 661	Principles of Biochemistry	
CHEM 662 & CHEM 663	Biochemistry I and Biochemistry II	
MATH 144	Business Calculus	3-5
or MATH 242	Calculus I	
ACCT 210 & ACCT 220	Financial Accounting and Managerial Accounting	6

ECON 201 & ECON 202	Principles of Macroeconomics and Principles of Microeconomics	6
BLAW 431	Legal Environment of Business [1]	3
FIN 340	Financial Management I [1]	3
MGMT 360	Principles of Management [1]	3
MKT 300	Marketing [1]	3
MKT 405	Consumer Behavior [1]	3
MKT 608	Selling and Sales Force Management [1]	3
Total Credit Hours		63-69

[1] Denotes an upper-division course.

Minor in Chemistry

The chemistry minor consists of at least 16 credit hours of chemistry courses:

Course	Title	Hours
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
Select at least 6 credit hours from the following:		6
CHEM 514	Inorganic Chemistry	
CHEM 523	Analytical Chemistry	
CHEM 524	Instrumental Methods of Chemical Analysis	
CHEM 531	Organic Chemistry I	
CHEM 532	Organic Chemistry II	
CHEM 545	Physical Chemistry I	
CHEM 546	Physical Chemistry II	
CHEM 661	Principles of Biochemistry	
Total Credit Hours		16

The 6 credit hours of upper-division courses must be taken at WSU. A 2.000 GPA is required for all chemistry courses taken.

Communication, Elliott School of

The Elliott School of Communication offers an integrated major in communication leading to the Bachelor of Arts (BA) degree. Students can develop a special (open) emphasis that respects their background and experience and is consistent with their educational and professional goals, or choose a structured emphasis in strategic communication, journalism, electronic media or integrated marketing communication.

This comprehensive communication degree has three distinguishing characteristics:

1. It is interdisciplinary in nature, reflecting the contemporary belief that all communication media are engaged in essentially the same functions (gathering information and creating and disseminating messages) and that the present-day communication professional must be schooled in the basic skills — writing, speaking and visual communication — and must develop the ability to plan, organize, evaluate and think strategically. Founded on the principle that communication specialists should also be communication generalists, this degree program combines disciplinary strengths in an inter-disciplinary matrix.
2. It is consistent with the mission of Wichita State University to offer programs that are responsive to the needs of the urban community that the university serves. The Kansas communication industry has its focus in Wichita, the major media center of the state.
3. Its location allows the program and its students to take full advantage of the communication opportunities afforded by the largest city in Kansas. The region of the state served by WSU includes one public and four commercial television stations, more than 15 radio stations, nine daily and 32 weekly newspapers, more than 25 advertising agencies, and a range of international, national, regional and local industries, businesses and public agencies, many with substantial communication operations. This setting allows students to combine academic and professional interests in a program that matches concept with example, education with experience.

Advising Requirements

The undergraduate advisor(s) will advise all premajors in communication to help students understand and attempt to meet the requirements for their degree. After successfully completing the Grammar, Spelling and Punctuation test, students will be assigned a faculty advisor, who will help them select their emphasis area or develop an open emphasis, which requires preparation of an undergraduate plan of study. Students are strongly encouraged to meet with their advisors at least once a semester while they are enrolled.

Communication Core Courses

Course	Title	Hours
COMM 130	Communication and Society	3
COMM 190	Introduction to Human Communication	3
COMM 301	Writing for the Mass Audience	3
COMM 305	Visual Technologies	3
COMM 306	Introduction to Multimedia	3
COMM 325	Speaking in Business and the Professions	3
COMM 430	Communication Research and Inquiry	3
COMM 535	Communication Analysis and Criticism	3
COMM 630	Communication Law and Responsibility	3
COMM 631	Historical and Theoretical Issues in Communication	3

Majors in Communication

- BA in Communication - Open Emphasis (p. 225)
- BA in Communication - Electronic Media Emphasis (p. 225)
- BA in Communication - Integrated Marketing Communications Emphasis (p. 225)
- BA in Communication - Journalism Emphasis (p. 225)
- BA in Communication - Strategic Communication Emphasis (p. 226)
- Bachelor of General Studies (p. 226)
- Field Major (p. 226)
- Departmental Honors in Communication (p. 226)

Minors in Communication

- Minor in Communication (p. 227)
- Minor in Graphic Design (p. 227)
- Minor in Graphic Design Communication (p. 227)

Courses in Communication

- Communication (COMM) (p. 355)

BA in Communication - Electronic Media Emphasis

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), and complete a minimum of 45 credit hours in communication, including 21 credit hours in the communication core. At least 24 credit hours must be in the following structured emphasis area.

Course	Title	Hours
Communication Core Courses		
COMM 130	Communication and Society	3
or COMM 190	Introduction to Human Communication	
COMM 301	Writing for the Mass Audience	3
COMM 325	Speaking in Business and the Professions	3
COMM 535	Communication Analysis and Criticism	3
COMM 305	Visual Technologies	3
or COMM 306	Introduction to Multimedia	
Select two of the following:		6
COMM 430	Communication Research and Inquiry	
COMM 630	Communication Law and Responsibility	
COMM 631	Historical and Theoretical Issues in Communication	
Electronic Media Emphasis Courses		
COMM 304	Studio Video Production	3
COMM 305	Visual Technologies [1]	3
or COMM 306	Introduction to Multimedia	
COMM 406	Audio Production	3
COMM 512	Principles of Video Production	3
COMM 604	Video Storytelling	3
COMM 609	Interactive Media Production	3
Select 6 credit hours of upper-division communication elective credit		6
Total Credit Hours		45

[1] Both COMM 305 and COMM 306 are required in the Electronic Media emphasis area.

BA in Communication - Integrated Marketing Communication Emphasis

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), complete a minimum of 39 credit hours in communication, including 21 credit hours in the communication core. At least 18 credit hours must be in the following structured emphasis area. Students must also complete MKT 300 and MKT 405.

Course	Title	Hours
Communication Core Courses		
COMM 130	Communication and Society	3
or COMM 190	Introduction to Human Communication	
COMM 301	Writing for the Mass Audience	3
COMM 325	Speaking in Business and the Professions	3
COMM 535	Communication Analysis and Criticism	3
COMM 305	Visual Technologies	3
or COMM 306	Introduction to Multimedia	
Select two of the following:		6
COMM 430	Communication Research and Inquiry	
COMM 630	Communication Law and Responsibility	
COMM 631	Historical and Theoretical Issues in Communication	
Integrated Marketing Communications Emphasis Courses		
COMM 324	Integrated Marketing Communication	3
COMM 450	Integrated Marketing Communication Strategy	3
COMM 502	Public Information Writing	3
COMM 525	Advertising Copywriting	3
Select 3 credit hours of upper-division communication elective credit		3
COMM 626	Integrated Marketing Communications Campaigns	3
MKT 300	Marketing	3
MKT 405	Consumer Behavior	3
Total Credit Hours		45

BA in Communication - Journalism Emphasis

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), and complete a minimum of 45 credit hours in communication, including 21 credit hours in the communication core. At least 24 credit hours must be in the following structured emphasis area.

Course	Title	Hours
Communication Core Courses		
COMM 130	Communication and Society	3
or COMM 190	Introduction to Human Communication	
COMM 301	Writing for the Mass Audience	3
COMM 325	Speaking in Business and the Professions	3
COMM 535	Communication Analysis and Criticism	3
COMM 305	Visual Technologies	3
or COMM 306	Introduction to Multimedia	
Select two of the following:		6
COMM 430	Communication Research and Inquiry	
COMM 630	Communication Law and Responsibility	
COMM 631	Historical and Theoretical Issues in Communication	
Journalism Emphasis Courses		
COMM 401	Reporting the News	3
COMM 510	Editing For Print	3
COMM 512	Principles of Video Production	3
COMM 500	Advanced News and Feature Writing	3
or COMM 622	Studio B: Live Television News	
Select 12 credit hours of journalism-related electives		12
Total Credit Hours		45

BA in Communication - Open Emphasis

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major) and complete a minimum of

39 credit hours in communication, including 21 credit hours in the communication core. At least 18 credit hours must be in the open emphasis area. The 18 credit hours should be selected in consultation with a faculty advisor.

Course	Title	Hours
Communication Core Courses		
COMM 130	Communication and Society	3
or COMM 190	Introduction to Human Communication	
COMM 301	Writing for the Mass Audience	3
COMM 325	Speaking in Business and the Professions	3
COMM 535	Communication Analysis and Criticism	3
COMM 305	Visual Technologies	3
or COMM 306	Introduction to Multimedia	
Select two of the following:		6
COMM 430	Communication Research and Inquiry	
COMM 630	Communication Law and Responsibility	
COMM 631	Historical and Theoretical Issues in Communication	
Select 18 credit hours of open emphasis electives with advisor approval.		18
Total Credit Hours		39

Open Emphasis

Students can develop and propose an open emphasis more appropriate for their interests and needs than a structured emphasis area and which respects their background and experience. These proposals must be developed by students in consultation with a faculty advisor, be substantially different from the structured emphases available, and be coherent and justifiable to a faculty committee, which will review and act on these proposals at specified times during the academic year. Each student must submit for approval an open emphasis plan of study to the Undergraduate Admissions Committee of the Elliott School of Communication at the beginning of the student's junior year or upon completion of 18 credit hours in the major.

BA in Communication - Strategic Communication Emphasis

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major) and complete a minimum of 39 credit hours in communication, including 21 credit hours in the communication core. At least 18 credit hours must be in the following structured emphasis area.

Course	Title	Hours
Communication Core Courses		
COMM 130	Communication and Society	3
or COMM 190	Introduction to Human Communication	
COMM 301	Writing for the Mass Audience	3
COMM 325	Speaking in Business and the Professions	3
COMM 535	Communication Analysis and Criticism	3
COMM 305	Visual Technologies	3
or COMM 306	Introduction to Multimedia	
Select two of the following:		6
COMM 430	Communication Research and Inquiry	
COMM 630	Communication Law and Responsibility	
COMM 631	Historical and Theoretical Issues in Communication	
Strategic Communication Emphasis Courses		
Select five of the following:		15
COMM 302	Interpersonal Communication	
COMM 312	Nonverbal Communication	
COMM 313	Argumentation and Advocacy	
COMM 321	Introduction to Film Studies	
COMM 328	Teamwork, Leadership and Group Communication	
COMM 335	International and Intercultural Communication	
COMM 502	Public Information Writing	
COMM 511	Strategic Communication in Organizations	
COMM 640	Issues in Corporate Communication	
COMM 660	Seminar in Communication	
or COMM 662	Seminar in Communication	
Elective		
Select one additional course in consultation with and advisor		3
Total Credit Hours		39

Bachelor of General Studies - Communication

Students seeking a BGS degree in the Elliott School of Communication may elect either a 15- to 21-credit-hour concentration in communication (as the focal or primary concentration) or a 6- to 12-credit-hour concentration (as one of two secondary concentrations taken in addition to the primary concentration). Some or all of the upper-division coursework may be in the communication core courses.

Field Major - Communication

Students seeking a field major may elect either an 18-credit-hour concentration in communication (as the major area of study) or a 9-credit-hour concentration in communication (as one of two allied departments taken in addition to the major area of study). Some or all of the upper-division coursework may be in the communication core courses.

Departmental Honors in Communication

Students must have a 3.250 GPA overall and must maintain at least a 3.500 GPA in communication as well as in departmental honors courses in communication to earn departmental honors. Students must apply for and be admitted to departmental honors in communication before their senior year. The departmental honors track in communication requires:

Course	Title	Hours
COMM 535	Communication Analysis and Criticism	3
Select two of the following:		6
COMM 430	Communication Research and Inquiry	
COMM 630	Communication Law and Responsibility	
COMM 631	Historical and Theoretical Issues in Communication	

COMM 633	Senior Honors Project [1]	3
Total Credit Hours		12

[1] To be taken only after completing two of the other courses in the departmental honors track.

Minor in Communication

A minor in communication consists of two courses from the communication core plus at least 12 credit hours of electives in communication chosen with the approval of a faculty advisor (6 of the 12 credit hours must be at the 300-level or above).

Minor in Graphic Design

A ***minor in graphic design*** is also available to communication students through the graphic design department in fine arts.

A minor in graphic design includes 15 credit hours in graphic design courses. It is available to any student whose major area is outside the School of Art, Design and Creative Industries.

Course	Title	Hours
Introductory Sequence		
ARTG 216	Typography I	3
ARTG 234	Introduction to Graphic Design	3
ARTG 235	Graphic Design Concepts	3
ARTG 490	Graphic Design Applications	3
Additional Course		
Select an additional course from the following:		3
ARTG 316	Typography II	
ARTG 490	Graphic Design Applications (as a repeat)	
ARTG 491	Interactive Design	
ARTG 530	Seminar in Graphic Design	
Or one 300+ course in graphic design chosen in consultation with an advisor		
Total Credit Hours		15

Minor in Graphic Design Communication

A ***minor in graphic design communication*** is available to any student working toward a bachelor of fine arts graphic design degree. This minor consists of 15 credit hours made up of the following 3-credit-hour courses:

Course	Title	Hours
COMM 301	Writing for the Mass Audience	3
COMM 324	Integrated Marketing Communication	3
COMM 510	Editing For Print	3
COMM 525	Advertising Copywriting	3
COMM 626	Integrated Marketing Communications Campaigns	3
An additional 1-credit-hour course is strongly recommended to students who pursue this minor:		
COMM 472	Senior Portfolio Seminar	
Total Credit Hours		15

Criminal Justice, School of

WSU's School of Criminal Justice brings together the departments of criminal justice, homeland security and forensic sciences to form a unique and diverse curriculum to better serve the needs of students who will work in an ever-changing urban and global community. The School of Criminal Justice is also the academic home for the Reserve Officers' Training Corps program (ROTC). Additionally, the Midwest Criminal Justice Institute (MCJI) and the Regional Community Policing Training Institute (RCPTI) provide opportunities to blend teaching, research and service. As a result, the School of Criminal Justice not only serves as a quality educational unit for students, but also functions as a research and service unit that assists with a broader range of needs identified in the community.

Criminal Justice

The Criminal Justice Program offers the Bachelor of Science (BS) and Master of Arts (MA) in criminal justice degrees. Both degrees can be completed in the classroom or online. These degree programs are designed to provide preservice and inservice students with a broad educational background in all aspects of the criminal justice field. The Bachelor of Science degree programs are described in the following pages.

Majors in Criminal Justice

- BS in Criminal Justice (p. 227)
- BS in Homeland Security (p. 228)

Minors in Criminal Justice

- Minor in Criminal Justice (p. 228)
- Minor in Homeland Security (p. 228)

Courses in Criminal Justice

- Criminal Justice (CJ) (p. 347)
- Homeland Security (HLS) (p. 409)

BS in Criminal Justice

Program Requirements

A minimum total of 120 credit hours is required for the BS in criminal justice and includes at least 36 credit hours of major courses (but not more than 50 credit hours will count toward the BS degree) that must be completed with a minimum grade point average of 2.500. ENGL 210 and CJ 360 are additional requirements. In addition to meeting the requirements of the WSU General Education Program (p. 57) and the requirements of Fairmount College of Liberal Arts and Sciences (including the foreign language requirement), students in the BS in criminal justice must take the following courses:

Course	Title	Hours
Core Courses		
CJ 191	Introduction to Criminal Justice	3
CJ 315	Criminal Law	3
CJ 320	Criminal Procedure	3
CJ 391	Corrections	3
CJ 392	Law Enforcement	3
CJ 394	Courts & Judicial Systems	3
CJ 407	Introduction to Research Methods	3
CJ 593	Crime Causation and Criminal Justice Policy	3
CJ 598	Contemporary Issues in Criminal Justice	3
Electives		
Select 9 credit hours of electives (there is a maximum of 6 credit hours total allowed in CJ 481 and CJ 483)		9
Total Credit Hours		36

Course	Title	Hours
Additional College Requirements		
SPAN 212	Spanish for Law Enforcement (required for CJ students to fulfill the LAS foreign language requirement)	5
Total Credit Hours		5

Students may take 14 additional credit hours beyond the 36 credit hours required for the major (for a total of 50 credit hours).

Applied Learning

Students in the BS in criminal justice program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by successfully completing CJ 407 Introduction to Research Methods.

Students in the traditional course have a hands-on experience serving or benefiting a community agency. Research questions are developed in conjunction with the agent of the agency identified at the beginning of each semester.

Students in the online course learn how to apply the course concepts thus far. Each student identifies four research study ideas directly linked to their everyday lives.

BS in Homeland Security

The Bachelor of Science in homeland security is designed to provide preservice and inservice students with a broad educational background in all aspects of the homeland security field. The BS in homeland security is a four-year course of study grounded in the liberal arts and sciences, along with a core homeland security curriculum. The Bachelor of Science degree program is described below.

Program Requirements

A minimum total of 120 credit hours is required for the BS in homeland security and includes at least 36 credit hours in the major (but not more than 50 credit hours will count toward the BS degree). ENGL 210 is an additional requirement. In addition to meeting the requirements of the WSU General Education Program (p. 57), the Fairmount College requirements (including the foreign language requirement) and the university requirements for the Bachelor of Science degree, students must complete 33 credit hours of core courses and 3 credit hours of electives. Students may take 14 additional credit hours beyond the 36 credit hours required for the major (for a total of 50 credit hours).

Course	Title	Hours
Core Courses for Major		
HLS 190	Introduction to Homeland Security	3
HLS 310	Emergency Management	3
HLS 312	Risk Assessment	3
HLS 320	Border Security	3
HLS 330	Legal Issues in Homeland Security	3
HLS 401	Cyber Security	3
HLS 403	Physical Security	3
HLS 405	Intelligence Process	3
CJ 407	Introduction to Research Methods	3
HLS 420	Terrorism	3
CJ 510	Crime and Transportation	3
College Requirements		
ENGL 210	Composition: Business, Professional and Technical Writing	3
SPAN 212	Spanish for Law Enforcement	5
Electives		3
CJ 320	Criminal Procedure	
CJ 343	Special Investigations	
CJ 420	Criminal Evidence	
CJ 451	International Criminal Justice	
HLS 470A	Immigration Policy & Politics	
HLS 470B	The History of U.S. Homeland Security	
CJ 501	Integrity in Public Service	
CJ 516	Profiling	
CJ 530	Private Security	
CJ 601	Digital Investigations	
Total Credit Hours		44

Applied Learning

Students in the BS in homeland security program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by conducting thorough in-person interviews and discussions with local/regional or federal officials, and by analyzing and presenting the information obtained, which will then be included as part of the overall course learning experience and grade assessment.

Minor in Criminal Justice

The minor in criminal justice consists of at least 18 credit hours of criminal justice courses and must include:

Course	Title	Hours
CJ 191	Introduction to Criminal Justice	3
Select two of the following:		6
CJ 391	Corrections	
CJ 392	Law Enforcement	
CJ 394	Courts & Judicial Systems	
CJ 593	Crime Causation and Criminal Justice Policy	
Select 9 additional credit hours of criminal justice courses		9
Total Credit Hours		18

Minor in Homeland Security

The minor in homeland security consists of 18 credit hours of homeland security and must include:

Course	Title	Hours
HLS 190	Introduction to Homeland Security	3
Select five courses from the following		15
HLS 310	Emergency Management	
HLS 320	Border Security	
HLS 330	Legal Issues in Homeland Security	
HLS 401	Cyber Security	
HLS 405	Intelligence Process	
HLS 420	Terrorism (Criminal Evidence)	
CJ 510	Crime and Transportation	
Total Credit Hours		18

Forensic Sciences

The forensic sciences program offers the Bachelor of Science (BS) in forensic sciences degree. This degree program is designed to prepare students for entry-level work in a forensic sciences laboratory that operates within the context of the criminal investigation and crime detection processes.

Program. The forensic sciences program consists of a minimum of 91 credit hours involving courses from chemistry, biological sciences, anthropology, psychology, criminal justice and forensic sciences. Some of these required courses may also satisfy the university's general education requirements. Students must also satisfy Fairmount College of Liberal Arts and Sciences and university requirements for the Bachelor of Science degree.

Majors in Forensic Sciences

- BS in Forensic Sciences (p. 229)

Courses in Forensic Sciences

- Forensic Sciences (FS) (p. 395)

BS in Forensic Sciences

Program Requirements

In addition to meeting the requirements of the WSU General Education Program (p. 57), and the requirements of Fairmount College of Liberal Arts and Sciences (p. 213), students in the BS in forensic sciences program must take the following courses:

Course	Title	Hours
Required Courses		
CJ 191	Introduction to Criminal Justice	3
CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 531	Organic Chemistry I	5
CHEM 532	Organic Chemistry II	5
CHEM 523	Analytical Chemistry	4
CHEM 524	Instrumental Methods of Chemical Analysis	4
CHEM 661	Principles of Biochemistry	3
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 223	Human Anatomy and Physiology	5
BIOL 330	General Microbiology	5
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4
ANTH 101 & ANTH 106	Biological Anthropology and Biological Anthropology Lab	4
ANTH 557	Human Osteology	3
ANTH 600	Forensic Anthropology	3
STAT 370	Elementary Statistics	3
CJ 315	Criminal Law	3
CJ 420	Criminal Evidence	3
FS 450	Forensic Identification of Marijuana	1
FS 451	Forensic Identification of Narcotics and Other Illicit Substances	1
FS 452	Forensic Toxicology Alcohol	1
FS 453	Forensic Serology	1
FS 454	Fingerprint Development and Analysis	1
FS 455	Forensic Arson Analysis	1
FS 498	Seminar in Forensic Sciences Techniques I	3
FS 499	Seminar in Forensic Sciences Techniques II	3
Electives		
Select electives sufficient to meet the 120 credit hours required for the program		
Total Credit Hours		91

Applied Learning

Students in the BS in forensic sciences program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by successfully completing all required core courses (91 credit hours).

The curriculum, which is made up of all core courses in the hard sciences, requires students to participate hands on in labs, classroom experiments, etc., enabling each major to receive a great deal of experiential learning prior to graduating.

Earth, Environmental and Physical Sciences

The earth, environmental and physical sciences (EEPS) program, coadministered by the departments of geology and physics, combines the disciplines of geology, physics and environmental science, and supporting fields such as biology and chemistry. It is designed to train a new generation of scientists, professionals and educators who will be well equipped with general knowledge and skills in methodology, critical and creative thinking in scientific research, and advanced knowledge and skills in geology, environmental science or physics.

Although there is no undergraduate degree in earth, environmental and physical sciences (EEPS), the following EEPS courses may be used toward an undergraduate degree in physics or geology.

Courses in Earth, Environmental and Physical Sciences

- Earth, Environmental and Physical Sciences (EPPS) (p. 376)

Economics

The economics major in Fairmount College provides excellent preparation for law school, for additional academic study in economics, business and other fields, and for careers in public service. The study of economics is useful in helping students develop both their skill in critical thinking and their ability to use analytical tools to solve complex problems. It is a major that lays a foundation for many career paths.

Teaching of Economics

Because Kansas Department of Education regulations governing the licensure of secondary economics teachers are very specific and contain requirements beyond the economics major, students planning to be teachers of economics should contact a secondary social studies advisor in the College of Applied Studies for program planning.

Majors in Economics

- BA in Economics (p. 229)

Minors in Economics

- Minor in Economics (p. 230)

Courses in Economics

- Economics (ECON) (p. 370)

BA in Economics

The economics major in Fairmount College requires a minimum of 37 credit hours and a maximum of 39 credit hours in economics. MATH 144 or MATH 242 is required. Students who plan to major in economics should consult with the undergraduate advisor in the department of economics in the Barton School of Business. Enrollment in all upper-division economics classes requires junior standing and completion of all course prerequisites. Students in this major or minor must achieve a minimum 2.250 GPA. The following courses are required:

Course	Title	Hours
MATH 144	Business Calculus	3-5
or MATH 242	Calculus I	
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
ECON 231	Introductory Business Statistics	3
Please select either the three BADM courses, or the PC course for 3 credit hours		3
BADM 161 & BADM 162 & BADM 163	Business Software: Word and Business Software: Excel and Business Software: Access and PowerPoint	
or PC 105	Introduction to Computers and Applications	
ECON 232	Statistical Software Applications for Business [1]	1
ECON 301	Intermediate Macroeconomics	3
ECON 302	Intermediate Microeconomics	3
Select 15 credit hours in upper-division economics to be chosen in consultation with an undergraduate economics advisor; at least 9 credit hours in economics, with up to 6 credit hours outside the department, with advisor's consent		15
Total Credit Hours		37-39

[1] Prerequisite for ECON 232 is either (BADM 161, BADM 162 & BADM 163) or PC 105.

Note: ECON 201 and ECON 202 may be taken as part of Fairmount College general education requirements. ECON 400, ECON 401 and ECON 481 may not be used in the economics major.

Minor in Economics

A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of:

Course	Title	Hours
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
Select 9 credit hours of upper-division economics classes		9
Total Credit Hours		15

Nine (9) credit hours of the economics classes must be in residency at WSU, and a minimum 2.250 GPA is required. ECON 481 may not be used in the economics minor.

English Language and Literature

The English department offers a broad and flexible program of courses that are central to a liberal arts education while providing students the opportunity for personal enrichment and a variety of career possibilities. The department offers degree programs in creative writing, literature and English teaching, as well as a range of courses in linguistics. Students who combine an English major with substantial work in other disciplines will find the knowledge and communication skills acquired in their work in English a valuable asset as they seek entrance into a wide range of fields that include communication, education, government, law and business.

Teaching

Students must file a declaration of English teaching major with an assigned English-education advisor at the time they apply to the teacher education program. A 2.500 grade point average in English is required of all majors applying for admission to the professional semester of student teaching in middle and secondary school English.

Majors in English Language and Literature

- Dual/Accelerated Bachelor's to Master's Program in English (p. 230)
- BA in Creative Writing (p. 231)
- BA in English (p. 231)
- BA in English Teaching - Middle Schools (p. 232)
- BA in English Teaching - Secondary Schools (p. 232)
- Certificate in Graphic Narrative Coding and Accessibility

Minors in English Language and Literature

- Minor in Creative Writing (p. 232)
- Minor in English (p. 232)

Courses in English Language and Literature

- English (ENGL) (p. 377)

Note: Courses numbered 000–099 do not count toward any degree program.

Dual/Accelerated Bachelor's to Master's Program in English

The dual/accelerated bachelor's to master's program in English is designed to prepare qualified students for graduate work in English at WSU through a coordinated program leading to both a bachelor's and master's degree. A student in the program will be allowed to enroll in courses for graduate credit while completing undergraduate degree requirements.

Admission

To be considered for admission to the program, the following must be satisfied:

1. An undergraduate GPA of 3.000 overall and 3.500 in English courses;
2. Completion of at least 60 credit hours of undergraduate study, with at least 18 credit hours remaining for completion of the undergraduate degree;
3. Completion of four English classes at the 300 level or above; and
4. Positive recommendation from at least one member of the English graduate faculty.

The student should apply for admission to the program during the semester prior to the first semester in which he or she intends to enroll in a course for graduate credit.

A student in the dual/accelerated program will be admitted to the MA program in English upon being awarded the bachelor's degree if all admission requirements for the master's program are satisfied at that time and the student has made continued satisfactory progress.

Program Requirements

Students admitted to the dual/accelerated program will be allowed to enroll in courses for graduate credit, including 800-level courses, prior to completing undergraduate degree requirements. At most 9 credit hours may be joint degree hours — hours taken for graduate credit at the 700 level (or above) that are also applied to both the bachelor's degree and master's degree program requirements. If this deviation is requested, joint-degree hours may not include workshop courses, undergraduate core curriculum courses, cooperative education courses, or courses that are prerequisite for the graduate program. A course taken for joint credit must be so identified at the time of enrollment in that course. Where courses specify differing requirements for graduate and undergraduate students (500–799), the student must meet the requirements for graduate students to apply the course to graduate credit. A student who has previously been admitted to a graduate degree program at Wichita State may not be admitted to the dual/accelerated program.

After initial admission, continuation in the program requires a continuing WSU undergraduate cumulative GPA of at least 3.000 and a GPA of at least 3.000 in courses taken for graduate credit. ENGL 700 must be included in the undergraduate program of study for students in the dual/accelerated program. (*Note:* ENGL 700 is normally offered only during fall semester. Students will be expected to plan accordingly.) Dual/accelerated students should also complete the English MA language requirement before completing the undergraduate degree. In addition to completing the undergraduate degree requirements for their major emphasis (English literature, creative writing, English education), all dual/accelerated students, regardless of their major emphasis, should complete all four courses in the 360–363 sequence before completing the undergraduate degree.

Upon admission to the dual/accelerated program the student is granted tentative admission to the graduate program in English, pending award of the undergraduate degree. The student should draw up a tentative plan of study in consult with the undergraduate coordinator and/or the graduate coordinator. This plan will be reviewed periodically by the undergraduate coordinator and the graduate coordinator. The student's progress in the program will be reviewed annually with a written progress report placed in the student's departmental file.

BA in Creative Writing

A student planning to major in creative writing must complete ENGL 101 and ENGL 102 and thereafter complete 33 credit hours of coursework in English, including the following courses. A minimum of 24 credit hours must be taken at the upper-division (300 or above) level.

Course	Title	Hours
Basic Requirements		
ENGL 101	College English I	3
ENGL 102	College English II	3
ENGL 322	Origins of Western Literature	3
or ENGL 323	World Literature	
ENGL 310	Nature of Poetry	3
ENGL 320	The Nature of Drama	3
or ENGL 330	The Nature of Fiction	
Select an English literature class numbered 300 or above		3
Major Requirements		
ENGL 285	Introduction to Creative Writing [1]	3
Skill Requirements		
Select at least 12 credit hours from the following:		12
ENGL 301	Fiction Writing [2]	
ENGL 303	Poetry Writing [2]	
ENGL 305	Creative Nonfiction Writing [2]	
ENGL 401	Fiction Workshop [2]	
ENGL 403	Poetry Workshop [2]	
ENGL 517	Scriptwriting I	
ENGL 518	Scriptwriting II	
ENGL 585	Writer's Tutorial: Prose Fiction [2]	
ENGL 586	Writer's Tutorial: Poetry [2]	
Or university honors English courses (1–3)		
Electives		
Select at least 6 credit hours of upper-division hours from any other area of emphasis within the department		6
Total Credit Hours		39

[1] To be completed with a grade of *B*- or better or receive departmental consent for further creative writing coursework.

[2] May be repeated once for credit.

Applied Learning

Students in the BA in creative writing program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successful completion of one of two courses: ENGL 401 Fiction Workshop, or ENGL 403 Poetry Workshop.

BA in English

A major consists of 33 credit hours, only 3 credits of which may be at the 200 level. The coursework is distributed as follows:

Course	Title	Hours
Basic Requirements (6 credit hours)		
Select one of the following courses for 3 credit hours:		3
ENGL 310	Nature of Poetry	
ENGL 320	The Nature of Drama	
ENGL 330	The Nature of Fiction	
Select one of the following for 3 credit hours:		3
ENGL 323	World Literature	
ENGL 346	American Multicultural Literature	
ENGL 365	African-American Literature	
Period Requirements (12 credit hours)		
Select one of the following for 3 credit hours:		3
ENGL 360	Major British Writers I	
ENGL 521	Medieval Literature	
ENGL 522	Renaissance Literature	
ENGL 524	Restoration and 18th Century Literature	
Select one of the following for 3 credit hours:		3
ENGL 361	Major British Writers II	
ENGL 526	Romantic Literature	
ENGL 527	Victorian Literature	
ENGL 532	Modern British Literature	
Select one of the following for 3 credit hours:		3

ENGL 362	Major American Writers I	
or ENGL 503	American Literature I	
Select one of the following for 3 credit hours:		3
ENGL 363	Major American Writers II	
or ENGL 504	American Literature II	
Capstone (3 credit hours)		3
ENGL 590	Senior Seminar	
Electives (12 credit hours)		
Select 12 credit hours of work in other English courses, at least 6 of which must be taken at the 500–600 level, with no more than one course at the 200 level. Students may take the opportunity to focus their elective courses on a particular track for example: Professional Writing (e.g. ENGL 680, 681 686, etc); Linguistics/Language (ENGL 315, 316, 317, 318, 667, 672, etc.); Visual Texts (ENGL 307, 377, 508, 576)		12
Total Credit Hours		33

BA in English Teaching - Middle Schools

The major in the College of Applied Studies consists of 18 credit hours of content courses distributed as follows:

Course	Title	Hours
Language		
ENGL 315	Introduction to English Linguistics	3
ENGL 317	History of the English Language	3
Composition		
ENGL 680	Theory and Practice in Composition	3
Literature		
ENGL 322	Origins of Western Literature	3
or ENGL 323	World Literature	
ENGL 330	The Nature of Fiction	3
ENGL 346	American Multicultural Literature	3
or ENGL 365	African-American Literature	
Total Credit Hours		18

Teaching

Students must file a declaration of English teaching major with an assigned English-education advisor at the time they apply to the teacher education program. A 2.500 grade point average in English is required of all majors applying for admission to the professional semester of student teaching in middle and secondary school English.

BA in English Teaching - Secondary Schools

The major in either Fairmount College or the College of Applied Studies consists of 33 credit hours of content courses distributed as follows:

Course	Title	Hours
Language		
ENGL 315	Introduction to English Linguistics	3
ENGL 317	History of the English Language	3
Composition		
ENGL 680	Theory and Practice in Composition	3
Literature		
ENGL 322	Origins of Western Literature	3
or ENGL 323	World Literature	
ENGL 310	Nature of Poetry	3
ENGL 330	The Nature of Fiction	3
ENGL 340	Shakespeare	3
or ENGL 515	Studies in Shakespeare	
ENGL 346	American Multicultural Literature	3
or ENGL 365	African-American Literature	
ENGL 360	Major British Writers I	3
or ENGL 361	Major British Writers II	
ENGL 362	Major American Writers I	3
ENGL 363	Major American Writers II	3
Total Credit Hours		33

Teaching

Students must file a declaration of English teaching major with an assigned English-education advisor at the time they apply to the teacher education program. A 2.500 grade point average in English is required of all majors applying for admission to the professional semester of student teaching in middle and secondary school English.

Minor in Creative Writing

A minor with a creative writing sequence is available and consists of 12 credit hours of creative writing coursework including:

Course	Title	Hours
ENGL 285	Introduction to Creative Writing	3
Select 9 credit hours from the following skill courses:		9
ENGL 301	Fiction Writing [1]	
ENGL 303	Poetry Writing [1]	
ENGL 305	Creative Nonfiction Writing [1]	
ENGL 401	Fiction Workshop [1]	
ENGL 403	Poetry Workshop [1]	
ENGL 517	Scriptwriting I	
ENGL 518	Scriptwriting II	
ENGL 585	Writer's Tutorial: Prose Fiction [1]	
ENGL 586	Writer's Tutorial: Poetry [1]	
Or university honors English courses (1–3)		
Select one of the following:		3
ENGL 310	Nature of Poetry	
ENGL 320	The Nature of Drama	
ENGL 330	The Nature of Fiction	
Total Credit Hours		15

[1] May be repeated once for credit.

Minor in English

A minor consists of 15 credit hours and requires:

Course	Title	Hours
Select one of the following:		3
ENGL 310	Nature of Poetry	
ENGL 320	The Nature of Drama	
ENGL 330	The Nature of Fiction	
Select 12 additional credit hours in ENGL. At least 9 must be in upper-division work.		12
Total Credit Hours		15

Note: ENGL 101 and ENGL 102 are not counted toward a minor.

Certificate in Graphic Narrative Coding and Accessibility

Students interested in an applied learning experience coding and translating comics for accessibility, digital humanities and other uses work in project-based cohorts to render published comics into fully accessible forms.

Program Requirements

The certificate requires 12 credit hours. Students must have a cumulative grade point average of at least 2.000 for all courses comprising the certificate program and no grades below *C* are required for completion.

Course	Title	Hours
Required Courses		
ENGL 377	Graphic Novels	3
or ENGL 576	Advanced Studies in the Graphic Novel	
ID 405	Seminar in Applied Innovation	1-6
Electives		
In consultation with program advisor, select sufficient courses to satisfy the 12 credit hour requirement. Elective courses may include the following		
CS 498	Individual Projects	
CS 798	Individual Projects	
LING 315	Introduction to English Linguistics	
THEA 590	Theatre: Special Topics	
ENGL 377	Graphic Novels	
ENGL 579	Introduction to Digital Humanities	
FREN 540	French Literature in English Translation	
SPAN 557	Principles of Translation and Interpreting	
Total Credit Hours		12

Assessment

As part of the requirements for the certificate, students are administered diagnostic pre- and post-tests covering their understanding of accessibility, translation, visual grammar, coding and digital humanities. Students need not achieve a passing score in all areas, but it is expected that students completing the certificate will have achieved proficiency in at least three of five areas and will have shown improvement in most.

Continuation of the program is determined by an annual meeting of program faculty who review enrollments and diagnostic test scores.

Ethnic Studies

Ethnic studies is an interdisciplinary program whose primary focus is on developing knowledge, attitudes and skills to communicate effectively across cultural boundaries. Basic to the development of those knowledges, attitudes and skills is an understanding of and appreciation for the unique experiences of the various ethnic groups in the larger context of United States society. This discussion helps students understand the role of past experiences in influencing current race and ethnic relations. Students from all backgrounds engage in constructive debates and critical thinking and work diligently with dedicated faculty to develop strategies for harmonious living.

The ethnic studies program offers undergraduate degrees through the field major and the Bachelor of General Studies (BGS) options.

Majors in Ethnic Studies

- Field Major/Bachelor of General Studies (BGS) (p. 233)

Minors in Ethnic Studies

- Minor in Ethnic Studies (p. 233)

Courses in Ethnic Studies

- Ethnic Studies (ETHS) (p. 390)

BGS/FM in Ethnic Studies

A field major in ethnic studies requires 18 credit hours of coursework including:

Course	Title	Hours
ETHS 100	Introduction to Ethnic Studies	3
ETHS 210	Fundamentals of Cross-Cultural Communications	3
ETHS 332	The Native American	3
ETHS 360	Dealing with Diversity	3
ETHS 370	The Black Experience in America	3
Select one of the following:		3
ETHS 320	Martin Luther King	
ETHS 330	Ethnic America, 1500-1924	
ETHS 331	The Black Family	
ETHS 334	Ethnic America in the 20th Century	
ETHS 380	Native American Tribal Systems	
ETHS 381	Special Topics	
ETHS 400	The Black Child	
Total Credit Hours		18

Minor in Ethnic Studies

A minor in ethnic studies consists of at least 18 credit hours. The courses are to be approved by the student's advisor in the program.

Geography

Wichita State University does not offer a major in geography. GEOG 235 is intended to be a natural sciences course, while GEOG 125 and GEOG 210 are social sciences courses.

Minors in Geography

- Minor in Geography (p. 233)

Courses in Geography

- Geography (GEOG) (p. 396)

Minor in Geography

Students may minor in geography with 15 credit hours.

Course	Title	Hours
Select 9 credit hours of upper-division GEOG courses		9
Select 6 additional credit hours of GEOG courses		6
Total Credit Hours		15

At least 9 credit hours must be from WSU. A minor in geography can be useful to students majoring in history, anthropology and political science, or for anyone interested in globalization or in understanding the diverse world in which we live.

Geology

Geology is the comprehensive study of the solid earth, atmosphere, ocean, other planets and the fossil record of life. It also encompasses the study of the effects of human activities on the Earth's environment and the availability and extraction of natural resources. Earth science is interdisciplinary, and the study of geology frequently employs tools, concepts and theories from mathematics and the other natural sciences, including chemistry, biology and physics. Geologists work to solve problems of local and global perspectives related to all Earth systems. The study of minerals, rocks and fossils continues to be an essential and exciting component of a geologist's training.

Through the geology program at Wichita State, students may earn either a Bachelor of Arts (BA) or Bachelor of Science (BS) degree. The program also offers a minor in geology and courses designed to fulfill general education requirements in the natural sciences.

Candidates for either the BA or BS degree are required to contribute examples of their coursework and other scholarly achievements to the department's assessment program. Students also are required to take at least one integrating capstone course, preferable during their senior year. Capstone courses are identified below.

The department of geology also offers graduate degree work at the Master of Science level in the earth, environmental and physical sciences (EEPS) degree program. This program offers students advanced training in methodology, critical and creative thinking in scientific research, and advanced knowledge and skills in geology, environmental science or physics. For more information about this graduate program, see the Graduate Catalog.

Through the generosity of its alumni and industry supporters, the geology department proudly awards more than $20,000 annually in scholarships and awards to qualified undergraduate majors and graduate students. Contact the geology department office for a complete listing of scholarship amounts, qualifications and application procedures.

Active student associations for geology majors and other students interested in geology include the Geology Club, the student chapter of the American Association of Petroleum Geologists (AAPG), and Sigma Gamma Epsilon (SGE), the national geology honorary society. These clubs cosponsor such extra-curricular activities as field trips, visiting lecturers, short courses, attendance at academic conferences and social gatherings.

Majors in Geology

- BA in Geology (p. 234)
- BS in Geology (p. 234)

Minors in Geology

- Minor in Geology (p. 235)

Certificates in Geology

- Certificate in Environment and Sustainability (p. 235)

Courses in Geology

- Geology (GEOL) (p. 396)

BA in Geology

The BA degree program, providing flexible, broad training in the earth sciences, is for students who wish to combine the geology major with teacher preparation (K–12), environmental studies, land-use planning, science journalism, environmental law, natural resource management/business or similar majors. The BA degree also is suited to students discovering geology as an interest later in their college or life experience. This program represents a minimum proficiency. Students are strongly advised to elect additional courses in geology and supporting sciences if they are interested in pursuing graduate studies in the geosciences after earning the BA.

Program Requirements

A major with the BA requires a minimum of 30 credit hours in geology, including:

Course	Title	Hours
Required Core Courses		
GEOL 102	Earth Science and the Environment	4
or GEOL 111	General Geology	
GEOL 302	Earth and Space Sciences	3
GEOL 312	Historical Geology	4
GEOL 320	Mineralogy and Optical Mineralogy	4
GEOL 522	Sedimentology and Stratigraphy	4
GEOL 544	Structural Geology	3
Capstone Course		
Select one of the following capstone courses		3-6
GEOL 621	Geochemical Cycling	
GEOL 640	Field Geology	
GEOL 650	Geohydrology	
GEOL 678	Geologic Perspectives on Climatic Change	
Additional Courses		
Select an additional 6 credit hours of electives chosen from the catalog listings for geology to match the student's career interest and in consultation with an advisor from the geology department		6
Required Supporting Sciences [1]		
STAT 370	Elementary Statistics	3
MATH 112	Precalculus Mathematics	3-5
or MATH 123	College Trigonometry	
CHEM 103	Introductory General, Organic and Biochemistry	5
or CHEM 211	General Chemistry I	
PHYS 111	Introductory Physics (if the student did not have high school physics)	4
Total Credit Hours		46-51

[1] It is recommended that the required supporting sciences courses be taken prior to, or at least concurrently with, the required core courses in geology listed above.

Students interested in pursuing graduate degrees in environmental sciences should also consider taking PHYS 213 and PHYS 214, BIOL 210 and BIOL 418, CHEM 211 and CHEM 212, and MATH 242 or earning a BS degree in geology.

Applied Learning

Students in the BA in geology program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by taking either GEOL 640 or GEOL 650. Successful completion of either course will serve as fulfillment of the university's applied learning/research experience requirement.

BS in Geology

The BS degree program, providing comprehensive training in geology and allied natural sciences, prepares graduates for professional work in industry or government, as well as for graduate study in any field of

geoscience or environmental sciences. This program prepares students for the examination for the professional geologist license. Students who expect to earn the BS in geology within a minimum amount of time (four years as a full-time student) should have completed geometry, trigonometry, two years of algebra, and chemistry in high school.

Program Requirements

A major with the BS requires a minimum of 43 credit hours in geology, including:

Course	Title	Hours
Required Core Courses		
GEOL 111	General Geology	4
GEOL 312	Historical Geology	4
GEOL 320	Mineralogy and Optical Mineralogy	4
GEOL 324	Petrology and Petrography	3
GEOL 522	Sedimentology and Stratigraphy	4
GEOL 540	Field Map Methods	3
GEOL 544	Structural Geology	3
GEOL 570	Biogeology	3
Required Capstone Course		
GEOL 640	Field Geology	6
Additional Courses		
Select an additional 9 credit hours of upper-division geology electives chosen to match the student's career interest and in consultation with an advisor from the geology department. An additional elective capstone course is:		9
GEOL 650	Geohydrology	
Required Supporting Sciences [1]		
MATH 242 & MATH 243	Calculus I and Calculus II	10
STAT 370	Elementary Statistics	3
CHEM 211 & CHEM 212	General Chemistry I and General Chemistry II	10
Select one of the following combinations:		10
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	
PHYS 313 & PHYS 314	Physics for Scientists I and Physics for Scientists II [2]	
Total Credit Hours		76

[1] It is recommended that the required supporting sciences courses be taken prior to, or at least concurrently with, the required core courses in geology listed above.

[2] PHYS 313 requires PHYS 315 as corequisite. PHYS 314 requires PHYS 316 as corequisite.

Students interested in pursuing graduate degrees in environmental sciences should also consider taking BIOL 210 and BIOL 418.

Applied Learning

Students in the BS in geology program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by taking GEOL 640. Successful completion of this course will serve as fulfillment of the university's applied learning/research experience requirement.

Minor in Geology

A minor in geology consists of at least 15 credit hours of geology including:

Course	Title	Hours
GEOL 102	Earth Science and the Environment (with lab)	4
or GEOL 111	General Geology	
Select at least 11 additional credit hours in GEOL		11
Total Credit Hours		15

It is suggested that students minoring in geology consult with the department in selecting courses that would be most appropriate to their major field of study.

Certificate in Environment and Sustainability

This certificate program is open to all WSU undergraduate students.

Program Requirements

Completion of the certificate in environment and sustainability requires a total of 13 credit hours of course work. This includes completion of GEOL 200 Introduction to Environment and Sustainability (3 credit hours) upon filing a plan of study in the certificate, and the GEOL 490 Environment and Sustainability Seminar (1 credit hour) at the conclusion of the certificate program. The remainder of the course work in this certificate program (9 credit hours) will be from courses in the particular track chosen by the student.

Students can choose from one of four tracks:

1. Environmental Policy and Communication
2. Human Society and the Environment
3. Resource and Remediation Science and Technology
4. Environmental and Green Sciences

These tracks allow students to tailor their studies in the certificate program to suit their individual interests and educational goals. Students are required to pick a certificate track upon completion of GEOL 200 Introduction to Environment and Sustainability and register their choice with the director of the certificate program. Students are free to change their certificate track at any time; however, credit hours from a previous track will only count towards the new track if the courses are listed in both tracks.

Environment and sustainability is an area of rapid growth, innovation and research. Given the highly dynamic nature of this field, the certificate program is also dynamic to ensure that students gain the greatest value from the program. As such, the courses listed in each track will be regularly evaluated to ensure that they provide appropriate value and reflect state-of-the-art developments. As new relevant courses are introduced at WSU they may be added to the certificate program within the most appropriate track(s). Similarly, courses that are no longer taught may be dropped from the certificate structure. Alterations to the courses offered in the certificate program will be made in concert with the faculty of record and relevant department chair.

Course	Title	Hours
Required Courses		
GEOL 200	Introduction to Environment and Sustainability	3
GEOL 490	Environment and Sustainability Seminar	1
Tracks		
Select one of the following four tracks from which the bulk of the certificate classes will be taken (minimum of 9 total credit hours)		9
Environmental Policy and Communication Track		
PHIL 385	Engineering Ethics	

POLS 305	Environmental Politics
ENGL 232M	Ecology and the Wild in American Literature
ENGL 503	American Literature I
GEOL 300	Energy, Resources and Environment
PHIL 590AD	Environmental Ethics
Service Learning/Internship/Undergraduate Research Option	
Human Society and the Environment Track	
PHIL 300	Science and the Modern World
PHIL 385	Engineering Ethics
SOC 320	Contemporary Social Problems
SOC 338	Health & Lifestyle
SOC 346	Sociology of Globalization
SOC 534	Urban Sociology
PHIL 530	Ethics of Space Exploration
POLS 305	Environmental Politics
PHIL 590AD	Environmental Ethics
GEOL 300	Energy, Resources and Environment
BIOL 370	Introductory Environmental Science
WOMS 508	Women and the Environment
Service Learning/Internship/Undergraduate Research Option	
Resource and Remediation Science and Technology Track	
PHIL 385	Engineering Ethics
GEOL 300	Energy, Resources and Environment
GEOL 560	Geomorphology and Land Use
GEOL 650	Geohydrology
GEOL 690AK	Soils
GEOL 751	Advanced Geohydrology
BIOL 530	Applied and Environmental Microbiology
CHEM 531	Organic Chemistry I
CHEM 532	Organic Chemistry II
ENGT 370	Environmental Engineering Technology
ENGT 323	Introduction to Fluids
ENGT 490	Sustainable Power Generation
ENGT 492	Energy Management and Sustainability
ENGT 510	Solar and Wind Engineering
ENGT 600	Water and Wastewater Treatment
ENGT 610	Hydraulics and Hydrology
ME 673	Recovery of Engineering Materials
ME/PHYS 702	Energy and Sustainability
ME 360D	Sustainability and Technology
Service Learning/Internship/Undergraduate Research Option	
Environmental and Green Sciences Track	
GEOL 102	Earth Science and the Environment [1]
GEOL 111	General Geology [1]
GEOL 235	Meteorology
GEOL 300	Energy, Resources and Environment
GEOL 310	Oceanography
GEOL 560	Geomorphology and Land Use
GEOL 678	Geologic Perspectives on Climatic Change
GEOL 650	Geohydrology
GEOL 690AK	Soils
GEOL 751	Advanced Geohydrology
PHIL 590AD	Environmental Ethics
BIOL 370	Introductory Environmental Science
BIOL 418	General Ecology
BIOL 510	Ecosystem Management & Restoration
BIOL 530	Applied and Environmental Microbiology
BIOL 570	Conservation Biology
CHEM 211	General Chemistry I
CHEM 212	General Chemistry II
CHEM 531	Organic Chemistry I
CHEM 532	Organic Chemistry II
PHYS 761	Environmental Physics
Service Learning/Internship/Undergraduate Research Option	
Total Credit Hours	13

[1] Students may take GEOL 102 *or* GEOL 111 for credit towards this certificate.

Applied Learning

Students in the certificate in environment and sustainability are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing GEOL 490. Additionally, the various certificate tracks allow options for service learning, internships and undergraduate research to count towards credit in the certificate.

History

The purpose of WSU's Department of History is to illuminate the forces that have shaped our world and to provide a historical perspective for the future. To accomplish those goals, the department offers a flexible program of study. While students may focus on a specific area of concentration, the program introduces them to a variety of classes that assures them a foundation for an integrated liberal education. Combined with courses in other disciplines, the history major prepares students for entrance into a wide variety of career opportunities, including business, government, law, journalism, teaching, communication and public affairs.

Teaching of History

Because Kansas Department of Education regulations governing the certification of secondary history teachers are very specific, students planning to be teachers of history should contact a secondary social studies advisor in the College of Applied Studies for program planning beyond the requirements of the history major.

Majors in History

- BA in History (p. 236)

Minors in History

- Minor in History (p. 237)

Courses in History

- History (HIST) (p. 401)

BA in History

A major for the Bachelor of Arts (BA) degree requires the successful completion of a minimum of 33 credit hours in history, at least 15 of which must be earned at Wichita State. All majors complete:

Course	Title	Hours
HIST 300	Introduction to Historical Research and Writing	3
HIST 698	Historiography (PHIL 510 may be accepted in place of HIST 698)	3
Select 3 credit hours from the following		3
HIST 100	The Human Adventure: World Civilization Since 1500	
HIST 101	World Civilization to 1500	
HIST 102	History of Western Civilization Since 1648	
HIST 104	Topics in World History	
HIST 131	History of the United States: Colonial to 1865	3
or HIST 132	History of the United States Since 1865	
Select 12 credit hours in history, 6 of which must be upper-division (300-level or above)		12
Select 3 credit hours from each of the following areas at the 500 or 600 level		9
Ancient and medieval history		
Modern European history		
American history (including Latin America)		
Total Credit Hours		33

Applied Learning

Students in the BA in history program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by taking HIST 300 Introduction to Historical Research and Writing.

Minor in History

A minor in history requires students to complete a total of 15 credit hours in history.

Course	Title	Hours
Select 15 credit hours in history. Only 6 of those credit hours may be lower-division (100- and 200-level) courses		15
Total Credit Hours		15

Students who complete the minor are limited to 3 credit hours of HIST 310.

Interdisciplinary Liberal Arts and Sciences

Fairmount College is the home for interdisciplinary courses and programs. Among those are academic service courses such as Adult Seminar, Topics in Career Exploration, Global Issues, Introduction to Premedical Professions, and Application Process for Medical and Professional Schools. In these and other courses, students learn more about themselves, university life, preparation for careers, and the foundations of liberal arts and sciences. An interdisciplinary certificate program that enables students to focus coursework from several departments around a unique area — Great Plains Studies — is also offered through LASI. Further, the foundation courses for the Master of Arts in Liberal Studies are part of the LASI range of coursework. More information about LASI, its courses and its programs may be obtained through the LAS Advising Center, 115 Grace Wilkie Hall, or at the advising center webpage (http://wichita.edu/lasadvising/)[1].

Liberal Studies

WSU offers an interdisciplinary Master of Arts in Liberal Studies (MALS) degree program for people who wish to pursue a particular topical or interdisciplinary interest at the graduate level, but find the existing programs either too specialized or insufficiently individualized. The MALS program offers students an opportunity to design a program of study to answer their particular needs and interests in a focused, coherent manner. For more information, consult the WSU Graduate Catalog.

[1] Link opens new window.

Certificates in the Interdisciplinary Liberal Arts and Sciences Program

- Certificate in Asian Studies (p. 237)
- Certificate in Film Studies (p. 238)
- Certificate in Global Competency (p. 238)
- Certificate in Great Plains Studies (p. 239)
- Certificate in Medieval and Renaissance Studies (p. 240)
- Tilford Diversity Studies Certificate (p. 241)

Courses in Interdisciplinary Liberal Arts and Sciences

- Liberal Arts and Sciences - Interdisciplinary (LASI) (p. 435)
- WSU First-Year Seminar: Liberal Arts (WSUA) (p. 516)

Certificate in Asian Studies

This certificate encourages a wide-ranging knowledge of Asia. This is accomplished by taking a variety of courses taught across the college and university. The certificate encourages students to study Asia through Asian languages, thereby gaining a better understanding of the history, society, culture and thought of peoples living in Asia. The certificate applies to the following languages currently taught at the university: Chinese, Japanese and Russian. It will be expanded to include other qualifying languages, histories and cultures, if and when they are added to the curriculum.

Students who have made the effort to attain language proficiency are most likely to profit from this enhanced background, as they are more likely to continue study of the languages and related cultures and to visit or do work which relates directly to Asian nations.

The certificate is based on a student's study of one of three languages and five additional courses, for a total of 25 credit hours:

- 10 credit hours of Chinese, Japanese or Russian language. All courses counted must be in the same Asian language. Students are expected to include these classes among the first they take in fulfillment of certificate requirements.
- 15 credit hours of courses with significant Asian content (one-third or greater). Specific decisions about appropriateness of content is decided by certificate coordinators. Students are encouraged to take an interdisciplinary approach and will not be permitted to count more than two courses in this category offered by any one department. An interdisciplinary approach allows students to see how a variety of scholarly perspectives may be brought to bear on common issues.

Course	Title	Hours
Select 10 credit hours of Chinese, Japanese or Russian language as described above		10

Select 15 credit hours of courses with significant Asian content (one-third or greater) as described above. Courses with Asian content include:		15
ANTH 690	Field Methods in Anthropology	
HIST 320	Russian History Survey	
HIST 321	The Vietnam Conflict	
HIST 324	Modern East Asian History	
HIST 588	History of Early Russia	
HIST 589	History of Imperial Russia	
HIST 592	History of Soviet Union	
HIST 593	Former Soviet Union	
PHIL 350	Ancient Chinese Philosophy	
PHIL 352	Contemporary Chinese Philosophy	
PHIL 365	Survey of Asian Philosophy	
PHIL 565	Topics in Asian Philosophy	
PHIL 590T	Japanese Philosophy and Film	
REL 370	Women in World Religions	
WOMS 370	Women in World Religions	
WOMS 579	Asian Women in Modern History	
Total Credit Hours		25

For information and application procedures please contact Dr. Robert Feleppa 316-978-3125, robert.feleppa@wichita.edu, or Dr. Helen Hundley 316-978-7745, helen.hundley@wichita.edu.

Certificate in Film Studies

The certificate in film studies requires 12 credit hours in film-oriented courses from any department, discipline or college that offers such courses. The certificate is offered both for those students seeking employment in some aspect of film, film making or film criticism, and for those wishing to improve their understanding of film or the influence of film on a discipline or on a culture. The film studies certificate can prove useful to students majoring in language, literature, broadcast journalism, speech and fine arts; it also can appeal to those in fields where some knowledge of mass communication as a cultural phenomenon is desirable or where film has influenced the view of that field, including sociology, history, anthropology, political science, psychology, criminal justice, education and administration. The certificate offers opportunities to study film as an art form and to gain experience in media production.

The film studies certificate consists of 12 credit hours from the courses listed below, selected with the approval of the coordinator of film studies. Other courses having film content may be substituted for the listed courses, with the approval of the coordinator as well. Courses (with different content) that can be repeated within their discipline can also be repeated for the film studies certificate. Courses approved for the film studies certificate include:

Course	Title	Hours
ANTH 397AD	Visual Anthropology	3
ANTH 597AD	Visual Anthropology	3
COMM 304	Studio Video Production	3
COMM 305	Visual Technologies	3
COMM 306	Introduction to Multimedia	3
COMM 321	Introduction to Film Studies	3
COMM 406	Audio Production	3
COMM 512	Principles of Video Production	3
COMM 604	Video Storytelling	3
COMM 622	Studio B: Live Television News	3
COMM 660AK	Film Production	3
CJ 518	Criminal Justice and Crime in Film	3
ENGL 307	Narrative in Literature and Film	3
ENGL 508	Critical Studies in Film	3
FREN 520	Novel and Film	3
HIST 318	The Holocaust in Film	3
HIST 399C	World War II In Film	3
HIST 399Q	Civil War in Film	3
PHIL 590T	Japanese Philosophy and Film	3
SPAN 520	Literature in Film	3
THEA 228	Script Analysis	3
THEA 253	Costuming for the Stage and Film	3
THEA 390	Acting for the Camera	3
WOMS 382	Feminism and Girl Culture	3
WOMS 510	Hollywood Melodrama: The Woman's Film	3
WOMS 523	Feminist Film Criticism	3
WOMS 580Z	Dangerous Women in Film	3
WSUA 102E	First-Year Seminar: World Cultures in Popular Media	3

Certificate in Global Competency

The Certificate in global competency is an interdisciplinary undergraduate program housed in Fairmount College of Liberal Arts and Sciences. The objective of the certificate program is to give students a multidisciplinary education that will augment their major fields of study with the introductory background knowledge

- To be a contributing member of globally diversified teams, and
- To understand the global diversity and the cultural, social, historical and international context of their professional activities.

Completion of this certificate program allows WSU students to acquire a basic understanding of global perspectives and cultures for augmenting their disciplinary education.

Employers of WSU graduates, particularly those of engineering, business and other professional disciplines, and WSU's corporate partners have often stated the need for employees who can work in global teams, where teams are made up of members from different cultures, speaking different languages, following different religions and living in different countries. These teams develop, design, produce, deploy and maintain products and services for all consumers and customers.

Completion of the proposed undergraduate certificate program allows WSU students to acquire a basic understanding of global perspectives and cultures for augmenting their disciplinary education.

Expected Learning Outcomes of the Global Competency Certificate Program

- Demonstrate understanding of the complexity of another culture in relation to its history, values, politics, communication styles, economy, gender or beliefs and practices.
- Analyze connections between the world views, power structures and experiences of multiple cultures to address a global problem.

- Examine the historical and contemporary roles, interconnections and differential effects of human organizations and actions on global systems within the human and natural worlds.
- Plan and evaluate more complex solutions to global challenges that are appropriate to their contexts using multiple disciplinary perspectives (such as cultural, historical and scientific).
- Initiate and develop interactions with people from different cultures. Recognize personal bias when interacting with culturally different others.

Admission Requirements

Students seeking the interdisciplinary global competency certificate must be admitted to WSU

- in a degree program, or
- in a nondegree status.

International students will not be issued an I-20 for certificate programs alone. They may obtain a certificate only while concurrently pursuing a WSU degree.

Area professionals may be admitted as nondegree bound as long and they meet all WSU admission requirements.

Current WSU graduate students may also complete this certificate program but will not receive graduate credit for the courses taken as part of the certificate requirements.

Transfer hours are usually not acceptable for certificate programs. Students interested in the certificate program are encouraged to meet with their respective college/department advisors and/or visit the WSU certificates webpage (https://wichita.edu/academics/majors/certificates.php)[1].

[1] Link opens new window.

Program Requirements

The certificate consists of completing courses totaling 15 credit hours meeting the following disciplinary distributions and from the given list of approved courses:

Course	Title	Hours
History - select one course, 3 credit hours, from the following		*3*
HIST 100	The Human Adventure: World Civilization Since 1500	
HIST 104	Topics in World History	
Select any preapproved history course of any world region, such as HIST 312, HIST 320 or HIST 324		
Political Science - select one course, 3 credit hours, from the following		*3*
POLS 220	Introduction to International Relations	
POLS 226	Comparative Politics	
POLS 340	Global Challenges	
Language/Communication - select one course 3 credit hours, from the following		*3*
LING 151	Nature of Language	
MCLL 351	Linguistics and Foreign Languages	
COMM 335	International and Intercultural Communication	
Culture - select one course, 3 credit hours, from the following		*3*
ANTH 200	Intercultural Relations	
ANTH 303	World Cultures	
WOMS 513	Issues and Perspectives on African Women and Globalism	
WOMS 514	Women in the Middle East	
WOMS 579	Asian Women in Modern History	
LASI 300	Global Issues	
Geography - select one course, 3 credit hours, from the following		*3*
GEOG 210	Introduction to World Geography	
GEOG 510	World Geography	
GEOG 530	Geography of Latin America	
GEOG 542	Geography of Europe	
Total Credit Hours		15

To be counted toward the certificate, courses must meet the above distribution requirements. One or more of these courses may be used to satisfy the general education requirements of the student's major as well (that is, double counting is allowed when possible).

Any substitution of the listed course must be approved by the Global Education Committee (GEC) and must meet the subject domain distribution requirement as well as promote the student's understanding of world/regional culture, history, geography, language/communication and international issues.

Certificate Completion Requirements

Students are encouraged to meet with any GEC member to discuss interest and potential course selection prior to completing the certificate requirements. Any grade below 2.000 in any of the certificate courses will not be acceptable and the student will have to either retake that course or take an approved substitute course.

The certificate will be awarded when the student has:

1. Completed the required certificate courses, each with a 2.000 or higher grade, and
2. Obtained a signed Certificate Completion Form. The form must be signed off by the GEC chair or a GEC member after the student has uploaded the required work samples and completed an exit survey.[1]

[1] Check certificate Blackboard page for directions about what and how to upload work samples as well as how to complete the exit survey.

Certificate in Great Plains Studies

Fairmount College offers a certificate in Great Plains studies, an interdisciplinary program for undergraduate students. This certificate is for students interested in supplementing their major field of study with a concentration of courses from a number of disciplines focusing on a common topic, the Great Plains. Nondegree adults can earn the certificate for professional or personal enrichment.

Program Requirements

Undergraduate students must have a 2.500 overall GPA and sophomore standing. They must maintain at least a 2.500 cumulative grade point average with no grade below *C* in courses applied toward the certificate.

Students may transfer 3 credit hours of coursework from another institution. Exceptions for additional transfer credit or other exceptions to the certificate requirements will be reviewed by the Great Plains studies coordinator and committee.

The program consists of 15 credit hours.

Course	Title	Hours
Select 15 credit hours from the following courses, including at least two courses in each area		15
Physical		
GEOL 235	Meteorology	
GEOL 430	Field Studies in Geology	
GEOL 560	Geomorphology and Land Use	
GEOL 640	Field Geology	
BIOL 499	Undergraduate Research	
BIOL 503	Field Botany	
BIOL 532	Entomology	
BIOL 560 & BIOL 561	Plant Ecology and Plant Ecology Lab	
BIOL 575	Field Ecology	
BIOL 610	Topics in Botany	
BIOL 640F	Stream Ecology	
Cultural		
LASI 501	Great Plains Experience	
ANTH 612	Indians of the Great Plains	
ANTH 613	Archaeology of the Great Plains	
HIST 528	History of Wichita	
HIST 535	History of Kansas	
Total Credit Hours		15

Courses whose content may emphasize the Great Plains, depending on instructor and semester, may be counted toward the certificate. One or more of these courses may be used to satisfy the general education requirements of the student's major as well (that is, double counting is allowed when possible).

Any substitution of the listed course must be approved by the coordinator and must meet the subject domain distribution requirement.

Courses that do not meet the learning outcomes of the certificate will be taken off the approved course list.

For information and application procedures, please contact: Jay M. Price, coordinator, Great Plains Studies, 316-978-7792.

Certificate in Medieval and Renaissance Studies

The Medieval and Renaissance studies certificate explores the diversity of European culture, drawing from WSU course offerings in art history, literature, music, languages, political science and history.

The undergraduate certificate may be earned by any undergraduate or graduate student and requires coursework from at least three departments including history, literature, language and another discipline. All grades for the certificate must be *C* or better.

The certificate may be combined with a major (e.g., English, history) or taken as an elective interest.

Program Requirements

Course	Title	Hours
Select a minimum of 18 credit hours in Medieval and Renaissance studies coursework (from at least three departments) from the following:		18
ARTH 520	Seminar In Art History	
ENGL 317	History of the English Language	
ENGL 340	Shakespeare	
ENGL 515	Studies in Shakespeare	
ENGL 520	Epic and Romance	
ENGL 521	Medieval Literature	
ENGL 522	Renaissance Literature	
ENGL 580/860	Special Studies	
ENGL 715	Seminar in Chaucer	
ENGL 721	Seminar in Medieval Literature	
ENGL 722	Seminar in Renaissance Literature	
HIST 566	Medieval History 500-1200	
HIST 567	Medieval History 1200-1500	
HIST 569	Medieval England	
HIST 575	Italian Renaissance	
HIST 576	The Reformations: From Heresies to Diversity	
HIST 577	Medieval Women	
FREN 551	French Civilization: The Middle Ages to the Restoration	
FREN 629	Medieval French Literature	
FREN 630	Renaissance French Literature	
LATN 111	Elementary Latin I	
LATN 112	Elementary Latin II	
LATN 223	Intermediate Latin	
LATN 224	Intermediate Latin	
MUSC 334	History of Music I	
SPAN 623	Seminar In Spanish	
Total Credit Hours		18

Notes:

- A total of 6 credit hours (in exceptional cases, 9 credit hours) from other universities may be applied toward the certificate with approval.
- A total of 6 credit hours (in exceptional cases, 9 credit hours) may be taken as independent study.
- Students must complete all work for the certificate within six (in exceptional cases, seven) years following admission to the program.
- New additions to the list of courses will be announced as they are approved.

Language Requirement

Students are required to complete a minimum of one course in a medieval language. However, those anticipating graduate work in a field within Medieval and Renaissance studies are strongly encouraged to take the Latin sequence (LATN 111–LATN 112, LATN 223–LATN 224). Students may choose from the following:

- Latin
- Old English
- Middle English
- Old French
- Medieval French
- Medieval Spanish
- Middle High German
- Old Norse

Note: Modern language courses (e.g., FREN 111) do not count toward the 18 credit hours needed to complete the certificate. Languages not taught on a regular basis may be taken as independent study courses with the permission of the instructor.

Final Project

The Final Project should be a substantial essay of not less than 20 pages of text (not including notes) that uses primary sources. The essay should be submitted to the program coordinator at least three months before the student graduates.

The student will present his or her essay at a final project review staffed by the coordinator, the professor who supervised the writing of the essay, and one other program faculty member. The coordinator will be responsible for scheduling the review.

Advising

Students should be advised by a member of the coordinating committee. For more information and advising, contact coordinator, Francis X. Connor, 316-978-6231, or francis.connor@wichita.edu.

Tilford Diversity Studies Certificate

The Tilford Diversity Studies certificate is an 18-credit hour program designed for undergraduate students whose academic interests and/or career goals could benefit from a focused but interdisciplinary exploration of diversity-related issues. Students who complete the Tilford Diversity Studies certificate: acquire an appreciation for the world's diversity and an understanding of the roots of privilege and oppression; learn to comprehend themselves and others beyond stereotypes; successfully interact with others in professional and personal settings; and be prepared to assume leadership roles in promoting diversity and inclusion. Students should complete one course (offered by any department) in each of the following three areas:

- Race or ethnicity studies;
- Gender or women's studies; and
- The study of socioeconomic class.

In addition, three electives will be required, and students may, if they wish, use those electives to study aging, ability, biodiversity or other diversity-related fields. Of the six courses taken for the certificate, one must have an international focus. The 18 credit hours of coursework counted toward the certificate should be distributed from among at least three different academic departments or programs. One foreign language course at the intermediate level or above can count for the certificate.

Applicable courses are offered by a variety of departments and often can be applied to the student's general education requirements. Courses taken before enrollment in the program can count toward the certificate if they are determined by the Tilford certificate coordinator to meet the learning objectives of the program. Students must receive a final grade of *C* or better to apply a course toward the certificate.

Students in the program design a plan of study with the Tilford certificate coordinator, who is responsible for approving all courses students take for the certificate. During their final semester in the program, students submit a portfolio of work completed in certificate courses. The contents of the portfolio vary depending on the coursework taken toward the certificate and are determined by the student in consultation with the coordinator.

Students interested in pursuing the Tilford Diversity Studies certificate can get more information from the Tilford Diversity Studies Certificate webpage (https://www.wichita.edu/services/tilford_commission/certificate.php/Program_Description_and_Requirements.php)[1], or contact Dr. Jean Griffith, department of English, at 316-978-6276 or jean.griffith@wichita.edu.

[1] Link opens new window.

Linguistics

There is no major in linguistics; however, an emphasis in linguistics is available through the general studies program or a Bachelor of Arts degree field major plan.

Linguistics courses fall into the following groups:

Course	Title	Hours
Group A — Basic Linguistic Theory		
LING 151	Nature of Language	
LING 152	Language of Food	
LING 315	Introduction to English Linguistics	
LING 304	Early Language Development	
LING 306	Applied Phonetics	
LING 316	English Sentence Structure	
LING 317	History of the English Language	
LING 318	Dialectology	
LING 665	History of the English Language	
LING 667	English Syntax	
LING 668	Field Methods of Linguistics	
LING 672	Dialectology	
Group B — Linguistic Study of Specific Languages or Language Groups		
LING 505A	Advanced French Phonetics	
LING 505B	Russian Phonology	
LING 505C	Spanish Phonetics	
LING 635	Introduction to Romance Linguistics	
LING 720	Seminar in Old English	
Group C — Areas of Contact Between Linguistics and Other Disciplines		
LING 351	Linguistics and Foreign Languages	
LING 651	Language and Culture	
LING 740	Graduate Studies in Linguistics	
Other		
LING 590	Special Studies in Linguistics	

Minors in Linguistics

- Minor in Linguistics (p. 241)

Courses in Linguistics

- Linguistics (LING) (p. 436)

Minor in Linguistics

A minor in linguistics consists of 15 credit hours from the following courses:

Course	Title	Hours
Select 15 credit hours from the following (at least 6 credit hours must be from Group A)		15
Group A—Basic Linguistic Theory		
LING 151	Nature of Language	
LING 315	Introduction to English Linguistics	
LING 316	English Sentence Structure	

LING 317	History of the English Language
LING 318	Dialectology
LING 667	English Syntax
LING 672	Dialectology
Group B — Linguistic Study of Specific Languages or Language Groups	
LING 505A	Advanced French Phonetics
LING 505C	Spanish Phonetics
LING 635	Introduction to Romance Linguistics
LING 720	Seminar in Old English
Group C—Areas of Contact Between Linguistics and Other Disciplines	
LING 351	Linguistics and Foreign Languages
LING 651	Language and Culture
LING 740	Graduate Studies in Linguistics
Total Credit Hours	15

Mathematics, Statistics and Physics

The department of mathematics, statistics and physics houses the following areas of study:

- Mathematics (p. 242)
- Personal Computing (p. 244)
- Physics (p. 244)
- Statistics (p. 247)

Mathematics

Mathematics is among the oldest disciplines. Throughout history, mathematics has spanned the spectrum from pure to applied areas. The ancient Greek mathematicians were interested in problems that ranged from properties of numbers to applications of mathematics to music and astronomy. The department of mathematics, statistics and physics fulfills its mission by offering a broad and representative collection of courses to give students the ability to select, with their advisors, a program that fits their needs and goals. The department of mathematics, statistics and physics offers bachelor's (BA and BS), master's (MS), and doctoral (PhD) degrees.

Note: For ease of description, certain courses in mathematics and statistics are categorized in the following groups (the courses in Group R are required of all majors):

Course	Title	Hours
Group R		
MATH 415	An Introduction to Advanced Mathematics	
MATH 511	Linear Algebra	
MATH 547	Advanced Calculus I	
MATH 551	Numerical Methods	
MATH 555	Differential Equations I	
Group A		
MATH 513	Fundamental Concepts of Algebra	
MATH 525	Elementary Topology	
MATH 615	Elementary Number Theory	
MATH 621	Elementary Geometry	
MATH 720	Modern Geometry	
Group B		
STAT 460	Elementary Probability and Mathematical Statistics	
STAT 571	Statistical Methods I	
STAT 572	Statistical Methods II	
STAT 574	Elementary Survey Sampling	
STAT 576	Applied Nonparametric Statistical Methods	
STAT 763	Applied Regression Analysis	
STAT 771	Theory of Statistics I	
STAT 772	Theory of Statistics II	
STAT 775	Applied Statistical Methods I	
STAT 776	Applied Statistical Methods II	
Group C		
MATH 530	Applied Combinatorics	
MATH 545	Integration Techniques and Applications	
MATH 548	Introduction to Complex Variables	
MATH 553	Mathematical Models	
MATH 640	Advanced Calculus II	
MATH 655	Differential Equations II	
MATH 657	Optimization Theory	
MATH 751	Numerical Linear Algebra	
MATH 753	Ordinary Differential Equations	
MATH 755	Partial Differential Equations I	

Students majoring in mathematics should consult closely with their mathematics advisors on any of these programs.

Majors in Mathematics

- Dual/Accelerated Bachelor's to Master's Program (p. 242)
- BA in Mathematics (p. 243)
- BS in Mathematics (p. 243)
- BS in Mathematics — Computing Emphasis (p. 243)
- BS in Mathematics — Statistics Emphasis (p. 244)

Minors in Mathematics

- Minor in Mathematics (p. 244)

Courses in Mathematics

- Mathematics (MATH) (p. 441)

Note: Courses numbered 000–099 do not count toward any degree program.

Dual/Accelerated Bachelor's to Master's Program in Mathematics and Statistics

The fast track, dual/accelerated bachelor's to master's program in mathematics and statistics is designed to prepare qualified students for graduate work in mathematics and statistics through a coordinated program leading to both a bachelor's and master's degree. A student in the program will be allowed to enroll in courses for graduate credit while completing undergraduate degree requirements.

Prior to application for admission to the program, a student interested in the program and receiving the recommendation of at least one faculty member, will be assigned a fast track advisor and advisory committee. Typically this should be done by the sophomore year, but may be done somewhat later. Being assigned a fast track advisor does not imply admission to the program.

Admission

To be considered for admission to the program, the following must be satisfied:

1. An undergraduate GPA of 3.000 overall and 3.500 in math and statistics courses;
2. Completion of at least 60 credit hours of undergraduate study, with at least 18 credit hours remaining for completion of the undergraduate degree;
3. Completion of MATH 415, MATH 451 and MATH 511, and either completion of, or current enrollment in, MATH 513 or MATH 547; and
4. Positive recommendation from the student's fast track advisor.

The student should apply for admission during the semester prior to the first semester in which he or she intends to enroll in a course for graduate credit.

A student in the dual/accelerated program will be admitted to the MS program in mathematics upon being awarded the bachelor's degree if all admission requirements for the master's program are satisfied at that time.

Program Requirements

Students admitted to the dual/accelerated program will be allowed to enroll in courses for graduate credit, including 800-level courses, prior to completing undergraduate degree requirements. At most 9 credit hours may be joint degree hours — hours taken for graduate credit at the 700-level (or above) that are applied to both the bachelor's degree and master's degree program requirements. A course taken for joint credit must be so identified at the time of enrollment in that course.

After initial admission, continuation in the program requires a continuing WSU and undergraduate cumulative GPA of at least 3.000 and a GPA of at least 3.000 in courses taken for graduate credit. MATH 513 must be included in the undergraduate program of study for students in the dual/accelerated program. Otherwise requirements for the BS or BA in mathematics and statistics are the same as for other students with a major in mathematics and statistics. Students admitted to the dual/accelerated program are expected to write a thesis as part of their master's degree program of study. A student who has previously been admitted to a graduate degree program at Wichita State may not be admitted to the dual/accelerated program.

All bachelor's degrees in mathematics require a high-level algorithmic computer language. The MATLAB course, MATH 451, is strongly recommended.

BA in Mathematics

For the Bachelor of Arts (BA) degree with a major in mathematics:

Course	Title	Hours
Complete all courses in Group R [1]		15
MATH 531	Introduction to the History of Mathematics	3
Select two additional courses from those listed in Groups A, B and C (MATH 451 is recommended) [1]		6
Total Credit Hours		24

[1] See MATH courses listed by group (p. 242)

All bachelor's degrees in mathematics require a high-level algorithmic computer language. The MATLAB course, MATH 451, is strongly recommended.

Applied Learning

Students in the BA in mathematics program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing one of the following:

1. The student completes a thesis.
2. The student attends a conference and presents at least a poster.
3. The student performs outreach in the local school district.
4. The student does a presentation in a venue involving members of the community, such as the Science Expo at Keeper of the Plains, or through participation in Math Circle, or Pi Mu Epsilon, or Math Awareness.
5. The student carries out a research project followed by a seminar presentation.

BS in Mathematics

For the Bachelor of Science (BS) degree in mathematics:

Course	Title	Hours
Complete all courses in Group R [1]		15
Select one course each in Groups A, B and C [1]		9
Select two additional courses from Groups B and/or C. MATH 451 is recommended		6
Total Credit Hours		30

[1] A list of courses in each group can be found at the beginning of the Mathematics section (p. 242).

All bachelor's degrees in mathematics require a high-level algorithmic computer language. The MATLAB course, MATH 451, is strongly recommended.

For students who are contemplating graduate work, it is highly recommended that they include MATH 513, MATH 547 and MATH 640 in their program, along with courses in one or more of French, German or Russian.

Applied Learning

Students in the BS in mathematics program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing one of the following:

1. The student completes a thesis.
2. The student attends a conference and presents at least a poster.
3. The student performs outreach in the local school district.
4. The student does a presentation in a venue involving members of the community, such as the Science Expo at Keeper of the Plains, or through participation in Math Circle, Pi Mu Epsilon or Math Awareness.
5. The student carries out a research project followed by a seminar presentation.

BS in Mathematics - Computing Emphasis

For the Bachelor of Science (BS) degree with emphasis in computing

Course	Title	Hours
Complete all courses in Group R [1]		15
MATH 451	Computational Mathematics Using MATLAB	3
Select an additional higher level programming language course		
CS 400	Data Structures	4
MATH 321	Discrete Structures I	3

MATH 322	Discrete Structures II	3
Select four of the following with at least three in computer science (CS)		6-12
MATH 553	Mathematical Models	
MATH 657	Optimization Theory	
MATH 751	Numerical Linear Algebra	
STAT 774	Statistical Computing I	
CS 194	Introduction to Digital Design	
CS 238	Assembly Language Programming	
CS 410	Programming Paradigms	
CS 510	Programming Language Concepts	
CS 540	Operating Systems	
CS 560	Design and Analysis of Algorithms	
Total Credit Hours		34-40

[1] A list of courses in each group can be found at the beginning of the Mathematics section (p. 242).

All bachelor's degrees in mathematics require a high-level algorithmic computer language. The MATLAB course, MATH 451, is strongly recommended.

For students who are contemplating graduate work, it is highly recommended that they include MATH 513, MATH 547 and MATH 640 in their program, along with courses in one or more of French, German or Russian.

Applied Learning

Students in the BS in mathematics – computing emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing one of the following:

1. The student completes a thesis.
2. The student attends a conference and presents at least a poster.
3. The student performs outreach in the local school district.
4. The student does a presentation in a venue involving members of the community, such as the Science Expo at Keeper of the Plains, or through participation in Math Circle, or Pi Mu Epsilon, or Math Awareness.
5. The student carries out a research project followed by a seminar presentation.

BS in Mathematics - Statistics Emphasis

For the Bachelor of Science (BS) degree in mathematics with emphasis in statistics:

Course	Title	Hours
Complete all courses in Group R [1]		15
Select one course in Group C [1]		3
Select 12 additional credit hours of courses in Group B which must include one of the following sequences [1]		12
STAT 571 & STAT 572	Statistical Methods I and Statistical Methods II	
STAT 771 & STAT 772	Theory of Statistics I and Theory of Statistics II	
Select one additional course from Group B or C [1]		3
Total Credit Hours		33

[1] A list of courses in each group can be found at the beginning of the Mathematics section (p. 242).

Bachelor of Science candidates must have a higher algorithmic computer language. MATH 451 is strongly recommended. Students under this option may select statistics courses from other departments with the approval of the department of mathematics, statistics and physics.

For students who are contemplating graduate work, it is highly recommended that they include MATH 513, MATH 547 and MATH 640 in their program, along with courses in one or more of French, German or Russian.

Applied Learning

Students in the BS in mathematics – statistics emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing one of the following:

1. The student completes a thesis.
2. The student attends a conference and presents at least a poster.
3. The student performs outreach in the local school district.
4. The student does a presentation in a venue involving members of the community, such as the Science Expo at Keeper of the Plains, or through participation in Math Circle, or Pi Mu Epsilon, or Math Awareness.
5. The student carries out a research project followed by a seminar presentation.

Minor in Mathematics

For a minor in mathematics:

Course	Title	Hours
Calculus Sequence		
MATH 242	Calculus I	5
MATH 243	Calculus II	5
MATH 344	Calculus III	3
Additional Course		3
Select at least one additional course at a level of 400 or above approved by both the department of mathematics, statistics and physics, and the student's major		
Total Credit Hours		16

Students must take at least one upper-division course in residence. Students shall not be allowed credit toward a minor for coursework below 2.000.

Personal Computing

Courses in Personal Computing

- Personal Computing (PC) (p. 478)

Note: No major or minor in personal computing is available.

Physics

Physics is a fundamental science — it is the study of matter, energy and their interactions. Physics is the basis for all sciences, applied science and engineering. Physicists study everything from elementary particles at the smallest scale to galaxies and the cosmos at the grandest scale, solid state physics such as semiconductors, and chaos.

Because physics is the basic underpinning for all of science and technology, physics majors have many career alternatives. Many continue their education at graduate and professional schools — in

physics, chemistry, biology, geology, engineering, medicine, law or business. Those who enter the job market directly find their knowledge and technical skills, particularly in problem solving, modeling, computers and electronics, to be strong selling points.

Majors in Physics

- BA in Physics (p. 245)
- BA in Physics — Chemical Physics Option (p. 245)
- BA in Physics — Engineering Physics Option (p. 245)
- BS in Physics (p. 246)
- BS in Physics — Chemical Physics Option (p. 246)
- BS in Physics — Engineering Physics Option (p. 247)

Other Options

Other programs are available which provide the student an opportunity to combine the study of physics with an interest in another area. On an individual basis, students have included interests in mathematics, geology, computer science, biological sciences, business and education.

Minors in Physics

- Minor in Physics (p. 247)

Courses in Physics

- Physics (PHYS) (p. 485)

BA in Physics

Program Requirements

Course	Title	Hours
Select one of the following combinations		10
Combination A		
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	
Combination B		
PHYS 313 & PHYS 315	Physics for Scientists I and University Physics Lab I	
PHYS 314 & PHYS 316	Physics for Scientists II and University Physics Lab II	
PHYS 551	Topics in Modern Physics	3
PHYS 621	Analytical Mechanics	3
PHYS 631	Electricity and Magnetism	3
PHYS 641	Thermophysics	3
PHYS 651	Quantum Mechanics I	3
MATH 555	Differential Equations I	3
Select one of the following MATH courses		3
MATH 511	Linear Algebra	
MATH 545	Integration Techniques and Applications	
MATH 547	Advanced Calculus I	
MATH 757	Partial Differential Equations for Engineers	
Select 5 credit hours in chemistry		5
Select 2 additional credit hours from the following		2
PHYS 516	Advanced Physics Laboratory	
PHYS 517	Electronics Laboratory	
PHYS 616	Computational Physics Laboratory	
Select 6 credit hours of upper-division physics electives		6
Total Credit Hours		44

Applied Learning

Students in the BA in physics are required to complete an applied learning or research experience to graduate from the program. The requirement can be met in several ways. Students can take PHYS 516, PHYS 481 or engage in undergraduate research PHYS 600/PHYS 601.

BA in Physics - Chemical Physics Option

Program Requirements

A student majoring in physics may select a chemical physics option.

Course	Title	Hours
Select one of the following combinations		10
Combination A		
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	
Combination B		
PHYS 313 & PHYS 315	Physics for Scientists I and University Physics Lab I	
PHYS 314 & PHYS 316	Physics for Scientists II and University Physics Lab II	
PHYS 551	Topics in Modern Physics	3
PHYS 621	Analytical Mechanics	3
PHYS 631	Electricity and Magnetism	3
PHYS 641	Thermophysics	3
PHYS 651	Quantum Mechanics I	3
MATH 555	Differential Equations I	3
Select one of the following MATH courses		3
MATH 511	Linear Algebra	
MATH 545	Integration Techniques and Applications	
MATH 547	Advanced Calculus I	
MATH 757	Partial Differential Equations for Engineers	
Select 5 credit hours in chemistry		5
Select 2 additional credit hours from the following		2
PHYS 516	Advanced Physics Laboratory	
PHYS 517	Electronics Laboratory	
PHYS 616	Computational Physics Laboratory	
Select four additional courses in chemistry beyond the 211–212 sequence		
Total Credit Hours		38

With departmental approval, the chemistry courses could substitute for required courses covering similar topics.

Applied Learning

Students in the BA in physics are required to complete an applied learning or research experience to graduate from the program. The requirement can be met in several ways. Students can take PHYS 516, PHYS 481 or engage in undergraduate research PHYS 600/PHYS 601.

BA in Physics - Engineering Physics Option

Program Requirements

A student majoring in physics may select an engineering physics option. Select four courses approved by the physics department from a given engineering department

Course	Title	Hours
Select one of the following combinations		10
Combination A		
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	
Combination B		
PHYS 313 & PHYS 315	Physics for Scientists I and University Physics Lab I	
PHYS 314 & PHYS 316	Physics for Scientists II and University Physics Lab II	
PHYS 551	Topics in Modern Physics	3
PHYS 621	Analytical Mechanics	3
PHYS 631	Electricity and Magnetism	3
PHYS 641	Thermophysics	3
PHYS 651	Quantum Mechanics I	3
MATH 555	Differential Equations I	3
Select one of the following MATH courses		3
MATH 511	Linear Algebra	
MATH 545	Integration Techniques and Applications	
MATH 547	Advanced Calculus I	
MATH 757	Partial Differential Equations for Engineers	
Select 5 credit hours in chemistry		5
Select 2 additional credit hours from the following		2
PHYS 516	Advanced Physics Laboratory	
PHYS 517	Electronics Laboratory	
PHYS 616	Computational Physics Laboratory	
Select four courses approved by the physics department from a given engineering department		
Total Credit Hours		38

With departmental approval, the engineering courses could substitute for required courses covering similar topics.

Applied Learning

Students in the BA in physics are required to complete an applied learning or research experience to graduate from the program. The requirement can be met in several ways. Students can take PHYS 516, PHYS 481 or engage in undergraduate research PHYS 600/PHYS 601.

BS in Physics

Program Requirements

Course	Title	Hours
Select one of the following combinations		10
Combination A		
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	
Combination B (preferred)		
PHYS 313 & PHYS 315	Physics for Scientists I and University Physics Lab I	
PHYS 314 & PHYS 316	Physics for Scientists II and University Physics Lab II	
PHYS 551	Topics in Modern Physics	3
PHYS 621	Analytical Mechanics	3
PHYS 631	Electricity and Magnetism	3
PHYS 641	Thermophysics	3
PHYS 651	Quantum Mechanics I	3
MATH 555	Differential Equations I	3
Select one of the following MATH courses		3
MATH 511	Linear Algebra	
MATH 545	Integration Techniques and Applications	
MATH 547	Advanced Calculus I	
MATH 757	Partial Differential Equations for Engineers	
Select 10 credit hours in chemistry		10
Select three semesters from the following		6
PHYS 516	Advanced Physics Laboratory	
PHYS 517	Electronics Laboratory	
PHYS 616	Computational Physics Laboratory	
Select 8 additional upper-division credit hours in physics (excluding PHYS 501 and PHYS 502)		8
Total Credit Hours		55

Applied Learning

Students in the BS in physics are required to complete an applied learning or research experience to graduate from the program. The requirement can be met in several ways. Students can take PHYS 516, PHYS 481 or engage in undergraduate research PHYS 600/PHYS 601.

BS in Physics - Chemical Physics Option

Program Requirements

A student majoring in physics may select a chemical physics option.

Course	Title	Hours
Select one of the following combinations		10
Combination A		
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	
Combination B (preferred)		
PHYS 313 & PHYS 315	Physics for Scientists I and University Physics Lab I	
PHYS 314 & PHYS 316	Physics for Scientists II and University Physics Lab II	
PHYS 551	Topics in Modern Physics	3
PHYS 621	Analytical Mechanics	3
PHYS 631	Electricity and Magnetism	3
PHYS 641	Thermophysics	3
PHYS 651	Quantum Mechanics I	3
MATH 555	Differential Equations I	3
Select one of the following MATH courses		3
MATH 511	Linear Algebra	
MATH 545	Integration Techniques and Applications	
MATH 547	Advanced Calculus I	
MATH 757	Partial Differential Equations for Engineers	
Select 10 credit hours in chemistry		10
Select three semesters from the following		6
PHYS 516	Advanced Physics Laboratory	
PHYS 517	Electronics Laboratory	
PHYS 616	Computational Physics Laboratory	

Select four additional courses in chemistry beyond the 211–212 sequence	
Total Credit Hours	47

With departmental approval, the chemistry courses could substitute for required courses covering similar topics.

Applied Learning

Students in the BS in physics are required to complete an applied learning or research experience to graduate from the program. The requirement can be met in several ways. Students can take PHYS 516, PHYS 481 or engage in undergraduate research PHYS 600/PHYS 601.

BS in Physics - Engineering Physics Option

Program Requirements

A student majoring in physics may select an engineering physics option.

Course	Title	Hours
Select one of the following combinations		10
Combination A		
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	
Combination B (preferred)		
PHYS 313 & PHYS 315	Physics for Scientists I and University Physics Lab I	
PHYS 314 & PHYS 316	Physics for Scientists II and University Physics Lab II	
PHYS 551	Topics in Modern Physics	3
PHYS 621	Analytical Mechanics	3
PHYS 631	Electricity and Magnetism	3
PHYS 641	Thermophysics	3
PHYS 651	Quantum Mechanics I	3
MATH 555	Differential Equations I	3
Select one of the following MATH courses		3
MATH 511	Linear Algebra	
MATH 545	Integration Techniques and Applications	
MATH 547	Advanced Calculus I	
MATH 757	Partial Differential Equations for Engineers	
Select 10 credit hours in chemistry		10
Select three semesters from the following		6
PHYS 516	Advanced Physics Laboratory	
PHYS 517	Electronics Laboratory	
PHYS 616	Computational Physics Laboratory	
Select four courses approved by the physics department from a given engineering department		
Total Credit Hours		47

With departmental approval, the engineering courses could substitute for required courses covering similar topics.

Applied Learning

Students in the BS in physics are required to complete an applied learning or research experience to graduate from the program. The requirement can be met in several ways. Students can take PHYS 516, PHYS 481 or engage in undergraduate research PHYS 600/PHYS 601.

Minor in Physics

A minor in physics consists of:

Course	Title	Hours
Select one of the following options:		10
Option A:		
PHYS 213 & PHYS 214	General College Physics I and General College Physics II	
Option B:		
PHYS 313 & PHYS 315	Physics for Scientists I and University Physics Lab I	
PHYS 314 & PHYS 316	Physics for Scientists II and University Physics Lab II	
Select at least 6 additional credit hours of physics courses numbered above 500 (excluding PHYS 501 and PHYS 502)		6
Total Credit Hours		16

Statistics

No major or minor in statistics is available, but a BS degree with emphasis in statistics is offered as described under the mathematics section. Statistics courses satisfy general education requirements. As part of the 120 credit hours required for graduation, students may take up to 15 credit hours of statistics courses in addition to the 45 or 50 credit hours of coursework allowed in mathematics.

Courses in Statistics

- Statistics (STAT) (p. 507)

Modern and Classical Languages and Literatures

The department of modern and classical languages and literatures works to instill in students an awareness and appreciation of other languages and cultures. The department grants the Bachelor of Arts (BA) degree in modern and classical languages and literatures. Students can specialize in French, Latin or Spanish. Minors are also available in French, German, Greek, Latin, Russian and Spanish. Courses are also offered in Chinese, Italian and Japanese. The department also offers the Master of Arts (MA) in Spanish and participates in the Master of Arts in Liberal Studies (MALS) program, which may include graduate work in French, German, Greek, Latin, Russian or Spanish.

A wide range of courses in language, literature, civilization, translation and linguistics is offered on campus as well as in summer programs in Puebla, Mexico; Strasbourg and Orléans, France (Wichita's sister city).

See Exchange and Study Abroad (p. 23) programs for more details.

Graduate students in Spanish interested in applying for teaching assistantships should consult with the graduate coordinator.

Scholarships

Various scholarships are available for study in French, German, Latin and Spanish, including Puebla, Mexico; and Strasbourg and Orléans, France.

Retroactive Credit Policy

WSU students may qualify for credit for previous foreign language experience. Language learning in courses prior to entering college, including high school language experience, can be validated by earning a grade of 2.000 or better in a WSU language course or courses beyond the first course in that language. For placement purposes, it is assumed that one year of high school language is equivalent to one semester

of college-level language. The credit earned by validation of previous experience is called retroactive credit.

Retroactive credit hours are considered to be credit by examination and are posted on the student's transcript with a grade of *TCrE* (credit by examination). Students pay for retroactive credit on a course-by-course basis.

Undergraduate students can apply for and earn a maximum of 16 credit hours of retroactive credit. Retroactive credit is not available for graduate students.

Students qualify for retroactive credit by completing the required validation course or courses, showing that a grade of 2.000 or better has been earned and posted to the student's transcript for each required course, and completing the application process to claim the credit. Credit can be claimed at any time before graduation, allowing a reasonable time for processing.

A validation course is more advanced than the first course in that language. Validation courses are specified for each language and each level of retroactive credit. They must be taken at WSU. If a student fails to earn a grade of 2.000 in a required validation course, the student may retake the class and apply for retroactive credit once the grade of 2.000 or better is achieved and posted on the transcript.

International students for whom English is a second language cannot earn retroactive credit in their native language.

Credit earned at other college-level institutions, including community colleges, already appears on the student's transcript and is therefore not eligible for retroactive credit.

Retroactive credit earned at WSU is not automatically transferable to other institutions. If planning to transfer to another school, consult with the institution regarding its retroactive credit transfer policies.

Applications, validation course listings and further information are all available at the College of Liberal Arts and Sciences Advising Center, 115 Grace Wilkie Hall, and in the MCLL office, or on the LAS Advising Center website (http://wichita.edu/lasadvising/)[1] under the retroactive credit category.

Participation in this program is by application to the College of Liberal Arts and Sciences Advising Center, which retains authority for final approval.

Questions about retroactive credit should be referred to an academic advisor in the College of Liberal Arts and Sciences Advising Center in 115 Grace Wilkie Hall.

[1] Link opens new window.

Majors in Modern and Classical Languages and Literatures

- Dual/Accelerated Bachelor´s to Master´s Program in Spanish (p. 248)
- BA in Modern and Classical Languages and Literatures - Bilingual Option (BI-OP) (p. 249)
- BA in Modern and Classical Languages and Literatures - French Specialization (p. 249)
- BA in Modern and Classical Languages and Literatures - Latin Specialization (p. 250)
- BA in Modern and Classical Languages and Literatures - Spanish Specialization (p. 250)
- Field Major - Classical Studies (p. 251)

Minors in Modern and Classical Languages and Literatures

- Minor in French (p. 251)
- Minor in German (p. 251)
- Minor in Greek (p. 251)
- Minor in Japanese (p. 251)
- Minor in Latin (p. 251)
- Minor in Russian (p. 251)
- Minor in Spanish (p. 252)

Certificates in Modern and Classical Languages and Literatures

- Certificate in Spanish for the Professions (p. 252)

Courses in Modern and Classical Languages and Literatures

- Arabic (ARAB) (p. 305)
- Chinese (CHIN) (p. 330)
- French (FREN) (p. 393)
- German (GERM) (p. 400)
- Greek (Ancient Classical) (GREK) (p. 400)
- Italian (ITAL) (p. 434)
- Japanese (JAPN) (p. 434)
- Latin (LATN) (p. 436)
- Modern and Classical Languages and Literatures (MCLL) (p. 444)
- Russian (RUSS) (p. 495)
- Spanish (SPAN) (p. 505)

Dual/Accelerated Bachelor´s to Master´s Program in Spanish

The dual/accelerated bachelor's to master's degree program is designed to offer outstanding Spanish students the opportunity for advancing their careers by pursuing the bachelor's and master's degree in a parallel program and accelerated time frame. A student in the program will be allowed to enroll in courses for graduate credit while completing undergraduate degree requirements.

Admission

Undergraduate students apply for admission to the accelerated bachelor's to master's program through the WSU Graduate School application and admission process during the semester prior to the first semester in which he or she intends to enroll in a course for graduate credit. The application term should be for the semester after the student expects to complete the bachelor's degree. Tentative graduate admission does not guarantee final admission to the graduate program and final graduate admission is contingent upon the student meeting all the admission requirements for the Spanish master's program at the time the bachelor's degree is awarded. A student who has previously been admitted to a graduate degree program at Wichita State may not be admitted to the dual/accelerated program.

To be considered for admission to the accelerated bachelor's to master's degree program, the following must be satisfied:

1. Completion of at least 60 credit hours;
2. A cumulative undergraduate GPA of at least 3.000 and 3.000 in Spanish courses;
3. Completion of three Spanish courses at the 300 level or above; and
4. A letter of recommendation from at least one member of the Spanish faculty.

A student in the dual/accelerated program will be admitted to the MA program in Spanish upon being awarded the bachelor's degree if all admission requirements for the master's program are satisfied at that time and the student has made continued satisfactory progress.

Program Requirements

Dual Credit Courses

Students admitted to the dual/accelerated program will be allowed to enroll in courses for graduate credit prior to completing undergraduate degree requirements. A maximum of 9 credit hours may be joint degree hours — hours taken for graduate credit that are also applied to the bachelor's degree. A course taken for joint credit must be so identified at the time of enrollment in that course.

After initial admission, continuation in the program requires a continuing WSU and undergraduate cumulative GPA of at least 3.000 and a GPA of at least 3.000 in courses taken for graduate credit.

BA in Modern and Classical Languages and Literatures - Bilingual Option (BI-OP)

Program Requirements

A specialization in two languages (bilingual option) consists of:

Course	Title	Hours
Select 12 credit hours of Language A beyond FREN 210, GERM 210, LATN 112, RUSS 210 or SPAN 210		12
Select 12 credit hours of Language B beyond FREN 210, GERM 210, LATN 112, RUSS 210 or SPAN 210		12
MCLL 351	Linguistics and Foreign Languages	3
FREN/LING 635	Introduction to Romance Linguistics [1]	3
Select 3 language-related elective credit hours, which may include:		3
Transfer credit		
XXXX 398	Travel Seminar (select from French, German, Latin, Russian or Spanish)	
LING 151	Nature of Language	
LING 651	Language and Culture	
A workshop		
A special- or directed-studies course		
A literature course or a teaching option		
Total Credit Hours		33

[1] Option available to students who choose French, Latin or Spanish as one of their languages.

Summary

Course	Title	Hours
Language A beyond 210/220 or LATN 112		12
Language B beyond 210/220 or LATN 112		12
MCLL 351	Linguistics and Foreign Languages	3
FREN/LING 635	Introduction to Romance Linguistics	3
Language-related elective course		3
Total Credit Hours		33

Distribution Requirement

Course	Title	Hours
German		
Select at least two of the following:		5-6
GERM 300	Intermediate German Readings	
GERM 325	Intermediate German Conversation and Composition	
GERM 526	Advanced German Grammar and Composition	
Latin		
Select at least two courses at the 500 level		
French, Russian and Spanish		
Select at least one 300-level and one 500-level course, or two 500-level courses		

Applied Learning

Students in the BA in modern and classical languages/bilingual option are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successfully completing MCLL 351 Linguistics and Foreign Languages, which involves an applied component such as sociolinguistics or semiotics, a discipline that involves applied linguistics.

BA in Modern and Classical Languages and Literatures - French Specialization

A specialization in French consists of a minimum of 33 credit hours beyond FREN 210 or its equivalent, and must include the following courses:

Course	Title	Hours
Required Courses [1]		
MCLL 351	Linguistics and Foreign Languages	3
FREN 223	Intermediate French Readings I	3
FREN 300	Intermediate French Readings II	3
FREN 324	Intermediate Conversation and Composition	3
FREN 526	Advanced French Composition and Grammar	3
FREN 551	French Civilization: The Middle Ages to the Restoration	3
or FREN 552	Contemporary French Civilization	
Additional Courses		
Select 15 additional credit hours from courses numbered above 500 [2]		15
Total Credit Hours		33

[1] Or equivalents.

[2] No fewer than 9 credit hours must be literature. It is strongly recommended that students specializing in French take courses in related fields such as other foreign languages, art history, English, history and philosophy.

Native Speakers

Native speakers are those who have completed a substantial amount of their education in a French-speaking country. Native speakers of French normally are not permitted to receive credit for 100- or 200-level courses. To complete a specialization, the following are required:

Course	Title	Hours
FREN 300	Intermediate French Readings II	3
Select one of the following:		3
MCLL 351	Linguistics and Foreign Languages	

FREN 526	Advanced French Composition and Grammar	
FREN 635	Introduction to Romance Linguistics	
Select 12 credit hours of upper-division work in French		12
Total Credit Hours		18

Note: Native speakers are advised to consult with a French professor before enrolling in French courses.

Student Teachers

Students who plan to teach French should consult with the department's professor in charge of teacher education early in their college career. In addition to the requirements for specialization, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy. It is also recommended that future French teachers spend at least a summer in a French-speaking country before student teaching.

Please contact the College of Applied Studies for current teacher education program requirements.

High School French

Students who have completed more than two units of high school French should consult with an advisor in the French department before enrolling in French courses.

Applied Learning

Students in MCLL/French specialization program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successfully completing FREN 515C Major Topics:Commercial; FREN 515L Major Topics:Translation; or FREN 526 Advanced French Composition and Grammar, involving the application of language skills to business correspondence.

BA in Modern and Classical Languages and Literatures - Latin Specialization

Program Requirements

A specialization in Latin consists of a minimum of 30 credit hours beyond LATN 112 or its equivalent, and must include:

Course	Title	Hours
LATN 526	Advanced Grammar and Composition	3
MCLL 351	Linguistics and Foreign Languages	3
Select at least 24 additional credit hours in Latin beyond LATN 112 or its equivalent		24
Total Credit Hours		30

Note: Travel seminar in Latin does not count toward the specialization in Latin.

Student Teachers

Students who plan to teach Latin should consult with the department's professor in charge of teacher education early in their Fairmount College career. In addition to the requirements for specialization, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy.

Requirements for this program:

1. Grade point average of 3.000 or higher in Latin;
2. Special departmental approval based on demonstrated proficiency in the use of Latin (based on certification and teacher education regulations issued by the Kansas State Department of Education); and
3. The professional foundation courses for education required by the teacher education program (see College of Applied Studies).

Applied Learning

Students in the MCLL/Latin program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successful completion of LATN 526 Advanced Grammar and Composition, involving study of Latin concepts and phrases in the legal and medical professions; or by completing MCLL 351 Linguistics and Foreign Languages, involving a sociolinguistic, i.e. applied component together with emphasis on the historical development of the modern Romance languages from Latin.

BA in Modern and Classical Languages and Literatures - Spanish Specialization

A specialization in Spanish consists of a minimum of 33 credit hours beyond SPAN 210 (http://catalog.wichita.edu/search/?P=SPAN%20210/) or its equivalent and must include the following courses:

Course	Title	Hours
Required Courses		
MCLL 351	Linguistics and Foreign Languages	3
SPAN 220	Intermediate Spanish Grammar and Composition	3
or SPAN 221	Spanish Grammar and Composition for Heritage Speakers	
SPAN 223	Selected Spanish Readings	3
SPAN 300	Intermediate Spanish Readings	3
SPAN 325	Intermediate Spanish Conversation	3
SPAN 525	Advanced Spanish Conversation	3
SPAN 526	Advanced Spanish Grammar and Composition	3
Select 12 credit hours from courses numbered above 500		12
Total Credit Hours		33

It is strongly recommended that students specializing in Spanish take courses in related fields such as other foreign languages, art history, English, history and philosophy.

Native Speakers

Native speakers are those who have completed a substantial amount of their education in a Spanish-speaking country. Native speakers of Spanish are normally not permitted to receive credit for 100- and 200-level courses, or SPAN 325. To complete a specialization the following are required:

Course	Title	Hours
SPAN 300	Intermediate Spanish Readings	3
Select one of the following		3
MCLL 351	Linguistics and Foreign Languages	
SPAN 526	Advanced Spanish Grammar and Composition	

Select 12 credit hours of upper-division work in Spanish	12
Total Credit Hours	18

Note: Native speakers are advised to consult with a Spanish professor before enrolling in Spanish courses.

Student Teachers

Students who plan to teach Spanish should consult with the department's professor in charge of teacher education early in their career. In addition to the requirements for specialization, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy. It is also recommended that future Spanish teachers spend at least a summer in a Spanish-speaking country before student teaching.

Please contact the College of Applied Studies for current teacher education program requirements.

High School Spanish

Students who have completed more than two units of high school Spanish should consult with an advisor in the Spanish department before enrolling in Spanish courses.

Applied Learning

Students in the MCLL/Spanish specialization program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by successfully completing SPAN 552 Business Spanish; SPAN 557 Principles of Translation and Interpreting; SPAN 558 Advanced Translation and Interpreting; or SPAN 526 Advanced Spanish Grammar and Composition, involving application of language skills to commercial correspondence and/or an applied learning component in a semi-professional medical setting.

Field Major - Classical Studies

Classical studies is an interdisciplinary program designed to give students a sense of continuity and to interpret the values, ideas and ideals of antiquity as shown in its history, art, mythology, literature, political institutions and religions. The major also serves as a sound preparation for areas in which sensitivity to language and ideas is an important tool — classics, linguistics, ancient history, art history, archaeology, comparative literature, law, religion and Near Eastern studies.

The major consists of 36 credit hours which must be selected from a list of approved courses, except that courses of independent study in one of the departments of the field major may count toward the major if the subject matter is at least half classical. For further information and a list of approved courses, contact the department of modern and classical languages and literatures.

Minor in French

A minor in French consists of a minimum of 12 credit hours beyond FREN 210 and must include:

Course	Title	Hours
FREN 223	Intermediate French Readings I	3
FREN 300	Intermediate French Readings II	3
FREN 324	Intermediate Conversation and Composition	3
Select one upper-division French course numbered 500 or above		3
Total Credit Hours		12

Minor in German

A minor in German consists of:

Course	Title	Hours
Select 11 credit hours beyond the 210 level		11
Total Credit Hours		11

Minor in Greek

A minor in Greek consists of:

Course	Title	Hours
Select 11 credit hours beyond the 111–112 level		11
Total Credit Hours		11

Minor in Japanese

A minor in Japanese consists of 11 credit hours beyond the 223 level, including credits received from sister institutions in Japan through study abroad.

Courses with content suitable for the minor. (Other courses may also be suitable. Please consult an advisor.)

Course	Title	Hours
JAPN 101	Travel Japanese	3
JAPN 223	Intermediate Japanese I	3
JAPN 224	Intermediate Studies in Japanese Language	1-3
JAPN 224A	Intermediate Japanese Grammar	1
JAPN 225	Japanese Conversation	2
JAPN 300	Special Studies	1-3

Minor in Latin

A minor in Latin consists of:

Course	Title	Hours
Select a minimum of 8 additional credit hours beyond the 112 level		8
Select at least one 500-level course		3
Total Credit Hours		11

Note: Travel seminar in Latin does not count toward the specialization in Latin.

Minor in Russian

A minor in Russian consists of:

Course	Title	Hours
RUSS 300	Intermediate Russian Readings	3
or RUSS 325	Intermediate Russian Conversation and Composition	
Select at least one 500-level course		3
Select a minimum of 5 additional credit hours beyond the RUSS 210 level		5
Total Credit Hours		11

Native Speakers

Native speakers are those who have completed a substantial amount of their education in a Russian-speaking country or school. Native speakers of Russian normally are not permitted to receive credit for 100- or 200-level courses. These students are advised to consult with a Russian professor before enrolling in Russian courses.

Minor in Spanish

A minor in Spanish consists of a minimum of 12 credit hours beyond the SPAN 210 level and must include:

Course	Title	Hours
SPAN 220	Intermediate Spanish Grammar and Composition	3
or SPAN 221	Spanish Grammar and Composition for Heritage Speakers	
SPAN 223	Selected Spanish Readings	3
SPAN 325	Intermediate Spanish Conversation	3
Electives - select 3 credit hours from the following:		3
SPAN 215	Spanish Study Abroad	
SPAN 300	Intermediate Spanish Readings	
Any class at the 500-level or above		
Total Credit Hours		12

Certificate in Spanish for the Professions

The certificate in Spanish for the professions is designed to train both WSU students, as well as community members in nondegree programs, to become linguistically capable, knowledgeable and culturally sensitive individuals able to perform language services in professional settings where Spanish is used. Prerequisites: SPAN 220 and SPAN 325. The Spanish for the professions certificate consists of 15 credit hours from the courses listed below.

Course	Title	Hours
SPAN 526	Advanced Spanish Grammar and Composition	3
SPAN 552	Business Spanish [1]	3
or SPAN 559	Spanish for the Health Professions	
SPAN 557	Principles of Translation and Interpreting [1]	3
SPAN 558	Advanced Translation and Interpreting [1]	3
SPAN 561	Practicum in Spanish for the Professions	3
Total Credit Hours		15

[1] Must be taken in residency at WSU.

Applied Learning

Students in the Certificate in Spanish for the professions program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a capstone practicum course (SPAN 561) that includes a 45-hour service-learning assignment in which students use Spanish in professional contexts with a community partner organization.

Philosophy

The study of philosophy is relevant to all aspects of life and can be pursued fruitfully at many levels. Philosophical thought may direct itself to such diverse topics as the nature of reality, the conditions of knowledge, the justifications for political authority, the reality of subatomic particles, the existence of God, the criteria of aesthetic evaluation, the structure of logical reasoning, and the foundations (if any) of morality. Because of the breadth of the philosophical enterprise, the study of philosophy can be approached from many directions and need not involve a hierarchy of prerequisites. Philosophy majors pursue many careers — teaching, law, medicine, city management, communication and sales. The philosophy department reflects the breadth and diversity of the philosophical enterprise and offers a wide variety of courses.

Majors in Philosophy

- BA in Philosophy (p. 252)

Minors in Philosophy

- Minor in Philosophy (p. 253)

Courses in Philosophy

- Philosophy (PHIL) (p. 478)

BA in Philosophy

A major requires a minimum of 27 credit hours of philosophy courses, at least 15 of which must be in courses numbered 300 or above. Each philosophy major must meet with a departmental advisor at least once a semester to plan or review a program of study. These programs are designed in terms of the individual student's interests and future plans. Up to 12 credit hours of philosophy courses taken before the decision to major in philosophy may count toward a major. Additional hours may be counted with the advisor's consent.

Applied Learning

Students in the Bachelor of Arts in philosophy program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the following program course requirements:

Select **one** item from list A, or **three** items from list B.

A. Substantive Experiences (one item from this list)

- Publish an article in an undergraduate philosophy journal.
- Edit or referee submissions for an undergraduate philosophy journal.
- Give a paper or serve as commentator for a paper at an undergraduate philosophy conference.
- Give a poster presentation at an undergraduate philosophy conference.
- Give a paper or poster presentation at URCAF.
- Take a Directed Readings or Honors option which involves original research or scholarship.
- Internship or co-op experience.
- Serve as logic/critical reasoning tutor.
- Serve as an officer in the Philosophy Society (PS), the Prelaw Student Association (PLSA) or the SGA.

B. Less Substantive Experiences[1] (three items from this list)

- Attend lecture of visiting speaker (in philosophy).
- Attend philosophy seminar given by visiting speaker.
- Attend on-campus session of the Kansas Appellate Court.
- Attend on-campus presentation by law school.
- Participate in visits to regional law schools organized by the PLSA.
- Attend an undergraduate or professional philosophy conference.
- Participate in activities of the PS or PLSA.
- Participate in philosophical discussions on social media organized by the PS.

[1] Attendance/participation is to be verified either through completed registration forms or signatures on sign-up sheets.

Minor in Philosophy

A minor consists of 15 credit hours of philosophy courses, selected in consultation with a departmental advisor, that orients students to the philosophic aspects of their major fields.

Political Science

Political science is the study of governments, public policies and political behavior. Political science uses both humanistic perspectives and scientific skills to examine the United States and all countries and regions of the world.

Students enrolled in political science courses explore American politics, international affairs, comparative politics, and urban and minority affairs. Students address critical issues such as public policy, globalization, terrorism, the environment, civil rights, political development and foreign policy. Political science examines theories concerning the ideal government and how power and resources are allocated in society.

As political science majors, students hone writing, communication, analytical and computer skills that are critical to a liberal arts education. This kind of education prepares students to think critically and independently, with tolerance for others and concern for current affairs. Today, students can reasonably expect to change jobs more than once and even to have more than one career. An undergraduate education in the liberal arts and sciences is excellent preparation for the flexibility in employment that students are likely to encounter.

Majoring in political science can prepare a student for many different careers in private for-profit and nonprofit organizations, as well as public sector organizations. A political science major can qualify students for graduate studies and an eventual career in business, law, consulting, state, local and federal government, journalism and communication, international organization, finance, polling and campaign management, lobbying, community service, nongovernmental organizations, and precollege and college teaching.

Political science education also provides valuable preparation for participating in community organizations, electoral politics, movements on behalf of specific policies, and for seeking elective or administrative positions in government. While many of these are voluntary activities, participation in them develops skills and creates opportunities for career success.

Majors in Political Science

- BA in Political Science (p. 253)
- Field Major - International Studies (p. 253)

Minors in Political Science

- Minor in Political Science (p. 254)
- Field Minor in International Studies (p. 254)

Courses in Political Science

- Political Science (POLS) (p. 487)

BA in Political Science

Program Requirements

A major consists of:

Course	Title	Hours
POLS 121	American Politics	3
POLS 220	Introduction to International Relations	3
POLS 226	Comparative Politics	3
POLS 365	Political Data Analysis	3
POLS 600	Senior Thesis	3
Select 18 additional credit hours of study distributed in the following fashion:		18
Electives in the major (18 credit hours):		
POLS 310	Latin American Politics	
POLS 315	The Presidency	
POLS 316	Legislative Politics	
POLS 319	State Government	
POLS 320	Developing World	
POLS 321	Introduction to Public Administration	
POLS 325	Women in the Political System	
POLS 336	International Organizations	
POLS 337	Conflict Analysis	
POLS 340	Global Challenges	
POLS 352	Law and Political Power	
POLS 356	Civil Liberties	
POLS 370	European Politics	
POLS 380	Parties and Elections	
POLS 385	Democracy and Authoritarianism	
POLS 390	Special Topics in Political Science	
POLS 395	U.S. Foreign Policy	
POLS 570	International Political Economy	
Total Credit Hours		33

Applied Learning

Students in the Bachelor of Arts in political science program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing POLS 600.

Departmental Honors

The department offers the option for majors to graduate with honors in political science if they meet the following requirements:

- obtain a 3.500 average or greater for the five core courses;

Course	Title	Hours
POLS 121	American Politics	3
POLS 220	Introduction to International Relations	3
POLS 226	Comparative Politics	3
POLS 232	Political Theory and Philosophy	3
POLS 365	Political Data Analysis	3

- take an additional course beyond the introductory one in each of the four sub-fields (American politics, international politics, comparative politics, political theory);
- take an additional 6 credit hours of political science courses beyond the 33 hours required for a major;
- maintain a 3.500 GPA for all political science courses; and
- receive an *A* or *A-* for the Senior Seminar capstone course.

Students who would like to be admitted to the honors track should contact the department chair.

Field Major in International Studies

In a rapidly globalizing world, the demand for college graduates who have a deeper understanding of different regions and cultures of the

world is growing. Many employers look favorably on prospective employees with language skills and international knowledge.

The international studies field major is an interdisciplinary degree with courses required in multiple departments. Students have the option to follow an area studies track or a business administration track. Both require students to focus on a particular region of the world, including language courses for that region. The core courses for each track vary, with the area studies track focusing more on historical, political and cultural relations, and the business administration track focusing on international business courses. The international studies degree is a BA degree in Fairmount College of Liberal Arts and Sciences. There is also an international studies minor available.

There are many career opportunities that can be pursued with an international studies degree including possible employment with federal and state government executive agencies, multinational corporations, law firms, international organizations such as the United Nations, nonprofit organizations and public and private schools. An international studies degree can also prepare students for a course of study in graduate school.

Students interested in pursuing a major or minor in international studies should contact the international studies advisors in the departments of political science or history, or seek additional information on the International Studies website (http://wichita.edu/is/)[1].

[1] Link opens new window.

Minor in Political Science

A minor consists of:

Course	Title	Hours
POLS 121	American Politics	3
Select 12 additional credit hours, at least 6 of which must be in upper-division courses		12
Total Credit Hours		15

Field Minor in International Studies

The field minor in international studies requires:

Course	Title	Hours
Language	Select 17 credit hours of language	17
Area Studies	Select 6 credit hours of area studies [1]	6
Core Courses	Select 9 credit hours	9
Total Credit Hours		32

[1] Refer to area studies track for a list of courses.

Psychology

The course of study is designed to provide a breadth of knowledge in the field of psychology.

The program is designed to prepare students for postgraduate work in psychology but is flexible enough to accommodate the interests of students who do not intend to pursue graduate study in psychology. Such students may be career oriented (e.g., social work, management training) or simply have an interest in learning more about why we behave as we do.

Majors in Psychology

- BA in Psychology (p. 254)

Minors in Psychology

- Minor in Psychology (p. 254)

Certificates in Psychology

- Certificate in Community Psychology (p. 254)
- Certificate in Human Factors Psychology (p. 255)

Courses in Psychology

- Psychology (PSY) (p. 491)

BA in Psychology

Program Requirements

The major for the Bachelor of Arts (BA) degree consists of a minimum of 31 credit hours in psychology, at least 9 of which are earned at Wichita State:

Course	Title	Hours
General Survey Course		
PSY 111	General Psychology	3
Research Methods Core Courses		
PSY 301	Psychological Statistics	3
PSY 311	Research Methods in Psychology	4
Core Content Courses		
Select 15 credit hours from the following:		15
PSY 320	Biological Psychology	
PSY 321	Psychology of Learning	
PSY 322	Cognitive Psychology	
PSY 323	Social Psychology	
PSY 324	Psychology of Personality	
PSY 325	Developmental Psychology	
PSY 327	Systems and Theories in Psychology	
PSY 328	Psychological Testing and Measurement	
Electives		
Select an additional 6 credit hours of electives from courses numbered 300 or above (excluding PSY 481)		6
Total Credit Hours		31

PSY 111 is prerequisite for all higher number psychology courses.

Minor in Psychology

The minor consists of a minimum of 15 credit hours selected in consultation with the student's major advisor.

Certificate Program in Community Psychology

This certificate program is designed to provide specialized skill training in community psychology for bachelor's-level students planning to enter the workforce or enter graduate school after graduation. It provides specialized information that will improve employability or chances of advancement within their current job. The curriculum is designed to equip students with the skills necessary to function within a community psychology setting, such as a nonprofit organization seeking a technical assistant.

The certificate program consists of six courses: five required and one optional. The five required courses (16 credit hours) in their preferred sequence are:

Course	Title	Hours
PSY 323	Social Psychology	3
PSY 301	Psychological Statistics	3
PSY 311	Research Methods in Psychology	4
PSY 406	Introduction to Community Psychology	3
PSY 428	Field Work In Psychology	3
Optional:		
PSY 608	Special Investigation	
Total Credit Hours		16

Eligible students need not be psychology majors, but must have a WSU GPA, both overall and in their psychology courses, of at least 3.000. Eligible students must apply to the community psychology coordinator upon completion of or current enrollment in:

Course	Title	Hours
PSY 301	Psychological Statistics	3
PSY 311	Research Methods in Psychology	4
PSY 323	Social Psychology	3
PSY 406	Introduction to Community Psychology	3

Acceptance into the certificate program will allow enrollment in PSY 428.

Certificate Program in Human Factors Psychology

This certificate program is designed to provide background and experience in human factors psychology for undergraduate students preparing for graduate study or entrance into the workforce. The program is designed to provide undergraduate students with the appropriate background and training to conduct research in a human factors laboratory within the psychology department. The curriculum is designed to equip students with the skills necessary to function within a human factors, cognitive psychology, perceptual psychology, experimental psychology or business setting.

The certificate program consists of six required courses, one of which is repeatable for additional credit. The special investigations course (PSY 608) will involve a research project in one of the human factors laboratories in the psychology department. The six required courses (17–19 credit hours) are:

Course	Title	Hours
PSY 301	Psychological Statistics	3
PSY 311	Research Methods in Psychology	4
PSY 322	Cognitive Psychology	3
PSY 405	Human Factors Psychology	3
PSY 409	Psychology of Perception	3
PSY 608	Special Investigation	1-3
Total Credit Hours		17-19

Eligible students need not be psychology majors, but must have a WSU GPA, both overall and in their psychology courses, of at least 3.000. Eligible students must apply to the human factors psychology coordinator upon completion of, or current enrollment in:

Course	Title	Hours
PSY 301	Psychological Statistics	3
PSY 311	Research Methods in Psychology	4
PSY 322	Cognitive Psychology	3
PSY 405	Human Factors Psychology	3
PSY 409	Psychology of Perception	3

Acceptance into the certificate program will guide enrollment in PSY 608 with one of the human factors laboratories in the department.

Note: This certificate has been reviewed and is not a gainful employment program per U.S. Department of Education rules and regulations.

Public Affairs, Hugo Wall School of

The Hugo Wall School of Public Affairs prepares students for careers in public and nonprofit organizations. For undergraduate students several courses are available for undergraduate credit. In the senior year, under the senior rule, some core courses required for the Master of Public Administration (MPA) may be taken for graduate credit.

Courses in the Hugo Wall School of Public Affairs

- Public Administration (PADM) (p. 477)

Religion

The study of religion offers students an opportunity to inform themselves about the major religious traditions of the world and to think critically and constructively about religion as a dimension of human experience and a mode of human expression. The curriculum includes courses on major religious traditions, significant issues in religion and methods of studying religion.

There is no major in religion but an emphasis in religion is available through the general studies program and a minor in religion is also possible.

Students contemplating an emphasis or minor in religion should discuss their academic program with a member of the department. A Bachelor of Arts degree field major provides an additional option.

Minors in Religion

- Minor in Religion (p. 255)

Courses in Religion

- Religion (REL) (p. 494)

Minor in Religion

A minor in religion requires a minimum of 15 credit hours. A maximum of 6 credit hours may be taken at the 100 level.

School of Social Work

The undergraduate social work program in WSU's School of Social Work offers courses leading to a Bachelor of Social Work (BSW) degree. The BSW program prepares students for foundation-level professional social work practice.

Students should consult the academic probation and dismissal standards (p. 211) for Fairmount College of Liberal Arts and Sciences at the beginning of the Fairmount College section and the requirements for retention stated in the BSW Student Manual found online at the School of Social Work website (http://wichita.edu/socialwork/)[1]. There

will be no credit toward the social work degree for prior life or work experiences.

Accreditation Status

The BSW program is accredited by the Council on Social Work Education. Students graduating from an accredited BSW program are eligible for professional social work licensure in Kansas.

[1] Link opens new window.

Majors in Social Work

- Bachelor of Social Work (p. 256)

Certificates in Social Work

- Certificate in Social Work and Addiction (p. 256)
- Certificate in Social Work and Child Welfare (p. 257)

Courses in the School of Social Work

- Social Work (SCWK) (p. 495)

Bachelor of Social Work

Admission

Requirements for program admission include a 2.000 overall GPA, completion of premajor and prerequisite courses, and satisfactory completion of a noncredit BSW Program/Practicum Orientation session. Students who receive a grade lower than *C* (2.000) in a required social work course must repeat that course and earn a *C* (2.000) or above. Provisional admissions may be granted before final grades are received, but enrollment in required upper-division social work courses is dependent upon meeting these admission standards.

Program Requirements

Social work majors must complete 45 credit hours of required social work courses. Students must be formally admitted to the major in order to take 400-level classes. BSW students are are required to take two major course selections, one suggested in the fall semester of the junior year, and one in the spring semester of their senior year.

Required Courses (in their suggested semester):

Sophomore		
Spring Semester		**Credit Hours**
SCWK 201	Introduction to Social Work and Social Welfare (or elective)	3
	Credit Hours	3
Junior		
Fall Semester		
SCWK 300	Policy I: Understanding Social Welfare Policy	3
SCWK	Major Course A	3
SCWK 360	Person in Society: Micro	3
	Credit Hours	9
Spring Semester		
SCWK 302	Techniques and Skills in Generalist Practice	4
SCWK 361	Person in Society: Macro	3
SCWK 351	Introduction to Social Work Research	3
	Credit Hours	10
Senior		
Fall Semester		
SCWK 401	General Practice With Groups	3
SCWK 402	Practicum I	4
SCWK 403	General Practice With Individuals	3
	Credit Hours	10
Spring Semester		
SCWK 400	Policy II: Connecting Policy and Practice	3
SCWK 404	Practicum II	4
SCWK	Major Course B	3
SCWK 470	Generalist Practice with Organizations and Communities	3
	Credit Hours	13
	Total Credit Hours	45

Course	Title	Hours
Major Courses		
These courses meet the requirements for a major course selection		
SCWK 304	Social Diversity and Ethics	3
SCWK 340	Human Sexuality	3
SCWK 385	Lesbian, Gay, Bisexual, Transgender Studies	3
SCWK 407	Generalist Practice With Children and Families	3
SCWK 541	Women, Children and Poverty	3
SCWK 542	International Social Work	3
SCWK 571	Contemporary Issues and Perspectives: LGBTQ	3
SCWK 610G	Policy and Practice with Aging	3
SCWK 611C	Domestic Human Trafficking	3
SCWK 572	Social Work Practice with Families of Diverse Cultures	3

Note: SCWK 201 is offered each semester. All other social work classes are offered only in the semester indicated on this guide.

Practicum

Placement into practicum requires attendance at a noncredit BSW program/practicum orientation session, submission of a practicum inventory form and resume by December 1 of the year prior to entering practicum. A practicum placement interview will need to be scheduled after the December 1 deadline.

Applied Learning

Students in the Bachelor of Social Work program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing a practicum experience in SCWK 402 and SCWK 404. These classes have an on-campus seminar that reflects on experiences in the 480 hours combined of required supervised placement in a social service agency in the Wichita Community, or student's own community if possible. Each student must meet with a field instructor at the agency for supervision and attend a university class with a field liaison that provides the reflective feedback for the educational tie to the Council of Social Work Education's — Education Policy and Accreditation Standards.

Certificate in Social Work and Addiction

This certificate program is designed to provide specialized knowledge and skills in addiction for bachelor’s-level students planning to enter the workforce or to enter graduate school after graduation. The curriculum is designed to equip students with the ability to be effective as social workers within a substance abuse arena, with prevention, interventions and evaluation.

Admission

Eligible students are required to be social work majors, accepted into the Bachelor of Social Work program, or have received a prior BSW degree. Students must have a WSU GPA of 2.500, and in their social work courses, at least a 3.000 GPA.

Students are allowed to apply to the certificate program, and the program application deadlines are July 1 or December 1 for admission consideration into the certificate program for the following academic year. Once accepted, students meet with the certificate coordinator each semester to review program progress, engage in mentoring activities, and plan for the next semester's learning.

Program Requirements

The certificate program consists of five courses. The five required courses (17 credit hours) in their preferred sequence are:

Fall Semester		Credit Hours
SCWK 531	Social Work Practice in Addictions	3
SCWK 402	Practicum I	4
	Credit Hours	7
Spring Semester		
SCWK 521	Forensic Social Work	3
SCWK 532	Pharmacology and Drug Classification in Social Work	3
SCWK 404	Practicum II	4
	Credit Hours	10
	Total Credit Hours	17

Students must maintain a WSU GPA of 2.500 and a 3.000 GPA in their social work classes. Students must receive a *C* (2.000) or better in the undergraduate certificate program classes to remain in the certificate program. The student's practicum (SCWK 402 and SCWK 404) placement must be an addiction focused practicum.

If a student does not meet the requirements to remain in the certificate program, the student and certificate coordinator request a review of the student's continued participation by the faculty student concerns committee. This group determines, along with the student and coordinator, whether there is a merited reason to remain a certificate program student, and if so, develops a plan forward accordingly.

If a student is dismissed from the certificate program due to failure to achieve the academic success in the certificate coursework, the student is notified in writing by the coordinator and faculty student concerns committee within 10 business days of the meeting.

Gainful Employment

This certificate has been reviewed and is *not* a gainful employment program per U.S. Department of Education rules and regulations.

Certificate in Social Work and Child Welfare

The certificate program in social work and child welfare is designed to provide specialized knowledge and skills in child welfare for bachelor's level students planning to enter the workforce or enter graduate school after graduation. The curriculum is designed to equip students with the ability to be effective as a social worker within a child welfare arena.

Admission

Eligible students are required to be social work majors accepted into the Bachelor of Social Work program, or prior graduates holding a BSW degree. Students must have a WSU GPA of 2.500, and in their social work courses, a GPA of at least 3.000.

Students are allowed to apply to the certificate program. Program application deadlines are July 1, or December 1 for admission consideration into the certificate program for the following academic year. Once accepted, students meet with the certificate coordinator each semester to review program progress, engage in mentoring activities, and plan for the next semester's learning.

Program Requirements

The certificate program consists of five courses. The five required courses (17 credit hours) in their preferred sequence are:

Course	Title	Hours
Spring Semester		
SCWK 407	Generalist Practice With Children and Families	3
SCWK 521	Forensic Social Work	3
Fall Semester		
Select one elective course from the following. (Topics courses as approved by the certificate advisor. May be offered in either the fall or spring semester.)		3
SCWK 531	Social Work Practice in Addictions	
SCWK 532	Pharmacology and Drug Classification in Social Work	
SCWK 541	Women, Children and Poverty	
SCWK 590	Domestic Violence	
SCWK 610	Topics In Social Work (Choose from 610 A—Z as approved by certificate advisor)	
SCWK 611	Special Topics in Social Work (Choose from 611 A—Z as approved by certificate advisor)	
SCWK 402	Practicum I	4
Spring Semester		
SCWK 404	Practicum II	4
Total Credit Hours		17

Note: Up to 3 credit hours taken outside of WSU may be used for the certificate.

Students must maintain a WSU GPA of 2.500, and a 3.000 GPA in their social work classes. Students must receive a *C* (2.000) or better in the undergraduate certificate classes to remain in the certificate program. The student's practicum (SCWK 402 and SCWK 404) placement must be a child welfare focused practicum.

If a student does not meet the requirements to remain in the certificate program, the student and certificate coordinator request a review of the student's continued participation by the faculty student concerns committee. This group determines, along with the student and coordinator, whether there is a merited reason to remain a certificate program student, and if so, develops a plan forward accordingly.

If a student is dismissed from the certificate program due to failure to achieve academic success in the certificate coursework, the student is notified in writing by the coordinator and faculty student concerns committee within 10 business days of the meeting.

Gainful Employment

This certificate has been reviewed and is *not* a gainful employment program per U.S. Department of Education rules and regulations.

Sociology

Sociology is the scientific study of the organization of society and social relationships. Sociology students learn not only about themselves but also about how their experiences and life trajectories are affected by their social environments. A major in sociology provides students

unique perspectives and skills that are applicable to a broad range of careers — including research, social services, business, education, policy and health care — making them well prepared to succeed in a diverse and changing society.

Through various opportunities within and outside of the classroom environment, sociology students develop insights about the effects of social structures on individual lives, communities and the broader society, learning to use scientific research methods to address complex social issues. The sociology department emphasizes a social justice perspective through research and teaching related to economic inequality, gender, race and ethnicity and aging, as well as social institutions such as the family, education and work.

Majors in Sociology

- BA in Sociology (p. 258)

Students interested in specializing in sociology but wanting the opportunity to more specifically tailor an interdisciplinary degree program may want to consider the Bachelor of General Studies (BGS) (p. 213) program with an emphasis in sociology, which can be completed either on campus or online. For more information, visit WSU Online's degree completion page (http://wichita.edu/onlinedegreecompletion/)[1].

[1] Link opens new window.

Minors in Sociology

- Minor in Sociology (p. 258)

Courses in Sociology

- Sociology (SOC) (p. 501)

BA in Sociology

The study of society mandates specific skills for interpreting information and observations. Therefore, students majoring in sociology are required to enroll in the following courses:

Course	Title	Hours
SOC 111	Introduction to Sociology	3
SOC 311	Introduction to Sociological Theory	3
SOC 312	Introduction to Social Research	3
SOC 313	Introduction to Social Statistics	3
SOC 514	Sociology Capstone	3
Select 15 credit hours of electives		15
Total Credit Hours		30

Outside of the required courses listed above, students have flexibility in selecting content specific areas of concentration such as deviant behavior, intimate relations and family life, social stratification and inequality, gender and sexuality, aging studies, social organization, urban sociology and the social determinants of health — or some combination of these specialties. Depending on a student's interests and goals, certain courses in related departments that meet their particular needs, if approved by the sociology department's undergraduate advisor, may be counted toward a sociology major, though no more than 6 credit hours of such courses may be included. Transfer students should note that at least 9 credit hours of sociology coursework must be earned at Wichita State.

Applied Learning

Students in the BA in sociology program are required to complete an applied learning or research experience to graduate from this program. The requirement can be met by taking SOC 514. Successful completion of this course will serve as fulfillment of the university's applied learning/research experience requirement.

Minor in Sociology

A minor in sociology consists of at least 15 credit hours, including:

Course	Title	Hours
SOC 111	Introduction to Sociology	3
At least 3 credit hours of courses 500+		3
An additional 9 credit hours in sociology electives		9
Total Credit Hours		15

Students can complete the minor through traditional face-to-face courses, a combination of face-to-face and online coursework, or completely online.

Women's Studies

As a department in Fairmount College of Liberal Arts and Sciences, the Center for Women's Studies offers a major and minor in women's studies. Students receive academic training and leadership skills with the goal of improving women's lives in domestic and professional arenas. The analysis of gender, race/ethnicity, class and sexuality is central to the major. Cross-cultural and international perspectives represent the department's commitment to move beyond culturally and nationally parochial understanding of women's identities and struggles. Women's studies is interdisciplinary in approach, and the major reflects a thematic rather than disciplinary focus. The four core areas — internationalism, representation and media, social issues, and religion and thought — provide critical understanding of women, culture and society. Students may elect to double-major in women's studies and other fields in the liberal arts and sciences or other colleges. The major prepares students for careers in a variety of fields.

Majors in Women's Studies

- BA in Women's Studies (p. 258)

Minors in Women's Studies

- Minor in Women's Studies (p. 259)

Courses in Women's Studies

- Women's Studies (WOMS) (p. 511)

BA in Women's Studies

The major in women's studies consists of 30 credit hours:

Course	Title	Hours
Required Core		
WOMS 190	Diverse Women in Popular Culture	3
WOMS 287	Women in Society: Social Issues	3
WOMS 387	Women in Society: Cultural Images	3
WOMS 587	Theories of Feminism	3
Core Area		
Select 9 credit hours (three courses) taken within a core area listed below		9
Electives		

Select 9 credit hours (three courses) in any of the four core areas, taken in any combination	9
Total Credit Hours	30

One course must be a diversity course such as:

Course	Title	Hours
WOMS 370	Women in World Religions	3
WOMS 385	Lesbian, Gay, Bisexual, Transgender Studies	3
WOMS 513	Issues and Perspectives on African Women and Globalism	3
WOMS 514	Women in the Middle East	3
WOMS 532	Women in Ethnic America	3
WOMS 542	Women in Other Cultures	3
WOMS 579	Asian Women in Modern History	3
WOMS 588	Gender, Race and the West/ East Divide	3

Of the 30 credit hours, no more than 3 credit hours in courses numbered 100–199 may be counted toward the major except WOMS 190, REL 110 and REL 115. Students are strongly encouraged to take WOMS 190 and WOMS 287 as early as possible in the major.

Core Areas

Some courses may appear in two core areas if course content is appropriate.

Core Area I: Global and International Studies

Course	Title	Hours
WOMS/REL 370	Women in World Religions	3
WOMS 391	Women's Global Issues	3
WOMS 513	Issues and Perspectives on African Women and Globalism	3
WOMS 514	Women in the Middle East	3
WOMS/HIST 532	Women in Ethnic America	3
WOMS/ANTH 542	Women in Other Cultures	3
WOMS/HIST/ETHS 579	Asian Women in Modern History	3
WOMS 588	Gender, Race and the West/ East Divide	3

Core Area II: Popular Culture, Literary and Media Representations

Course	Title	Hours
WOMS 330	Women's Personal Narrative	3
WOMS 365	Gender and Digital Culture	3
WOMS 382	Feminism and Girl Culture	3
WOMS 385	Lesbian, Gay, Bisexual, Transgender Studies	3
WOMS 510	Hollywood Melodrama: The Woman's Film	3
WOMS 523	Feminist Film Criticism	3
WOMS/ENGL 536	Writing By Women	3
WOMS 580Z	Dangerous Women in Film	3

Core Area III: Social Issues and Social Inequalities

Course	Title	Hours
WOMS/SOC 306	Introduction to Gender Studies	3
WOMS/SOC 316	Men and Masculinities	3
WOMS/POLS 325	Women in the Political System	3
WOMS/SCWK 340	Human Sexuality	3
WOMS 345	Gender, Alcohol and Addictions	3
WOMS 361	Gender, Work and Culture	3
WOMS 365	Gender and Digital Culture	3
WOMS 380	Special Topics	1-3
WOMS 380AF	Diversity, Human Rights and the Law	3
WOMS 380Q	Women and Animal Rights	3
WOMS 385	Lesbian, Gay, Bisexual, Transgender Studies	3
WOMS 389	Gender, Science and Technology	3
WOMS/ETHS 399	Asian American Women and Men (Asian American Women and Men)	3
WOMS/HIST 532	Women in Ethnic America	3
WOMS/PSY 534	Psychology of Women	3
WOMS/SCWK 541	Women, Children and Poverty	3
WOMS 701B	Women and the Environment	3

Core Area IV: Religion and Diversity of Thought

Course	Title	Hours
REL 110	Old Testament	3
REL 115	New Testament	3
PHIL 345	Philosophy of Sex and Love	3
WOMS/PHIL 338	Philosophy of Feminism	3
WOMS/REL 370	Women in World Religions	3
REL 384	Paul	3
WOMS/REL 420	Women and the Bible	3
WOMS 588	Gender, Race and the West/ East Divide	3

Minor in Women's Studies

The minor in women’s studies consists of a minimum of 15 credit hours of women’s studies courses, including:

Course	Title	Hours
WOMS 287	Women in Society: Social Issues	3
WOMS 387	Women in Society: Cultural Images	3
Select 9 additional credit hours in women's studies courses		9
Total Credit Hours		15

Restrictions on 100-level courses in the major also apply to the minor. (No more than 3 credit hours in courses numbered 100–199 may be counted toward the minor except WOMS 190, REL 110 and REL 115.)

University Faculty

(as of January 15, 2020)

A

Abdinnour, Suhair H., Omer Professor in Business, Department of Finance, Real Estate, and Decision Sciences (1998). BS, Birzeit University, 1983; MS, Southampton University, 1988; PhD, Indiana University, 1994.

Adler, Edward T., Associate Professor, School of Art, Design and Creative Industries (2005). BA, Lewis and Clark College, 1993; MFA, Ohio University, 2002.

Adler, Michelle D., Assistant Professor, School of Education (2015). BS, Emporia State University, 1993; MEd, Wichita State University, 1998; EdD, Liberty University, 2015.

Aghaie, Sina, Assistant Professor, Department of Marketing (2019). PhD, University of South Carolina, 2019.

Ahmed, Ikramuddin, Associate Professor, Department of Mechanical Engineering (2000). BSME, Bangladesh University of Engineering and Technology, 1988; MSME, University of Texas-Austin, 1993; PhD, 1997.

Alagic, Mara, Professor, School of Education (1993). BS, University of Belgrade, 1970; MS, 1975; PhD, 1985.

Allen, Neal R., Associate Professor and Department Chair, Department of Political Science (2011). BA, DePauw University, 1998; MA, University of Texas-Austin, 2001; PhD, 2009.

Alliston, Kevin, Teaching Professor, Department of Chemistry (2005). BS, Wichita State University, 1991; PhD, 1999.

Alloway, Laurie B., Associate Teaching Professor, Department of Medical Laboratory Sciences (2012). BA, Newman University, 1996; BS, Wichita State University, 1996; MS, Friends University, 2010.

Ambal, Kapildeb, Assistant Professor, Department of Mathematics, Statistics and Physics (2019). MS, University of Utah, 2013; PhD, 2016.

Amos, Brian M., Assistant Professor, Department of Political Science (2019). MA, University of Florida, 2013; PhD, 2018.

Anderson, Kelly, Associate Professor, Department of Dental Hygiene (2001). AS, Wichita State University, 1982; BHS, 1983; MHS, 1994.

Aravinthan, Visvakumar, Associate Professor, Department of Electrical Engineering and Computer Science (2011). BS, University of Moratuwa-Sri Lanka, 2002; MS, 2005; MS, Wichita State University, 2006; PhD, 2010.

Armbruster, Sonja M., Health Sciences Educator, Department of Public Health Sciences (2017). BA, Wichita State University 1994; MA, 2001.

Armstrong, Richard N., Associate Professor and Director of Basic Oral Communication Program, Elliott School of Communication (1987). BA, Southern Utah University, 1972; MA, Brigham Young University, 1974; PhD, Bowling Green State University, 1978.

Arnold, Stephen D., Professor, Department of Public Health Sciences (2011). BS, New Mexico State University, 1984; PhD, Colorado State University Fort-Collins, 1989.

Arrasmith, Mark B., Senior Educator and Information Systems Specialist, Department of Mathematics, Statistics and Physics (1996). BS, Wichita State University, 1992; MS, 1996.

Asaduzzaman, Abu, Associate Professor, Department of Electrical Engineering and Computer Science (2010). BS, Bangladesh University of Engineering and Technology, 1993; MS, Florida Atlantic University, 1997; PhD, 2009.

Ashbrook, Christina M., Assistant Teaching Professor, Department of Physical Therapy (2018). PhD, Wichita State University, 2010.

Ashworth, Sherry L., Teaching Professor, Intensive English Language Center (1981). BA, Wichita State University, 1981; MEd, 1985.

Askari, Davood, Assistant Professor, Department of Mechanical Engineering (2013). MS, Eastern Mediterranean University, 2002; PhD, University of Hawaii-Manoa, 2009.

Asmatulu, Eylem, Assistant Professor, Department of Mechanical Engineering (2015). BS, Cukurova University, Institute of Science and Technology, 2002; MS, 2004; PhD, Wichita State University, 2013.

Asmatulu, Ramazan, Professor, Department of Mechanical Engineering (2006). BS, Istanbul Technical University, 1992; MS, 1995; PhD, Virginia Polytechnic Institute and State University, 2001.

Azpuru, Dinorah, Professor, Department of Political Science (2005). Certificate, University Institute of Development, Geneva-Switzerland, 1986; Diploma, Uppsala University-Sweden, 1989; MA, University Rafael Landivar-Guatemala, 1993; MA, University of Pittsburgh, 2000; PhD, 2003.

B

Babb, Timothy P., Assistant Educator and Program Director of Animation, Shocker Studios (2019). BA, Wichita State University, 2000; MSW, 2007.

Babnich, Judith, Professor, School of Performing Arts (1984). BA, Xavier University, 1974; MA, University of Cincinnati, 1975; PhD, University of California-Los Angeles, 1981.

Badgett, Barry T., Associate Professor, School of Art, Design and Creative Industries (1993). BFA, Virginia Commonwealth University-Richmond, 1985; MFA, Syracuse University, 1990.

Bagai, Rajiv, Professor, Department of Electrical Engineering and Computer Science (1990). MS, Birla Institute of Technology and Science, 1983; MS, University of Victoria, 1987; PhD, 1990.

Bailey, Whitney A., Athletic Training Clinical Education Coordinator, Department of Human Performance Studies (2016). BS, North Georgia College and State University, 2009; MEd, Georgia College & State University, 2011.

Baker, Carl E., Associate Professor and Technical Director, School of Performing Arts (2005). BA, Wichita State University, 1988; MFA, Ohio University, 1991.

Baker, Danette M., Visiting Assistant Professor and Interim Program Director of Theater, School of Performing Arts (2001). BA, Wichita State University, 1988; MFA Ohio University-Athens, 1992.

Baldridge, Wilson R., Professor and Department Chair, Department of Modern and Classical Languages and Literatures (1984). BA, Denison University, 1973; PhD, State University of New York-Buffalo, 1982.

Baldwin, Carryl L., Carl and Rozina Cassat Professorship in Aging and Director of Regional Institute on Aging, Department of Psychology (2019). MA, University of South Dakota-Vermillion, 1994; PhD, 1997.

Ballout, Laila K., Assistant Professor, Department of History (2019). MA, Northwestern University, 2009; PhD, 2017.

Banke, Andrea E., Assistant Professor, School of Music (1995). BM, University of Rochester Eastman School of Music, 1995; MM, University of Minnesota, 1998.

Bann, James G., Associate Professor, Department of Chemistry (2004). BS, Ft. Lewis College, 1993; PhD, Oregon Health Sciences University, 2000.

Bannister, Andra J., Professor and Director, School of Criminal Justice (1996). BS, University of Illinois Urbana-Champaign, 1989; MA, Indiana University-Bloomington, 1990; PhD, Michigan State University, 1995.

Barut, Mehmet, Professor, Department of Finance, Real Estate, and Decision Sciences (2000). BS, Istanbul Technical University, 1988; MS, 1991; PhD, Clemson University, 1999.

Beamer, Patricia E., Assistant Teaching Professor, School of Nursing (2012). AS, Butler Community College, 1989; BSN, Wichita State University, 1992; MSN, 2012.

Bechtold, Rebeccah B., Associate Professor and Graduate Studies Coordinator, Department of English (2013). BA, Knox College, 2005; MA, University of Illinois Urbana-Champaign, 2007; PhD, 2012.

Beck, James, Associate Professor, Department of Biological Sciences (2013). BS, Eastern Kentucky University, 1999; PhD, Washington University, 2007.

Beck, Moriah R., Associate Professor, Department of Chemistry (2011). BS, Eastern Kentucky University, 1999; PhD, Washington University, 2007.

Beeken, Ryan N., Associate Professor and Director of Choral Activities, School of Music (2019). BM, Drake University, 1994; MM, Michigan State University, 2009; DMA, 2012.

Beeler, Angela M., Assistant Professor, Department of Counseling, Educational Leadership, Educational and School Psychology (2018). PhD, Oklahoma State University, 2018.

Bees, Julie I., Professor, School of Music (1986). BM, Peabody Conservatory, 1974; DMA, University of Colorado, 1982.

Behrman, Elizabeth C., Professor, Department of Mathematics, Statistics and Physics (1990). BS, Brown University, 1979; MS, University of Illinois Urbana-Champaign, 1981; PhD, 1985.

Belt, Lisa D., Teaching Professor and Department Chair, Department of Dental Hygiene (2004). AS, Seward Community College, 1980; AS, Wichita State University, 1982; BHS, 1982; MS, Idaho State University, 2013.

Bergman, Daniel J., Professor, School of Education, College of Applied Studies (2007). BS, University of Nebraska-Lincoln, 1999; MA, 2002; MA, University of Nebraska-Kearney, 2004; PhD, Iowa State University, 2007.

Bernstorf, Elaine D., Professor, School of Music (1984). BME, Wichita State University, 1976; MMED, 1978; PhD, 1993.

Berry, Bobby D., HP Lab Manager and Clinical Educator, Department of Human Performance Studies (2016). BAED, Wichita State University, 2011; MEd, 2013.

Besthorn, Fred H., Professor, School of Social Work (2010). BS, Sterling College, 1973; MDiv, Grace Theological Seminary, 1978; MSW, University of Kansas, 1991; PhD, 1997.

Bett, Carol J., Associate Teaching Professor, School of Nursing (2009). BSN, Point Loma Nazarene University, 1979; MA, Nazarene Theological Seminary, 1984; MN, University of Phoenix, 1996. PhD, University of New Mexico-Albuquerque, 2015.

Bibb, Sandra C., Dean, College of Health Professions; Professor, School of Nursing (2014). BSN, University of San Diego, 1983; MSN, 1991; DNSC, 1999.

Billingham, Chase M., Associate Professor, Department of Sociology (2013). BA, Tulane University, 2006; MA, Northeastern University, 2008; PhD, 2013.

Birondo, Noell N., Associate Professor and Department Chair, Department of Philosophy (2013). BA, University of California-Berkeley, 1995; MA, University of Notre Dame, 1999; PhD, 2004.

Birzer, Michael L., Professor, School of Criminal Justice (1996). BS, Wichita State University, 1989; MS, 1994; EdD, Oklahoma State University, 2000.

Bischoff, William D., Professor, Department of Geology (1984). BA, DePauw University, 1979; MS, Northwestern University, 1982; PhD, 1985.

Black, Phillip C., Assistant Professor, School of Music (1986). BS, Ball State University, 1977; MM, University of New Mexico, 1980.

Blakeslee, Donald J., Professor, Department of Anthropology (1976). BA, University of Nebraska-Lincoln, 1969; MA, 1971; PhD, University of Wisconsin-Milwaukee, 1975.

Boehme, Rodney, Associate Professor, Department of Finance, Real Estate, and Decision Sciences (2004). BS, Texas A&M, 1984; MBA, Baylor University, 1993; PhD, University of Houston, 1998.

Boldsaikhan, Enkhsaikhan, Assistant Professor, Department of Industrial, Systems, and Manufacturing Engineering (2018). PhD, South Dakota School of Mines and Technology, 2008.

Bolema, Theodore R., Executive Director, Institute for the Study of Economic Growth and Associate Professor, Department of Economics (2018). JD, University of Michigan School of Law, 1991.

Bolin, Brien L., Professor and Associate Dean, School of Social Work (1999). BS, Oklahoma State University, 1985; MS, 1988; MSW, Walla Walla College, 1998; PhD, Oklahoma State University, 1994.

Bomgardner, Richard K., Assistant Professor, Department Chair and Program Director, Department of Human Performance Studies (2003). BAED, Wichita State University, 1987; MS, Fort Hays State University, 1991; EdD, Liberty Baptist College, 2014.

Bondy, Patrick R., Assistant Professor, Department of Philosophy (2018). PhD, McMaster University, 2012.

Bonitto, Cassandra M., Assistant Educator, Department of Counseling, Educational Leadership, Educational and School

Psychology (2017). BA, Wichita State University, 2011; SPED, University of Kansas, 2014.

Boppre, Breanna L., Assistant Professor, School of Criminal Justice (2018). PhD, University of Nevada-Las Vegas, 2018.

Bordelon, Gregory R., Assistant Teaching Professor, Department of Finance, Real Estate, and Decision Sciences (2018). JD, Louisiana State University and A&M College, 2001.

Bose, Sourabh, Assistant Teaching Professor, Department of Electrical Engineering and Computer Science (2019). PhD, University of Texas-Arlington, 2019.

Bousfield, George R., Jones Distinguished Professor, Department of Biological Sciences (1991). BS, Saginaw Valley State University, 1974; MA, Indiana University, 1976; PhD, 1981.

Bowen, Aaron S., Assistant Professor and Instruction and Research Services Librarian, University Libraries (2015). BA, College of Wooster, 2001; MA, University of Washington, 2006; MLS, 2015.

Bowman, Andrew P., Senior Educator, Intensive English Language Center (2018). MA, Rutgers University, 1993.

Boynton, Thomas J., Assistant Professor, Department of English (2014). BA, Monmouth College, 2002; MA, University of Illinois, 2005; PhD, 2011.

Bradfield, Katherine A., Fairmount Lecturer, Department of Philosophy (2012). BA, Wichita State University, 1993; MA, Washington University-St. Louis, 2001.

Bradley, Patricia C., Senior Research Economist and Associate Educator, Department of Economics (2018). BBA, Wichita State University, 2004; MA, 2010.

Brady, Stephen W., Associate Professor and Director of College Algebra Program, Department of Mathematics, Statistics and Physics (1967). BA Indiana University 1963; MA, 1965; PhD, 1968.

Bray, Susan S., Associate Professor, Department of Counseling, Educational Leadership, Educational and School Psychology (2012). BS, Louisiana State University-Shreveport, 1984; MA, Louisiana Tech University, 1996; MS, Louisiana State University-Shreveport, 2012; PhD, Texas A&M University, 2009.

Broberg, John C., Associate Professor, Department of Management (2008). BA, Brigham Young University, 1995; MBA, University of Arizona, 1998; PhD, Texas Tech University, 2010.

Brooking, Gary D., Teaching Professor and Department Chair, Department of Engineering Technology (2014). BS, University of Cape Town, 1985; MS, Clemson University, 1990; PhD, University of Virginia, 1996.

Brown, Gina R., Associate Professor and Director Didactic Education, Physician Assistant Program (2009). BS, Wichita State University, 2004; MPA, University of Nebraska-Omaha, 2009.

Brown, Molly B., Assistant Dean, Interprofessional Education & Collaborative Practice and Assistant Educator, College of Health Professions (2018). MPH, University of Kansas, 2013.

Bryant, Jeffrey J., Professor, BKD Faculty Fellow and Director, School of Accountancy (1985). BA, Wichita State University, 1977; JD, Washburn University School of Law, 1980; PhD, Texas Tech University, 1994. CPA — Kansas.

Bubp, Robert, Associate Professor, School of Art, Design and Creative Industries (2002). BFA, University of Georgia, 1993; MFA, Georgia State University, 2002.

Buerge, Brandon T., Associate Teaching Professor, Department of Aerospace Engineering (2012). BS, Washington University, 2002; MS, 2005; PhD, 2008.

Bukhgeym, Alexander L., Professor, Department of Mathematics, Statistics and Physics (2002). MS, Novosibirsk State University, 1971; Candidate of Sciences (PhD), Russian Academy of Sciences Computing Center-Siberian Division, 1974; Doctor of Sciences (PhD), 1984.

Bukonda, Ngoyi K., Professor, Department of Public Health Sciences (2007). BS, National University of Kinshasa, 1981; MPH, University of Minnesota, 1989; PhD, 1994.

Burdsal, Charles A., Professor, Department of Psychology; Director, Social Science Research Laboratory (1970). BA, Texas Tech University, 1966; PhD, 1971.

Burke, Collette D., Associate Professor, Department of Geology (1983). BA, St. Mary of the Woods College, 1973; MA, Akron University, 1981; PhD, University of Wisconsin-Milwaukee, 1983.

Burns, Dennis H., Professor, Department of Chemistry (1989). BS, University of California-Los Angeles, 1981; PhD, University of California-Davis, 1986.

Burugupally, Sindhu Preetham, Assistant Professor, Department of Mechanical Engineering (2017). PhD, Washington State University, 2014.

Butler, Brandi L., Assistant Educator, Department of Dental Hygiene (2019). BS, Wichita State University, 2015.

Butts, Sara A., Assistant Professor and Engineering, Patents and Trademark Librarian, University Libraries (2018). MLS, Emporia State University, 2016.

Byun, Jae Hwan, Assistant Professor, School of Education (2015). BA, Hanyang University, 2001; MA, 2004; PhD, Southern Illinois University Carbondale, 2012.

C

Campbell, Betty I., Professor, School of Nursing (1998). BSN, University of Michigan, 1980; MN, University of Kansas, 1987; PhD, University of Colorado, 1996.

Carlson, Brandi N., Assistant Professor, Department of Dental Hygiene (2014). BA, Pittsburg State University, 2001; MS, 2002; BS, Wichita State University, 2010.

Carter, Rebecca S., Assistant Educator, School of Nursing (2017). BSN, Wichita State University, 2002; MSN, 2005.

Castaldi, Cristina M., Assistant Professor, School of Music (2016). BM, Kennesaw College, 1990; MM, New England Conservatory of Music, 1992; DMA, Rutgers University, 2015.

Castro, Susan V., Associate Professor, Department of Philosophy (2012). BS, University of California-Los Angeles, 1993; MA, 1998; PhD, 2006.

Celestin, Denise A., Professor, School of Performing Arts (1992). BFA, Texas Christian University, 1980; MFA, 1984.

Celso, Jennifer E., Associate Teaching Professor, Department of Physical Therapy (2011). BS, Wichita State University, 1999; MPT, 2001; DPT, Northeastern University, 2009.

Chand, Masud, Associate Professor and Department Chair, Department of Management (2009). BBA, University of Dhaka, 2000; MBA, Simon Fraser University, 2004; PhD, 2010.

Chandler, Gaylen N., Professor and Barton Distinguished Chair in Entrepreneurship, Department of Management (2007). BS, Brigham Young University, 1980; MBA, University of Utah, 1989; PhD, 1990.

Chang, Doris, Associate Professor, Department of Women's Studies and Religion (2002). BA, University of North Carolina, 1992; MA, Bowling Green State University, 1994; PhD, Ohio State University, 2002.

Chavez, Cuitlahuac, Instructor, Language Lab Director and Puebla Program Director, Department of Modern and Classical Languages and Literatures (2013). BA, Humboldt State University, 2002; MA, California State University-Sacramento, 2006.

Cheng, Jen-Chi, Associate Professor and Department Chair, Department of Economics (1989). BA, National Chengchi University, 1978; MA, National Taiwan University, 1982; PhD, Vanderbilt University, 1989.

Chesser, Amy K., Associate Professor, Department of Public Health Sciences (2014). MA, Wichita State University, 2003; PhD, Regents University, 2008.

Chopra, Dharam V., Professor, Department of Mathematics, Statistics and Physics (1967). BA, Panjab University-India, 1950; MA, 1953; MS, University of Michigan, 1961; MA, 1963; PhD, University of Nebraska, 1967.

Chou, Remi, Assistant Professor, Department of Electrical Engineering and Computer Science (2017). MS, Georgia Institute of Technology, 2011; PhD, 2015.

Clark, Charles B., Assistant Professor, Department of Psychology (2015). BS, Aquinas College, 2004; MA, University of Southern Mississippi, 2008; PhD, 2011.

Clark, James E., Associate Professor and Director of Assurance of Learning, Department of Economics (1976). BA, Michigan State University, 1969; MA, Northwestern University, 1971; PhD, 1976.

Clawson, Cheyla M., Assistant Professor, School of Performing Arts (2012). BFA, Wichita State University, 2000; MA, 2006.

Clemens, Jason R., Data Analytics Postdoctoral Fellow, Graduate School (2018). MS, Kansas State University, 2014; PhD, 2018.

Close, Dan E., Associate Professor, Elliott School of Communication (1985). BA, Wichita State University, 1981; MA, 1993.

Clouse, Michael A., Assistant Educator, Physician Assistant Program (2019). BS, Wichita State University, 2005

Cluff, Kim, Associate Professor, Department of Biomedical Engineering (2012). BS, University of Nebraska-Lincoln, 2007; MS, 2009; PhD, 2012.

Cochran-Black, Diana L., Associate Professor and Department Chair, Department of Medical Laboratory Sciences (1987). BS, Emporia State University, 1979; MHS, Wichita State University, 1986; DPH, University of Oklahoma, 1998; MS, University of Florida, 2017.

Cockrell, Seth, Assistant Professor, Department of Marketing (2018). PhD, Michigan State University, 2016.

Cohen, Peter A., Professor, Department of Public Health Sciences (1998). BA, University of California, 1973; MA, San Diego State University, 1976; PhD, University of Michigan, 1980.

Cole, Michael K., Assistant Teaching Professor, Department of English (2019). BA, Wichita State University, 2012; MA, 2015.

Collins, Breann M., Associate Clinical Professor, School of Social Work (2013). BA, Wichita State University, 2003; MSW, 2005.

Connor, Francis X., Associate Professor and Undergraduate Studies Coordinator, Department of English (2012). BA, University of Scranton, 1994; MA, George Mason University, 2003; PhD, University of Virginia, 2011.

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Consiglio, Catherine A., Professor, School of Music (1990). BM, Wichita State University, 1981; MA, New England Conservatory, 1983.

Cooper, Theresa A., Associate Educator, School of Nursing (2007). BSN, Wichita State University, 1993; BA, 1994; MSN, MBA, 2001.

Corcoran, Samantha L., Engineering Educator, College of Engineering (2009). BSIE, Wichita State University, 2004; MS, 2010.

Core, Terri J., Associate Educator, School of Nursing (2006). BSN, Pittsburg State University, 1988; MSN, Wichita State University, 2000.

Cornell, Heidi R., Assistant Professor, School of Education (2016). BS, Indiana University, 2002; MS, 2005; PhD, 2015.

Countryman-Roswurm, Karen I., Associate Professor, School of Social Work; Executive Director, Center for Combatting Human Trafficking (2009). BA, Wichita State University, 2005; MSW, 2006; PhD, 2012.

Craft, Timothy M., Associate Professor and Director of Koch Global Trading Center, Department of Finance, Real Estate, and Decision Sciences (2000). BS, Illinois State University, 1987; MS, University of Illinois Urbana-Champaign, 1992; MS, University of Wisconsin-Madison, 1996; PhD, 2001.

Cramer, Katherine C., Associate Professor, School of Education (2010). BS, Emporia State University, 2000; MS, Kansas State University, 2003; PhD, Arizona State University, 2006.

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Cure Vellojin, Laila N., Assistant Professor, Department of Industrial, Systems, and Manufacturing Engineering (2015). BS, Universidad del Norte-Colombia, 2003; MS, 2006; PhD, University of South Florida, 2011.

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Dehner, George J., Associate Professor, Department of History (2004). BS, Temple University, 1992; MA, University of Denver, 1999; PhD, Northeastern University, 2005.

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Demissie, Zelalem S., Assistant Professor, Department of Geology (2019). PhD, Oklahoma State University, 2018.

Desai, Jaydip M., Assistant Professor, Department of Biomedical Engineering (2017). MS, Stevens Institute of Technology, 2010; PhD 2014.

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DiLollo, Anthony, Professor, Department of Communication Sciences and Disorders (2002). BS, University of Western Australia, 1986; MS, University of Mississippi, 1996; PhD, University of Memphis, 2001.

Dickison, Carrie N., Coordinator Online English, Department of English (2015). BA, Seattle Pacific University, 2004; MA, University of Illinois Urbana-Champaign, 2008.

Ding, Yanwu, Associate Professor, Department of Electrical Engineering and Computer Science (2008). BS, Southwest Jiaotong University, 1985; MS, Northern Jiaotong University, 1989; MS, McMaster University, 2002; PhD, 2007.

Dooley, Patricia L., Elliott Professor of Communication, Elliott School of Communication (1997). BA, University of Minnesota, 1975; MA, 1985; PhD, 1994.

Dowling, Jolynn A., Riordan Distinguished Professorship in Maternal Child Health and Associate Educator, School of Nursing (2012). BSN, Wichita State University, 1988; MSN, 1995.

Downes, Kathy A., Dean and Associate Professor, University Libraries (1979). BS, Mississippi University for Women, 1978; MS, University of Kentucky, 1979; MPADM, Wichita State University, 1985.

Doyle, Kevin M., Abercrombie Distinguished Executive in Residence in Geology, Department of Geology (2017). MS, University of Wisconsin-Milwaukee, 1983.

Dozier, Crystal A., Assistant Professor, Department of Anthropology (2018). MA, Texas A&M University, 2016; PhD, 2018.

Dreifort, John E., Professor, Department of History (1970). BS, Bowling Green State University, 1965, MA, 1966; PhD, Kent State University, 1970.

Driessen, Brian J., Associate Professor, Department of Mechanical Engineering (2004). BS, Louisiana Tech University, 1991; MS, Georgia Institute of Technology, 1993; PhD, 1996.

Durano, Cathy S., Associate Educator, School of Education (2012). BA, Wichita State University, 1985; MEd, 1990.

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Goering, John M., Assistant Professor, School of Music (1997). BM, Wichita State University, 1995; MM, 2001.

Gong, Maojun, Associate Professor, Department of Chemistry (2012). BA and BS, University of Science and Technology of China, 1998; PhD, University of Cincinnati, 2006.

Gonzalez, Barbara M., Clinical Professor, Department of Dental Hygiene (1986). AS, Wichita State University, 1984; BHS, 1984; MHS, 1987.

Gooch, Deanna L., Assistant Clinical Professor, Department of Counseling, Educational Leadership, Educational and School Psychology (2018). BS, Kansas State University, 1983; PhD, 2012.

Goodvin, Sharon Bever, Clinical Educator, School of Education (2011). BS, Pittsburg State University, 1974; MS 1981; EdD, Wichita State University 2005.

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Goter, Rachelle M., Visiting Assistant Educator, School of Music (2018). BM, Wichita State University, 1994; MM, 2010.

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Granada, Arthur J., Associate Teaching Professor, School of Education (2011). BS, Emporia State University, 1977; MEd, Wichita State University, 1986; EdD, Northern Arizona University, 1997.

Grant, Candace S., Assistant Educator, School of Nursing (2019). BS, Western Governors University, 2016; MS, 2018.

Green, Jacie L., Director of Graduate Programs and Associate Educator, Department of Public Health Sciences (2013). MA, Wichita State University, 2012.

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Griffith, Jean C., Associate Professor and Department Chair, Department of English (2007). BA, Boston College 1993; MA, Temple University, 1996; PhD, Texas A&M University, 2003.

Groutas, William C., WSU Foundation Distinguished Professor, Department of Chemistry (1980). BS, American University of Beirut, 1969; PhD, University of Kentucky, 1973.

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Gupta, Deepak P., Associate Professor, Department of Industrial, Systems, and Manufacturing Engineering (2014). BS, Indian Institute of Technology, 2000; MS, West Virginia University-Morgantown, 2005; PhD, 2007.

H

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Hackett, Donald W., Associate Professor and Kansas Family Business Fellow, Department of Management (1973). BBA, University of Oklahoma, 1967; MBA, 1970; PhD, 1974.

Hager, Kevin E., Associate Professor, Elliott School of Communication (1998). BA, Fort Hays State University, 1982; MS, 1983.

Hakansson, Nils A., Associate Professor, Department of Biomedical Engineering (2011). BA, Duke University, 1988; MS, University of California-Davis, 2003; PhD, 2008.

Hale, LaDonna S., Professor and Director of Assessment, Physician Assistant Program (1997). BS, University of Kansas, 1995; PharmD, 1996.

Haley, Usha, Barton Distinguished Chair in International Business and Professor, Department of Management (2018). MPH, New York University, 1988; PhD, 1990.

Hall, Michael G., Associate Professor, Department of Political Science (2008). BS, University of Pittsburgh, 1991; MA, University of California-Santa Barbara, 1997; PhD, 2002.

Ham, Amy D., Clinical Professor, Department of Public Health Sciences (1996). BA, Wichita State University, 1993; MA, 1997; MPH, 2001; PhD, University of Kansas, 2013.

Hamdeh, Hussein H., Professor, Department of Mathematics, Statistics and Physics (1989). BS, Lebanese University, 1978; MS, Northwestern University, 1980; PhD, 1986.

Hammond, John M., Associate Educator, Department of Mathematics, Statistics and Physics (2012). BS, Missouri State University, 2006; MA, University of Missouri-Columbia, 2012.

Hanneman, Ronda J., Assistant Clinical Professor, Physician Assistant Program (2017). MPH, University of Kansas, 2016.

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Harrington, Jamie A., Assistant Professor, School of Nursing (2018). PhD, Wichita State University, 2018.

Harrison, Paul D., Professor and Summers Faculty Fellow in Accounting and Director, School of Accountancy (1999). BS, Kansas State University, 1976; MBA, 1977; PhD, Arizona State University, 1982.

Hawley, Suzanne R., Professor, Department of Public Health Sciences (2011). AA, Victor Valley College, 1990; BA, California State University-San Bernardino, 1993; MA, 1995; MPH, Loma Linda University, 1999; PhD, 2002.

Hayton, Jeffrey P., Assistant Professor, Department of History (2014). BA, McMaster University, 2002; MA, 2003; PhD, University of Illinois, 2013.

Hazen, Shirley E., Senior Educator, School of Nursing (1994). BSN, Wichita State University, 1981; MN, 1983.

He, Hongsheng, Assistant Professor, Department of Electrical Engineering and Computer Science (2017). PhD, National University of Singapore, 2012.

He, Jibo, Associate Professor, Department of Psychology (2012). BS and BA, Peking University, 2007; MA, University of Illinois Urbana-Champaign, 2010; PhD, 2012.

Heckman, Rachel A., Instructor, Department of Mathematics, Statistics and Physics (2014). BS, Wichita State University, 2011, MA; 2013.

Held, Alan J., Associate Professor and Ross Faculty of Distinction and Program Director of Opera, School of Music (2014). BM, Millikin University, 1987; MM, Wichita State University, 1983.

Hellman, James L., Associate Professor, School of Art, Design and Creative Industries (1975). BA, Wichita State University, 1972; MA, 1975; MFA, Kansas State University, 1995.

Helm, Steven K., Senior Educator, Department of Finance, Real Estate, and Decision Sciences (2002). BA, Andrews University, 1984; MA, University of Arizona, 1993.

Henderson, Julie M., Assistant Educator and Undergraduate Coordinator, Department of Modern and Classical Languages and Literatures (2018). BA, Wichita State University, 1981; MA 2017.

Hendry, William J., Professor and Department Chair, Department of Biological Sciences (1991). BA, Northeastern University, 1974; MA, 1978; PhD, Clark University, 1982.

Henry, Robin C., Associate Professor and Graduate Coordinator, Department of History (2006). BA, Austin College, 1998; MA, University of Massachusetts-Amherst, 2000; PhD, Indiana University, 2006.

Hepburn, Brian S., Associate Professor, Department of Philosophy (2014). BA, University of Lethbridge, 1999; PhD, University of Pittsburgh, 2007.

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Hersch, Philip L., Professor and Barton Fellow, Department of Economics (1983). BA, Queens College, 1974; MA, Ohio State University, 1978; PhD, 1982.

Hershfield, Jeffrey A., Associate Professor, Department of Philosophy; Director, Master of Arts in Liberal Studies Program, Fairmount College of Liberal Arts and Sciences (1995). BA, University of British Columbia, 1982; MA, University of Arizona, 1985; PhD, 1992.

Hertzog, Jodie L., Associate Professor and Department Chair, Department of Sociology (2003). BS, Grand Valley State University, 1994; MA, Western Michigan University, 1997; PhD, Purdue University, 2003.

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Hunsicker, John D., Associate Professor, School of Music (2012). BM, Indiana University, 1994; MM, University of Michigan, 2000; DMA, Arizona State University, 2012.

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Imhof, Michael J., Associate Professor and Barton Fellow, School of Accountancy (2011). BBA, Pittsburg State University, 2003; MBA, 2005; PhD, University of Missouri-Columbia, 2011.

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Kahn, Melvin A., Professor, Department of Political Science (1970). BA, University of Florida, 1952; MA, University of Chicago, 1958; PhD, Indiana University, 1964.

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Keuter, Kayla R., Assistant Professor, Physician Assistant Program (2010). BS, University of Wisconsin-Platteville, 1988; BS, Wichita State University, 1999; MPH, University of Kansas, 2006.

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Latioui, Foudil, Teaching Professor, Department of Mathematics, Statistics and Physics (2014). BS, University of Annaba-Algeria, 1990; MS, University of Vallencienne and Hainaut Cambresis-France, 1992; PhD, University of Strasbourg, 1999.

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Lecompte, Richard L.B., Associate Professor, H. Dene Heskett Chair in Finance, Department of Finance, Real Estate, and Decision Sciences (1989). BA, University of Arkansas, 1976; MA, 1978; PhD, University of Texas-Austin, 1987.

Lee, Kyoung H., Professor and Director, School of Social Work (2007). BA, Kang-Nam University, 1997; MPA, Myong-Ji University, 1999; MA, West Virginia University, 2003; MSW, 2005; PhD, 2005.

Lee, Soon C., Assistant Professor, School of Education (2014). BS, Kyung-Hee University-Korea, 1994; MEd, Yonsei University-Korea, 2008; MA, Ohio State University, 2011; PhD, 2012.

Lee, Yongkuk, Assistant Professor, Department of Biomedical Engineering (2018). PhD, West Virginia University, 2014.

Lefever, Shirley, Dean, College of Applied Studies; Professor, School of Education (2005). BS, Kansas State University, 1984; MS, 1988; PhD, 1991.

Lehecka, Bryan J., Associate Professor, Department of Physical Therapy (2012). BS, Kansas State University, 2006; PhD, Wichita State University, 2009.

Lehner, Deborah E., Assistant Educator, Department of Public Health Sciences (2015). BS, University of Central Florida, 1996; MBA, 1999.

Leighton, Maggie L., Assistant Teaching Professor, School of Nursing (2017). BSN, Washburn University, 2010; DNP, Wichita State University, 2016.

Leisy, Aimee C., Associate Teaching Professor, Intensive English Language Center (2009). BA, Bethel College, 1996; MS, Indiana University, 2009.

Lemoine, Carmen, Assistant Professor, School of Music (2016). BM, Eastman School of Music, 2003; DMA, 2011; MM, San Francisco Conservatory of Music, 2005.

Lewis, Rhonda K., Professor and Department Chair, Department of Psychology (1991). BA, Wichita State University, 1991; MA, University of Kansas, 1993; MPH, 1996; PhD, 1996.

Li, Bin, Associate Professor, Department of Mechanical Engineering (2013). BS, Sichuan University, 2005; MS, 2008; PhD, Washington State University-Pullman, 2012.

Li, Jiaqi, Assistant Professor, Department of Counseling, Educational Leadership, Educational and School Psychology (2014). BA, Liaoning Normal University-China, 2000; MEd, Western Kentucky University, 2009; EdD, Texas Tech University, 2013.

Lin, Yueh-Ju, Assistant Professor, Department of Mathematics, Statistics and Physics (2018). PhD, University of Notre Dame, 2014.

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Liu, Fuchang, Associate Professor, School of Education (2005). BA, Liaocheng Teachers College, 1982; MA, Jilin University, 1989; MEd, Northeast Louisiana University, 1996; EdD, 1999.

Liu, Yuan, Assistant Professor, Department of Mathematics, Statistics and Physics (2019). MS, University of Notre Dame, 2010; PhD, 2012.

Livesay, Dennis R., Dean of College of Engineering; Professor, Department of Chemistry and Department of Biomedical Engineering (2016). BS, Ball State University, 1996; PhD, University of Illinois-Urbana Champaign, 2000.

Lockard, Brittany J., Assistant Professor, School of Art, Design and Creative Industries (2013). BA, Vanderbilt University, 2002; MA, Indiana University-Bloomington, 2004; PhD, University of Kansas, 2012.

Long, David S., Assistant Professor, Department of Biomedical Engineering (2017). BS, Tennessee Technological University, 1998; MS, University of Illinois Urbana-Champaign, 2001; PhD, 2004.

Longhofer, Stanley D., Professor and Clark Chair in Real Estate and Finance, Department of Finance, Real Estate, and Decision Sciences; Director, Center for Real Estate (1999). BBA, Wichita State University, 1989; MS, University of Illinois Urbana-Champaign, 1991; PhD, 1995.

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Lu, Huabo, Assistant Teaching Professor, Department of Electrical Engineering and Computer Science (2019). MS, Wichita State University, 2011; PhD 2018.

Lu, Tianshi, Associate Professor, Department of Mathematics, Statistics and Physics (2008). BS, Fudan University-China, 1997; MS, New York University, 1999; MA, University of Wisconsin-Madison, 2001; PhD, State University of New York-Stony Brook, 2005.

Lu, Xiufen, Associate Professor, Department of Philosophy (2001). BA, Beijing Second Institute of Foreign Language, 1983; MA, University of Southern Illinois-Edwardsville, 1991; PhD, University of Kansas, 2001.

Luhring, Thomas M., Assistant Professor, Department of Biological Sciences (2019). BS, University of Georgia, 2005; MS, 2008; PhD, University of Missouri-Columbia, 2013.

Luinstra, Lindsay C., Assistant Educator, Department of Human Performance Studies (2018). BA, Wichita State University, 2010; BA 2011; Kansas State University, 2014.

M

Ma, Chunsheng, Professor, Department of Mathematics, Statistics and Physics (1999). BS, Wuhan Teachers College, 1981; MS, Wuhan University, 1988; PhD, University of Sydney, 1997.

Ma, Daowei, Professor, Department of Mathematics, Statistics and Physics (1993). MA, Wuhan University, 1982; PhD, Washington University, 1990.

MacDonald, David J., Assistant Professor, School of Music (2018). MM, Michigan State University, 2008; DMA, 2009.

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Mahapatro, Anil, Associate Professor, Department of Biomedical Engineering (2011). BS, Maharashtra Institute of Technology-India, 1996; MS, University of Manchester-England, 1997; PhD, New York University, 2004.

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Marble-Flint, Karissa J., Assistant Professor, Department of Communication Sciences and Disorders (2017). BA, Hastings College, 2007; PhD, Wichita State University, 2017.

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Nickel, Sarah M., Assistant Professor, Department of Medical Laboratory Sciences (2017). BS, Wichita State University, 2006; MS, University of Florida, 2017.

Nickol, Ben, Assistant Professor, Department of English (2018). MFA, University of Arkansas, 2011.

Nicks, Stephanie R., Associate Educator, School of Nursing (2007). BSN, Newman University, 2002; MSN, Wichita State University, 2007.

Nili Ahmadabadi, Zahra, Assistant Prof, Department of Mechanical Engineering (2018). PhD, University of Quebec, 2016.

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Owen, Dorene A., Assistant Educator and Simulation Lab Coordinator, School of Nursing (2019). MSN, University of Texas-Austin, 2010.

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Parcell, William C., Associate Professor and Department Chair, Department of Geology (2001). BS, University of the South, 1994; MS, University of Delaware, 2000; PhD, University of Alabama, 2000.

Parham, Douglas F., Associate Professor, Department of Communication Sciences and Disorders (2008). BA, Memphis State University, 1992; MA, University of Memphis, 1996; PhD, 2008.

Parker, Phillip E., Professor, Department of Mathematics, Statistics and Physics (1983). BA, Hendrix College, 1969; MA, University of Missouri-Columbia, 1970; PhD, Oregon State University, 1977.

Parsons, Susan D., Associate Professor, School of Nursing (2008). BSN, Wichita State University, 1974; MN, 1978; PhD, Kansas State University, 1987.

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Patterson, Jeremy A., Dean, Institute for Interdisciplinary Innovation, Division of Academic Affairs; Erker Faculty of Distinction Professor and Director of Human Performance Laboratory, Department of Human Performance Studies (2004). BS, Linfield College, 1995; MS, Victoria University of Wellington, 2002; PhD, 2004.

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Pearson, Jennifer D., Associate Professor and Graduate Coordinator, Department of Sociology (2008). BA, University of Texas-Austin, 2000; MA, 2003; PhD, 2008.

Peck, Shanin M., Assistant Clinical Educator, Department of Dental Hygiene (2016). BS, Wichita State University, 2011; MA, 2014.

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Pelkowski, Jodi E., Associate Professor, Department of Economics (2000). BA, Coe College, 1995; MS, University of Kentucky, 1998; PhD, 2000.

Perez, Kathleen M., Associate Professor, Department of Sociology (1983). BA, Clarke College, 1979; MA, Miami University, 1980; PhD, Purdue University, 1984.

Perkins, Jennifer L., Engineering Educator, Department of Engineering Technology (2018). BS, University of Kansas, 1997; MS, Wichita State University, 2018.

Perline, Martin, Professor and Dean's Distinguished Fellow, Department of Economics (1965). BA, Arizona State University, 1962; MA, Ohio State University, 1962; PhD, 1965.

Perry, John T., Associate Dean, Academic Operations and Undergraduate Programs, Barton School of Business; Professor, Department of Management. (2005). BA, Dickinson College, 1989; MBA, Lehigh University, 1992; MS, University of Pennsylvania, 1999; PhD, Pennsylvania State University, 2006.

Petts, Rachel A., Assistant Professor, Department of Psychology (2018). MA, Western Michigan University, 2014; PhD, 2017.

Pickus, Keith H., Assistant to the Provost and Senior Vice President, Division of Academic Affairs; Professor, Department of History (1995). BA, University of California-Santa Barbara, 1983; MA, University of Washington, 1988; PhD, 1993.

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Pisano, James D., Assistant Professor, School of Music (2018). MM, University of Miami, 1997.

Pitetti, Kenneth H., Professor, Department of Physical Therapy (1987). BS, University of San Francisco, 1968; MS, Fort Hays State University, 1980; PhD, University of Texas-Dallas, 1986.

Porter, Christine M., Assistant Professor, School of Accountancy (2015). BS, University of Denver, 2005; PhD, University of Kansas, 2015.

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Price, Jay M., Professor and Department Chair, Department of History (1999). BA, University of New Mexico, 1991; MA, College of William and Mary, 1992; PhD, Arizona State University, 1997.

Proctor, Pat E., Assistant Professor, School of Criminal Justice (2019). PhD, Kansas State University, 2014.

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Q

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Ramey, Samuel E., Distinguished Professor of Opera, School of Music (2014). BM, Wichita State University, 1968.

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Rawson, Brian L., Barton School Lecturer, Department of Management (2008). BS Brigham Young University, 1986; MBA, University of Virginia, 1993.

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Reding, Kurt F., Associate Clinical Professor, School of Accountancy (2008). BS, Trinity Christian College, 1977; MS, Northern Illinois University, 1979; PhD, University of Tennessee, 1988.

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T

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Key to Abbreviations and Symbols

Symbols

The number of hours of credit for each course is indicated in parentheses following the course title. The number of class meetings per week is normally the same as the number of credit hours. Two hours of laboratory work usually are required for 1 hour of credit. In courses involving meetings other than lectures, the following terms are used:

- Classroom
- Conference
- Demonstration
- Laboratory
- Lecture
- Practicum/Clinical[1]
- Theory

[1] Practicum/clinical — the hours of practicum/clinical per week are given in front (6–8 Practicum or 6–8 Clinical means six to eight hours of practicum/clinical per week).

Abbreviations

The following abbreviations of academic departments and subject areas are used in references to courses offered by those departments.

ACCT	Accounting
AE	Aerospace Engineering
AGE	Aging Studies
ANTH	Anthropology
ARAB	Arabic
ARTE	Art Education
ARTF	Art and Design Foundation
ARTG	Graphic Design
ARTH	Art History
ARTS	Studio Arts
BADM	General Business Administration
BIOL	Biological Sciences
BLAW	Business Law
BME	Biomedical Engineering
CAS	Applied Studies
CESP	Counseling, Educational and School Psychology
CHEM	Chemistry
CHIN	Chinese
CI	Curriculum and Instruction
CJ	Criminal Justice
CLES	Counseling, Educational Leadership, Educational and School Psychology
COMM	Communication
CS	Computer Science
CSD	Communication Sciences and Disorders
DANC	Dance
DH	Dental Hygiene
DS	Decision Sciences
ECON	Economics
EDUC	Education
EE	Electrical Engineering
EEPS	Earth, Environmental and Physical Sciences
EL	Educational Leadership
EMBA	Executive Master of Business Administration
ENGL	English Language and Literature
ENGR	General Engineering
ENGT	Engineering Technology
ENTR	Entrepreneurship
ETHS	Ethnic Studies
FA	Fine Arts — General
FIN	Finance
FREN	French
FS	Forensic Science
GEOG	Geography
GEOL	Geology
GERM	German
GREK	Greek
HA	Health Administration
HIST	History
HLS	Homeland Security
HNRS	Honors Program
HP	Health Professions — General
HPS	Human Performance Studies
HRM	Human Resource Management
HS	Health Sciences
IB	International Business
ID	Innovative Design
IME	Industrial and Manufacturing Engineering
ITAL	Italian
JAPN	Japanese
LASI	Liberal Arts Interdisciplinary
LATN	Latin
LING	Linguistics
MART	Media Arts
MATH	Mathematics
MBA	Master of Business Administration
MCLL	Modern and Classical Languages and Literature
ME	Mechanical Engineering
MGMT	Management
MILS	Military Science
MIS	Management Information Systems
MKT	Marketing
MLS	Medical Laboratory Sciences
MUSA	Applied Music
MUSC	Musicology-Composition
MUSE	Music Education
MUSP	Music Performance
NURS	Nursing
PA	Physician Assistant
PADM	Public Administration

PC	Personal Computing
PHIL	Philosophy
PHS	Public Health Sciences
PHYS	Physics
POLS	Political Science
PSY	Psychology
PT	Physical Therapy
RE	Real Estate and Land Use Economics
REL	Religion
RUSS	Russian
SCWK	Social Work
SMGT	Sports Management
SOC	Sociology
SPAN	Spanish
STAT	Statistics
THEA	Theatre
WOMS	Women's Studies
WSUA	First-Year Seminar: Liberal Arts and Sciences
WSUB	First-Year Seminar: Business
WSUD	First-Year Seminar: Education
WSUE	First-Year Seminar: Engineering
WSUF	First-Year Seminar: Fine Arts
WSUH	First-Year Seminar: Health Professions
WSUN	First-Year Seminar: Honors

Degrees and Academic Majors

When viewing online, click any column title to sort the table by program, type, department, college or online learning availability.

Academic Program	Program Type	Department	College	Online Learning
Accounting (p. 112)	Minor	Accounting	BA	
Aerospace Engineering (p. 119)	BS	Aerospace Engineering	EN	
Aging Studies (p. 185)	Dual/Accelerated Bachelor's to Master's	Public Health Sciences	HP	Yes
Aging Studies (p. 189)	Field Major/BGS	Public Health Sciences	HP	Yes
Aging Studies (p. 189)	Minor	Public Health Sciences	HP	
Aging Studies (p. 191)	Certificate	Public Health Sciences	HP	Yes
Anthropology (p. 216)	BA	Anthropology	LA	
Anthropology (p. 217)	Field Major	Anthropology	LA	
Anthropology (p. 217)	Minor	Anthropology	LA	
Applied Computing (p. 126)	BS	Engineering Technology	EN	
Applied Data Analysis (p. 131)	Certificate	Engineering Technology	EN	
Art - Art Education Emphasis (p. 145)	BFA	Art Education	FA	
Art - Art Emphasis (p. 143)	BA	Art, Design and Creative Industries, School of	FA	
Art - Art History Emphasis (p. 144)	BA	Art History	FA	
Art - Studio Art - Applied Drawing Concentration (p. 147)	BFA	Studio Art	FA	
Art - Studio Art - Ceramics Media Concentration (p. 148)	BFA	Studio Art	FA	
Art - Studio Art - Community & Social Practices Concentration (p. 149)	BFA	Studio Art	FA	
Art - Studio Art - Electronic Media Concentration (p. 149)	BFA	Studio Art	FA	
Art - Studio Art - Painting Concentration (p. 150)	BFA	Studio Art	FA	
Art - Studio Art - Photo Media Concentration (p. 151)	BFA	Studio Art	FA	
Art - Studio Art - Print Media Concentration (p. 152)	BFA	Studio Art	FA	
Art - Studio Art - Sculpture Concentration (p. 153)	BFA	Studio Art	FA	
Art History (p. 155)	Minor	Art History	FA	
Art, Design and Creative Industries (p. 155)	Minor	Art, Design and Creative Industries, School of	FA	
Asian Studies (p. 237)	Certificate	Interdisciplinary Liberal Arts and Sciences	LA	
Associate of Arts (p. 213)	AA	Fairmount College of Liberal Arts and Sciences	LA	Yes
Assistive Technology and Accessible Design (p. 131)	Certificate	Engineering Technology	EN	
Athletic Training (p. 72)	BA	Human Performance Studies	AS	
Biochemistry (p. 219)	Field Major	Biological Sciences	LA	
Biochemistry (p. 223)	Field Major	Chemistry	LA	
Biological Sciences (p. 220)	Field Major (BA) or Bachelor of General Studies (BGS)	Biological Sciences	LA	
Biological Sciences (p. 220)	Minor	Biological Sciences	LA	
Biological Sciences with Biological/Biomedical Emphasis (p. 218)	BA	Biological Sciences	LA	

Biological Sciences with Biological/Biomedical Emphasis (p. 218)	BS	Biological Sciences	LA	
Biological Sciences with Ecological/Environmental/Organismal Emphasis (p. 218)	BA	Biological Sciences	LA	
Biological Sciences with Ecological/Environmental/Organismal Emphasis (p. 219)	BS	Biological Sciences	LA	
Biological Sciences: Secondary Education (p. 220)	BA	Biological Sciences	LA	
Biomedical Engineering (p. 120)	Dual/Accelerated Bachelor's to Master's	Biomedical Engineering	EN	
Biomedical Engineering (p. 121)	BS	Biomedical Engineering	EN	
Business - General (p. 113)	Minor	Business, W. Frank Barton School of	BA	
Business Administration (p. 106)	BBA	Business, W. Frank Barton School of	BA	Yes
Business Administration - Accounting (p. 107)	BBA	Accounting	BA	
Business Administration - Economics (p. 107)[1]	BBA	Economics	BA	
Business Administration - Entrepreneurship (p. 108)[1]	BBA	Management	BA	
Business Administration - Finance (p. 108)[1]	BBA	Finance, Real Estate and Decision Sciences	BA	
Business Administration - General (p. 109)	BBA	Business, W. Frank Barton School of	BA	Yes
Business Administration - Human Resource Management (p. 109)	BBA	Management	BA	Yes
Business Administration - Information Technology and Management Information Systems (p. 111)	BBA	Finance, Real Estate and Decision Sciences	BA	
Business Administration - International Business (p. 110)	BBA	Management	BA	
Business Administration - Management (p. 110)	BBA	Management	BA	Yes
Business Administration - Marketing (p. 111)[1]	BBA	Marketing	BA	
Business Analytics (p. 112)	Minor	Finance, Real Estate and Decision Sciences	BA	
Business Analytics (p. 115)	Certificate	Finance, Real Estate and Decision Sciences	BA	
Chemistry (p. 221)	BA	Chemistry	LA	
Chemistry (p. 224)	Minor	Chemistry	LA	
Chemistry - Biochemistry Option (p. 221)	BS	Chemistry	LA	
Chemistry - Chemistry Option (p. 221)	BS	Chemistry	LA	
Chemistry - Premedicine (p. 223)	BS	Chemistry	LA	
Chemistry - Business (p. 223)	Field Major	Chemistry	LA	
Classical Studies (p. 251)	Field Major	Modern and Classical Languages and Literatures	LA	
Communication (p. 226)	Bachelor of General Studies (BGS)	Communication, Elliott School of	LA	
Communication (p. 226)	Field Major	Communication, Elliott School of	LA	
Communication (p. 227)	Minor	Communication, Elliott School of	LA	

Communication - Departmental Honors Track (p. 226)	BA	Communication, Elliott School of	LA	
Communication - Electronic Media Emphasis (p. 225)	BA	Communication, Elliott School of	LA	
Communication - Integrated Marketing Communications Emphasis (p. 225)	BA	Communication, Elliott School of	LA	
Communication - Journalism Emphasis (p. 225)	BA	Communication, Elliott School of	LA	
Communication - Open Emphasis (p. 225)	BA	Communication, Elliott School of	LA	
Communication - Strategic Communication Emphasis (p. 226)	BA	Communication, Elliott School of	LA	
Communication Sciences and Disorders (p. 181)	BA	Communication Sciences and Disorders	HP	
Community Psychology (p. 254)	Certificate	Psychology	LA	
Composition - Harp/Guitar/Bass (p. 161)	BM	Musicology-Composition	FA	
Composition - Keyboard (p. 161)	BM	Musicology-Composition	FA	
Composition - Strings (p. 161)	BM	Musicology-Composition	FA	
Composition - Vocal (p. 161)	BM	Musicology-Composition	FA	
Composition - Winds/Percussion (p. 161)	BM	Musicology-Composition	FA	
Computer Engineering (p. 123)	BS	Electrical Engineering and Computer Sciences	EN	
Computer Networking (p. 122)	Dual/Accelerated Bachelor's to Master's	Electrical Engineering and Computer Sciences	EN	
Computer Science (p. 123)	Dual/Accelerated Bachelor's to Master's	Electrical Engineering and Computer Sciences	EN	
Computer Science (p. 124)	BS	Electrical Engineering and Computer Sciences	EN	
Computer Science (p. 125)	Minor	Electrical Engineering and Computer Sciences	EN	
Creative Writing (p. 231)	BA	English Language and Literature	LA	
Creative Writing (p. 232)	Minor	English Language and Literature	LA	
Criminal Justice (p. 227)	BS	Criminal Justice	LA	Yes
Criminal Justice (p. 228)	Minor	Criminal Justice	LA	
Cyber Physical Systems (p. 132)	Certificate	Engineering Technology	EN	
Cybersecurity Essentials (p. 132)	Certificate	Engineering Technology	EN	
Dance (p. 170)	BA	Dance	FA	
Dance (p. 170)	BFA	Dance	FA	
Dance (p. 171)	Minor	Dance	FA	
Dance, Commercial (p. 172)	Certificate	Dance	FA	
Data and Web Security (p. 132)	Certificate	Engineering Technology	EN	
Dental Hygiene - Degree Completion (p. 198)	BS	Dental Hygiene	HP	Yes
Dental Hygiene - Entry Level Program (p. 198)	BS	Dental Hygiene	HP	
Directing (p. 177)	Certificate	Theatre	FA	
Economics (p. 229)	BA	Economics	LA	
Economics (p. 112)	Minor	Economics	BA	
Economics (p. 230)	Minor	Economics	LA	
Education - Biology (Secondary) (p. 76)	BAED	Education, School of	AS	
Education - Chemistry (Secondary) (p. 77)	BAED	Education, School of	AS	

Education - Early Childhood Unified (p. 78)	BAED	Education, School of	AS	
Education - Early Childhood Unified/Elementary Education Apprentice (p. 79)	BAED	Education, School of	AS	Yes
Education - Earth and Space Science (Secondary) (p. 81)	BAED	Education, School of	AS	
Education - Elementary (p. 82)	BAED	Education, School of	AS	
Education - English/Language Arts (Secondary) (p. 83)	BAED	Education, School of	AS	
Education - English/Science (Middle) (p. 84)	BAED	Education, School of	AS	
Education - French (PreK-12) (p. 86)	BAED	Education, School of	AS	
Education - History Comprehensive/ Mathematics (Middle) (p. 87)	BAED	Education, School of	AS	
Education - History Comprehensive/ Science (Middle) (p. 88)	BAED	Education, School of	AS	
Education - History, Government and Social Studies (Secondary) (p. 89)	BAED	Education, School of	AS	
Education - History/English (Middle) (p. 90)	BAED	Education, School of	AS	
Education - Mathematics (Middle) (p. 91)	BAED	Education, School of	AS	
Education - Mathematics (Secondary) (p. 92)	BAED	Education, School of	AS	
Education - Mathematics/English (Middle) (p. 94)	BAED	Education, School of	AS	
Education - Mathematics/Science (Middle) (p. 95)	BAED	Education, School of	AS	
Education - Physics (Secondary) (p. 96)	BAED	Education, School of	AS	
Education - Spanish (PreK-12) (p. 97)	BAED	Education, School of	AS	
Electrical and Computer Engineering (p. 123)	Dual/Accelerated Bachelor's to Master's	Electrical Engineering and Computer Sciences	EN	
Electrical Engineering (p. 125)	BS	Electrical Engineering and Computer Sciences	EN	
Engineering Management (p. 134)	Dual/Accelerated Bachelor's to Master's	Industrial, Systems and Manufacturing Engineering	EN	
Engineering Technology - Civil Engineering Technology Concentration (p. 128)	BSET	Engineering Technology	EN	
Engineering Technology - Engineering Technology Management Concentration (p. 129)	BSET	Engineering Technology	EN	Yes
Engineering Technology - Facilities Management Concentration (p. 130)	BSET	Engineering Technology	EN	
Engineering Technology - Mechatronics Technology Concentration (p. 130)	BSET	Engineering Technology	EN	
English (p. 230)	Dual/Accelerated Bachelor's to Master's	English Language and Literature	LA	
English (p. 231)	BA	English Language and Literature	LA	
English (p. 232)	Minor	English Language and Literature	LA	
English Teaching - Middle Schools (p. 232)	BA	English Language and Literature	LA	

English Teaching - Secondary Schools (p. 232)	BA	English Language and Literature	LA	
Entrepreneurship (p. 112)	Minor	Management	BA	
Environment and Sustainability (p. 235)	Certificate	Geology	LA	
Esports Management (p. 101)	Minor	Sport Management	AS	
Ethnic Studies (p. 233)	Field Major or Bachelor of General Studies (BGS)	Ethnic Studies	LA	
Ethnic Studies (p. 233)	Minor	Ethnic Studies	LA	
Exercise Science (p. 71)	Dual/Accelerated Bachelor's to Master's	Human Performance Studies	AS	
Exercise Science (p. 73)	BA	Human Performance Studies	AS	
Exercise Science (p. 75)	Minor	Human Performance Studies	AS	
Field Major (p. 213)	Field Major	Field Majors: Aging Studies, Art History, Biochemistry, Chemistry/Business, Classical Studies, Criminal Justice, CSD, Ethnic Studies, Geography, German, International Studies, Mathematics, Music Composition, Philosophy, Physics, Psychology, Religion, Sociology, Theatre, Women's Studies and all LAS Majors.	LA	Yes[2 3]
Film Studies (p. 238)	Certificate	Film Studies	LA	
Finance (p. 113)	Minor	Finance, Real Estate and Decision Sciences	BA	
Forensic Sciences (p. 229)	BS	Forensic Sciences	LA	
French (p. 251)	Minor	Modern and Classical Languages and Literatures	LA	
Fundamentals of Information Technology (p. 132)	Certificate	Engineering Technology	EN	
General Studies (p. 213)	BGS	General Studies/Liberal Studies: Aging Studies, Anthropology, Art History, Criminal Justice, CSD, English, Ethnic Studies, Geography, German, Mathematics, Music Composition, Philosophy, Physics, Political Science, Psychology, Religion, Social Work, Sociology, Theatre, Women's Studies and all LAS Majors	LA	Yes[2 3]
Geography (p. 233)	Minor	Geography	LA	
Geology (p. 234)	BA	Geology	LA	
Geology (p. 234)	BS	Geology	LA	
Geology (p. 235)	Minor	Geology	LA	
German (p. 251)	Minor	Modern and Classical Languages and Literatures	LA	
Global Competency (p. 238)	Certificate	Interdisciplinary Liberal Arts and Sciences	LA	
Global Studies (p. 217)	Field Major	Anthropology	LA	
Graphic Design (p. 154)	BFA	Graphic Design	FA	
Graphic Design (p. 155)	Minor	Graphic Design	FA	
Graphic Design Communication (p. 227)	Minor	Communication, Elliott School of	LA	
Graphic Narrative Coding and Accessibility (p. 233)	Certificate	English Language and Literature	LA	
Great Plains Studies (p. 239)	Certificate	Interdisciplinary Liberal Arts and Sciences	LA	

Greek (p. 251)	Minor	Modern and Classical Languages and Literatures	LA	
Health Administration (p. 185)	Dual/Accelerated Bachelor's to Master's	Public Health Sciences	HP	Yes
Health Management (p. 185)	BS	Public Health Sciences	HP	
Health Management (p. 190)	Minor	Public Health Sciences	HP	
Health Management (p. 191)	Certificate	Public Health Sciences	HP	
Health Science (p. 188)	BS	Public Health Sciences	HP	
Health Science (p. 190)	Minor	Public Health Sciences	HP	
Health Science (p. 192)	Certificate	Public Health Sciences	HP	Yes
History (p. 236)	BA	History	LA	
History (p. 237)	Minor	History	LA	
Homeland Security (p. 228)	BS	Criminal Justice	LA	Yes
Homeland Security (p. 228)	Minor	Criminal Justice	LA	Yes
Honors Baccalaureate (p. 203)	HB	Dorothy and Bill Cohen Honors College	HN	
Honors, University (p. 204)	Minor	Dorothy and Bill Cohen Honors College	HN	
Human Factors in Security and Technology (p. 132)	Certificate	Engineering Technology	EN	
Human Factors Psychology (p. 255)	Certificate	Psychology	LA	
Human Resource Management (p. 107)	Dual/Accelerated Bachelor's to Master's	Management	BA	Yes
Human Resource Management (p. 113)	Minor	Management	BA	
Industrial Engineering (p. 134)	Dual/Accelerated Bachelor's to Master's	Industrial, Systems, and Manufacturing Engineering	EN	
Industrial Engineering (p. 135)	BS	Industrial, Systems, and Manufacturing Engineering	EN	
Information Technology and Management Information Systems (p. 113)	Minor	Finance, Real Estate and Decision Sciences	BA	
International Business (p. 114)	Minor	Management	BA	
International Studies (p. 253)	Field Major	Political Science	LA	
International Studies (p. 254)	Field Minor	Political Science	LA	
Japanese (p. 251)	Minor	Modern and Classical Languages and Literatures	LA	
Jazz and Contemporary Media (p. 162)	BM	Music Performance	FA	
Latin (p. 251)	Minor	Modern and Classical Languages and Literatures	LA	
Leadership (p. 207)	Certificate	Institute for Interdisciplinary Innovation	II	Yes
Linguistics (p. 241)	Minor	Linguistics	LA	
Management (p. 114)	Minor	Management	BA	
Manufacturing Engineering (p. 137)	Minor	Industrial, Systems, and Manufacturing Engineering	EN	
Marketing (p. 114)	Minor	Marketing	BA	
Mathematics (p. 242)	Dual/Accelerated Bachelor's to Master's	Mathematics, Statistics and Physics	LA	
Mathematics (p. 243)	BA	Mathematics, Statistics and Physics	LA	
Mathematics (p. 243)	BS	Mathematics, Statistics and Physics	LA	
Mathematics (p. 244)	Minor	Mathematics, Statistics and Physics	LA	
Mathematics - Computing Emphasis (p. 243)	BS	Mathematics, Statistics and Physics	LA	

Mathematics - Statistics Emphasis (p. 244)	BS	Mathematics, Statistics and Physics	LA	
Mechanical Engineering (p. 138)	BS	Mechanical Engineering	EN	
Mechanical Engineering (p. 139)	Minor	Mechanical Engineering	EN	
Media Arts - Animation (p. 159)	Certificate	Digital Arts, School of	FA	
Media Arts - Animation Concentration (p. 156)	BAA	Digital Arts, School of	FA	
Media Arts - Audio Production (p. 159)	Certificate	Digital Arts, School of	FA	
Media Arts - Audio Production Concentration (p. 156)	BAA	Digital Arts, School of	FA	
Media Arts - Collaborative Design Concentration (p. 157)	BAA	Digital Arts, School of	FA	
Media Arts - Filmmaking (p. 159)	Certificate	Digital Arts, School of	FA	
Media Arts - Filmmaking Concentration (p. 158)	BAA	Digital Arts, School of	FA	
Media Arts - Game Design (p. 159)	Certificate	Digital Arts, School of	FA	
Media Arts - Game Design Concentration (p. 158)	BAA	Digital Arts, School of	FA	
Medical Laboratory Sciences (p. 183)	BS	Medical Laboratory Sciences	HP	
Medieval and Renaissance Studies (p. 240)	Certificate	Interdisciplinary Liberal Arts and Sciences	LA	
Modern and Classical Languages and Literatures - Bilingual Option (p. 249)	BA	Modern and Classical Languages and Literatures	LA	
Modern and Classical Languages and Literatures - French Specialization (p. 249)	BA	Modern and Classical Languages and Literatures	LA	
Modern and Classical Languages and Literatures - Latin Specialization (p. 250)	BA	Modern and Classical Languages and Literatures	LA	
Modern and Classical Languages and Literatures - Spanish Specialization (p. 250)	BA	Modern and Classical Languages and Literatures	LA	
Music (p. 161)	BA	Music, School of	FA	
Music (p. 169)	Minor	Music, School of	FA	
Music Education - Instrumental (p. 166)	BME	Music Education	FA	
Music Education - Keyboard (p. 166)	BME	Music Education	FA	
Music Education - Vocal (p. 167)	BME	Music Education	FA	
Music Performance - Instrumental Emphasis (p. 163)	BM	Music Performance	FA	
Music Performance - Keyboard Emphasis (p. 163)	BM	Music Performance	FA	
Music Performance - Vocal Emphasis (p. 164)	BM	Music Performance	FA	
Nursing - Accelerated Program (p. 193)	BSN	Nursing, School of	HP	
Nursing - RN to BSN (p. 195)	BSN	Nursing, School of	HP	Yes
Nursing - Traditional Program (p. 196)	BSN	Nursing, School of	HP	
Operations Management (p. 115)	Minor	Management	BA	
Performing Arts - Music Theatre (p. 173)	BFA	Performing Arts, School of	FA	
Performing Arts - Music Theatre (p. 172)	BA	Performing Arts, School of	FA	

Performing Arts - Music Theatre (p. 174)	Minor	Performing Arts, School of	FA	
Performing Arts - Stage Management (p. 177)	Certificate	Performing Arts, School of	FA	
Personal Selling (p. 115)	Minor	Marketing	BA	
Philosophy (p. 252)	BA	Philosophy	LA	
Philosophy (p. 253)	Minor	Philosophy	LA	
Physical Education Coaching (p. 75)	Certificate	Human Performance Studies	AS	
Physical Education Fitness (p. 75)	Certificate	Human Performance Studies	AS	
Physical Education: PreK-12 (p. 74)	BA	Human Performance Studies	AS	
Physical Education Weight Training (p. 75)	Certificate	Human Performance Studies	AS	
Physics (p. 245)	BA	Mathematics, Statistics and Physics	LA	
Physics (p. 246)	BS	Mathematics, Statistics and Physics	LA	
Physics (p. 247)	Minor	Mathematics, Statistics and Physics	LA	
Physics - Chemical Physics Option (p. 245)	BA	Mathematics, Statistics and Physics	LA	
Physics - Chemical Physics Option (p. 246)	BS	Mathematics, Statistics and Physics	LA	
Physics - Engineering Physics Option (p. 245)	BA	Mathematics, Statistics and Physics	LA	
Physics - Engineering Physics Option (p. 247)	BS	Mathematics, Statistics and Physics	LA	
Political Science (p. 253)	BA	Political Science	LA	
Political Science (p. 254)	Minor	Political Science	LA	
Product Design and Manufacturing Engineering (p. 136)	BS	Industrial, Systems, and Manufacturing Engineering	EN	
Psychology (p. 254)	BA	Psychology	LA	
Psychology (p. 254)	Minor	Psychology	LA	
Public Health (p. 190)	Minor	Public Health Sciences	HP	
Public Health Science (p. 192)	Certificate	Public Health Sciences	HP	Yes
Religion (p. 255)	Minor	Religion	LA	
Russian (p. 251)	Minor	Modern and Classical Languages and Literatures	LA	
Communication Sciences and Disorders - Signed Languages (p. 182)	Minor	Communication Sciences and Disorders	HP	
Social Work (p. 256)	BSW	Social Work, School of	LA	
Social Work and Addiction (p. 256)	Certificate	Social Work, School of	LA	
Social Work and Child Welfare (p. 257)	Certificate	Social Work, School of	LA	
Sociology (p. 258)	BA	Sociology	LA	
Sociology (p. 258)	Minor	Sociology	LA	
Spanish (p. 248)	Dual/Accelerated Bachelor's to Master's	Modern and Classical Languages and Literatures	LA	
Spanish (p. 252)	Minor	Modern and Classical Languages and Literatures	LA	
Spanish for the Professions (p. 252)	Certificate	Modern and Classical Languages and Literatures	LA	
Special Music Education (p. 168)	BME	Music Education	FA	
Sport Management (p. 99)	BA	Sport Management	AS	
Sport Management (p. 101)	Minor	Sport Management	AS	
Supply Chain Management (p. 115)	Minor	Management	BA	
Sustainable Energy Technology (p. 133)	Certificate	Engineering Technology	EN	

Sustainable Materials and Design (p. 139)	Certificate	Mechanical Engineering	EN	
Sustainable Water Technology (p. 133)	Certificate	Engineering Technology	EN	
Theatre (p. 174)	BA	Theatre	FA	
Theatre (p. 176)	Minor	Theatre	FA	
Theatre - Design and Technical Theatre (p. 175)	BFA	Theatre	FA	
Theatre - Physical Performance Studies (p. 177)	Certificate	Theatre	FA	
Theatre Performance (p. 176)	BFA	Theatre	FA	
Tilford Diversity Studies (p. 241)	Certificate	Interdisciplinary Liberal Arts and Sciences	LA	Yes
Women's Studies (p. 258)	BA	Women's Studies	LA	
Women's Studies (p. 259)	Minor	Women's Studies	LA	
Workforce Leadership (p. 101)	Minor	Sport Management	AS	
Workforce Leadership and Applied Learning (p. 99)	BAS	Sport Management	AS	Yes

[1] Real Estate emphasis available in these areas.

[2] LAS Field Majors and General Studies available online: Aging Studies, Anthropology, Criminal Justice, English, Political Science, Psychology, Social Work, Sociology, Women’s Studies; and Associate degree.

[3] Field Major/Bachelor of General Studies degrees in Psychology, Social Work and Sociology do not lead to licensure.

Courses A - Z

ACCT - Accounting

School of Accountancy

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ACCT 190. Selected Topics (1-3).
Umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 190A, 190B, etc.). Students should enroll in the lettered courses with specific topics in the titles rather than in this root course. Repeatable for credit with departmental consent.

ACCT 210. Financial Accounting (3).
Studies accounting as a means of communicating financial information about the activities of business enterprises. Emphasizes concepts and principles underlying the measurement of income and financial position and how this information may be used to evaluate the progress of a firm. Restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisite(s): MATH 111, BADM 161, 162 and 163.

ACCT 220. Managerial Accounting (3).
Studies accounting in terms of management's information requirements. Emphasizes the use of accounting information to assist management in planning, analyzing and implementing business decisions and activities. Restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisite(s): ACCT 210, MATH 111, BADM 161, 162 and 163.

ACCT 310. Financial Accounting and Reporting: Assets (3).
In-depth study of the conceptual and technical aspects of financial accounting. Emphasizes recognition and measurement problems of income determination and balance sheet presentation. Covers asset accounting in depth. Prerequisite(s): completion of ACCT 210 with a minimum grade of B- (2.700), ACCT 220 with a minimum grade of C+ (2.300), MATH 111, BADM 161, 162 and 163, advanced standing.

ACCT 360. Accounting Information Systems (3).
Studies accounting information systems, emphasizing the processing of financial transactions and the analysis of internal controls. ACCT 310 and 360 may be taken concurrently. Students with credit in ACCT 560 cannot take ACCT 360 for credit. Prerequisite(s): ACCT 210 with a minimum grade of B- (2.700), ACCT 220 with a minimum grade of C+ (2.300), MATH 111, BADM 161, 162 and 163, advanced standing.

ACCT 410. Financial Accounting and Reporting: Equities (3).
Continuation of ACCT 310. Emphasizes liabilities and equity. Prerequisite(s): completion of ACCT 310 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 420. Intermediate Cost Accounting (3).
The use of accounting information to assist management in developing and identifying superior strategies to produce and sustain comparative and/or competitive advantages. Focuses on goal-congruent strategies and incentives. Students with credit in ACCT 620 cannot take ACCT 420 for credit. Prerequisite(s): ACCT 310 with a grade of C (2.000), and advanced standing.

ACCT 430. Introduction to Federal Income Tax (3).
Overview of the federal tax law and those laws specifically applicable to individuals and sole proprietors. Introduces tax research techniques. Prerequisite(s): completion of ACCT 310 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 481. Cooperative Education (1-3).
Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): junior standing and 2.250 GPA.

ACCT 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ACCT 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in accounting, junior standing, advanced standing, School of Accountancy consent.

ACCT 580. Data Analytics for Accountants (3).
Application-oriented study of data analytics as it pertains to accounting professionals. Emphasizes improving students' software, critical thinking, and decision-making skills. Prerequisite(s): ACCT 360 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 610. Financial Accounting and Reporting: Special Entities and Complex Issues (3).
Examines accounting concepts and techniques related to consolidated statements, governmental and not-for-profit entities, and partnerships. Includes accounting for foreign currency, hedges, financial instruments and emerging issues in financial accounting and reporting. Prerequisite(s): completion of ACCT 410 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 630. Taxation of Business Entities (3).
Studies the federal tax law as it applies to corporations, partnerships and other business entities. Examines the effect of taxation on business decisions. Prerequisite(s): completion of ACCT 430 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 640. Principles of Auditing (3-4).
Studies the auditor's attest function, emphasizing auditing standards and procedures, independence, legal responsibilities, codes of ethical conduct and evaluation of accounting systems and internal control. Prerequisite(s): completion of ACCT 410 and 580 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 690. Seminar in Selected Topics (1-3).
Umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 690A, 690B, etc.). Students should enroll in the lettered courses with specific topics in the title rather than in this root course. Repeatable for credit with School of Accountancy consent. Prerequisite(s): junior standing, advanced standing.

ACCT 781. Cooperative Education (1).
Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience. Programs must be formulated in consultation with appropriate graduate faculty. Repeatable for credit up to 3 hours. May not be used to fulfill degree requirements.

AE - Aerospace Engineering

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

AE 223. Statics (3).
Studies the condition of equilibrium of rigid bodies under the action of forces. Rigid bodies include beams, trusses, frames and machines. Considers both two- and three-dimensional bodies. Also studies centroids, centers of gravity and moments of inertia. Prerequisite(s): PHYS 313. Pre- or corequisite(s): MATH 243.

AE 227. Engineering Digital Computation (3).
2 Classroom hours; 2 Lab hours. MATLAB and Visual-Basic programming; introduces linear algebra and matrix methods for engineers, selected numerical methods for approximating functions, solution of systems of equations, numerical integration, and numerical determination of the roots of polynomials. Pre- or corequisite(s): MATH 243. Corequisite(s): AE 227L.

AE 281I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

AE 324. Fundamentals of Atmospheric Flight (3).
Studies the atmosphere, aircraft and aerodynamic nomenclature. Introduces aerodynamic theory, airfoils, wings, aircraft performance, stability and control, and propulsion. Prerequisite(s): AE 223 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course). Pre- or corequisite(s): AE 227.

AE 333. Mechanics of Materials (3).
Studies the mechanical properties of materials, transformation of stresses and strains, stresses and deformations in structural elements of various shapes and loading, statically indeterminate structures, and buckling. Prerequisite(s): AE 223 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course). Pre- or corequisite(s): MATH 344 or MATH 555.

AE 373. Dynamics (3).
Studies the kinematics and kinetics of particles and rigid bodies. Includes force-mass-acceleration, work-energy and impulse-momentum methods. Prerequisite(s): AE 223 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course), and MATH 344.

AE 415. Introduction to Space Dynamics (3).
Fundamentals of orbital mechanics and rigid body dynamics, two-body problems, orbital maneuvers and orbital determination, rigid body kinematics, and kinetics. Prerequisite(s): AE 227 and AE 373 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for AE 373). Pre- or corequisite(s): MATH 555.

AE 424. Aerodynamics I (3).
Studies the dynamics of incompressible potential flow, governing equations of motion in control volume form and differential form, rotation and vorticity, stream function and velocity potential, singularities and superposition, introduction to panel methods, various two-dimensional airfoil theories, finite wing theory, flow over axisymmetric bodies, application tools for aerodynamic design and analysis. Prerequisite(s): MATH 555, AE 324 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for these courses), and AE 373.

AE 460. Selected Topics (1-3).
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite(s): instructor's consent.

AE 460A. Aerospace Colloquium (0).
Zero credit hour course specifically for freshmen aerospace engineering students. Includes faculty and industry engineer seminars and activities that promote academic success, hands-on aerospace relevant experiences, and career achievement. Prerequisite(s): freshman standing.

AE 460H. Selected Topics Honors (3).
Experiential based aerospace design course for honors students. Introduces basic Unmanned Air Vehicle (UAV) design methods, construction, and testing. Meets concurrently with and includes interactions with seniors enrolled in the AE 528 aerospace design class. Includes design, construction and testing of a small UAV. Prerequisite(s): admitted to honors program, sophomore or junior standing, aerospace engineering major.

AE 481A. Cooperative Education (1).
Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Student may be able to use this course as a technical elective, with department consultation and permission prior to enrollment. Repeatable for credit. Prerequisite(s): junior standing and approval by the appropriate faculty sponsor.

AE 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

AE 481N. Internship (1).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

AE 481P. Cooperative Education (1).
Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 credit hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Student may be able to use this course as a technical elective, with department consultation and permission prior to enrollment. Repeatable for credit. Prerequisite(s): junior standing and approval by the appropriate faculty sponsor.

AE 502. Aerospace Propulsion I (3).
Surveys aerospace propulsion methods. Production of thrust and consumption of fuel. Rocket performance analysis; liquid chemical and solid propellant rocket engines. Jet engine cycle analysis; turbojet, ramjet, turbofan and turboprop engines. Analyzes piston engines and propellers. Prerequisite(s): AE 227, 373, ME 398. Pre- or corequisite(s): AE 424.

AE 512. Experimental Methods in Aerospace (3).
Studies experimental methods and test planning, error analysis and propagation, model design, instrumentation and flow visualization. Uses electromechanical testing machines, subsonic and supersonic wind tunnels. Prerequisite(s): AE 333, 424. Pre- or corequisite(s): AE 524. Corequisite(s): AE 512L.

AE 514. Flight Dynamics and Control (3).
Static stability and control of conventional aircraft and implications in aircraft design, six degrees of freedom, time dependent equations of motion and their linearized solutions. Consideration of stability versus maneuverability and the dynamic modes of motion of the aircraft. Prerequisite(s): AE 415. Pre- or corequisite(s): AE 424.

AE 524. Aerodynamics II (3).
Continues the discussion of potential flow from AE 424. Introduces energy equation, fundamental concepts of high speed flow, normal and oblique shock waves, Prandtl-Meyer flow, nozzles and diffusers, linearized high speed potential flow, airfoils and wings in subsonic and supersonic flow, Navier-Stokes equation, boundary layer flow, momentum integral approximation and various laminar and turbulent flow solutions, introduction to convective heat transfer. Prerequisite(s): AE 424.

AE 525. Flight Structures I (3).
2 Classroom hours; 2 Lab hours. Introduces the theory of elasticity, advanced mechanics of materials, and stress analysis of flight vehicle components. Prerequisite(s): AE 333 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course). Pre- or corequisite(s): MATH 555. Corequisite(s): AE 525L.

AE 527. Numerical Methods in Engineering (3).
Error analysis. Includes polynomial approximations and power series, iterative solutions of equations, matrices and systems of linear equations, numerical differentiation and integration, approximate solution of differential equations by finite differences. Prerequisite(s): AE 227. Pre- or corequisite(s): MATH 555.

AE 528. Aerospace Design I (4).
2 Classroom hours; 4 Lab hours. Methodology of flight vehicle design; mission objectives, regulations and standards; use of hand and computer methods for configuration development and component sizing, ethics, and liability in design. Prerequisite(s): AE 502, 514, 525.

AE 607. Flight Control Systems (3).
Classical design methods for stability and control augmentation and guidance systems specifically for aerospace vehicles, including block diagrams, root locus and frequency response. Sensors used in aerospace systems. Flying qualities and performance specifications for closed loop systems. Includes a review of the aircraft and spacecraft dynamic model derivation. Prerequisite(s): AE 514.

AE 625. Flight Structures II (3).
2 Classroom hours; 3 Lab hours. Strength analysis and design of flight vehicle components. Introduces energy methods and variational principles. Applies finite element method, including commercial finite element software, to the analysis of flight vehicle structures. Prerequisite(s): AE 525. Corequisite(s): 625L.

AE 628. Aerospace Design II (4).
2 Classroom hours; 4 Lab hours. Preliminary design of flight vehicles, design iteration, sensitivity studies, optimization, economic considerations and introduction to project management. Prerequisite(s): AE 528.

AE 660. Selected Topics (1-3).
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite(s): instructor's consent.

AE 690. Independent Study (1-3).
Arranged individual independent study in specialized areas of aerospace engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite(s): consent of supervising faculty member.

AE 702. Aerospace Propulsion II (3).
In-depth study of rocket and jet propulsion. Turbojet and rocket engine components. Effect of operating variables on turbojet cycles and rocket performance. Prerequisite(s): AE 502 or instructor's consent.

AE 703. Rotor Aerodynamics (3).
Aerodynamics of rotors, including propellers, wind turbines and helicopters; momentum, blade element and potential flow analysis methods; helicopter dynamics, control and performance. Prerequisite(s): AE 424.

AE 707. Modern Flight Control System Design I (3).
Modern multi-loop design methods for stability and control augmentation and guidance systems, specifically for aerospace vehicles. State variable model. Optimal state feedback gains and Riccati's equation, tracking systems, sensors and actuator, discretization of continuous dynamic systems, optimal design for digital controls, and effect of nonlinearities and trim conditions on design considerations. Prerequisite(s): AE 514 or 714, and AE 607 or EE 684 or ME 659.

AE 711. Intermediate Aerodynamics (3).
Studies potential flow equations of motion, singularity solutions, principles of superposition, conformal mapping, thin airfoil theory, finite wing theory, three-dimensional singularities, swept wing theory, delta wing theory, and introduces panel methods. Prerequisite(s): AE 424 or equivalent.

AE 712. Advanced Aerodynamics Laboratory (3).
2 Classroom hours; 2 Lab hours. Advanced topics in wind tunnel testing, such as analysis and sensitivity, modeling techniques, flexure design and calibration, control surface loads and moments, laser velocimetry, hot film anemometry, dynamic signal processing, flow measurement probes, flow visualization using smoke tunnels and water tunnel. Prerequisite(s): AE 512.

AE 714. Advanced Flight Dynamics I (3).
Detailed derivation of the linear and nonlinear equations of motion for aircraft. Aerodynamic and thrust force and moment models. Steady state flight and dynamic stability and control of aircraft. Aircraft, FAR and MIL specs. Prerequisite(s): AE 514.

AE 715. Intermediate Space Dynamics (3).
Advanced topics in orbital mechanics-vector mechanics perspective of the two-body problem; fast transfers; interplanetary missions including gravity assist maneuver and intercept problem; atmospheric entry. Prerequisite(s): AE 415 or instructor's consent.

AE 716. Compressible Fluid Flow (3).
Analyzes compressible fluid flow for one- and two-dimensional cases, unsteady wave motion, velocity potential equation, method of characteristics, linearized velocity potential equation, aerodynamic coefficients, approximate pressure calculation for hypersonic flows, Newtonian pressure, and chemically reacting flows. Prerequisite(s): AE 524.

AE 719. Introduction to Computational Fluid Dynamics (3).
Classification of partial differential equations, numerical solution of parabolic, elliptic and hyperbolic differential equations, stability analysis, boundary conditions, scalar representation of the Navier-

Stokes equations, incompressible Navier-Stokes equations. Prerequisite(s): AE 424 or ME 521.

AE 721. Aircraft Icing (3).
Topics include the icing environment, icing envelopes, ice accretion physics, fundamental equations for icing analysis, types of ice accretions, effects of ice accretions on aircraft aerodynamic performance, ice protection and detection systems, icing test facilities, introduces simulation tools for aircraft icing analysis, icing incidents and accidents, and aspects of aircraft icing certification. Corequisite(s): AE 424 or equivalent.

AE 722. Finite Element Analysis of Structures I (3).
Advanced treatment of the theoretical concepts and principles necessary for the application of the finite element method in the solution of differential equations in engineering. Prerequisite(s): AE 525 or AE 733.

AE 731. Theory of Elasticity (3).
Develops the equations of the theory of elasticity and uses them to determine stress and displacement fields in linear elastic isotropic bodies; uses Airy stress functions to obtain solutions. Prerequisite(s): AE 525 or AE 733.

AE 733. Advanced Mechanics of Materials (3).
Extension of AE 333. Includes transformation of stress and strain in three dimensions, torsion of members with noncircular cross sections, curved beams, beams with unsymmetrical cross sections, energy methods, stress concentrations, and theories of failure and fracture mechanics. Prerequisite(s): AE 333.

AE 737. Mechanics of Damage Tolerance (3).
Introduces fatigue analysis and mechanics of damage tolerance emphasizing stress analysis oriented fracture mechanics. Includes stress intensity, fracture toughness, residual strength, fatigue crack growth rate, fatigue crack propagation, and damage tolerance concepts. Prerequisite(s): AE 525 or AE 733.

AE 742. Applied Jet Propulsion (3).
In-depth overview of jet propulsion. Effect of operating variables on turbojet and modified engine cycles. Introduces real world issues and engine testing. Prerequisite: AE 502 or instructor's consent.

AE 743. Applied Jet Propulsion Subsystems (3).
In-depth study of jet engine components. Introduces engine component manufacturing, maintenance and repair issues. Prerequisite(s): AE 502 or instructor's consent.

AE 753. Mechanics of Laminated Composites (3).
Descriptive classification of advanced composite materials and their constituents; mechanics of lamina and laminates, testing for material properties, lamina and laminate failure criteria, laminate strain allowables, structural analysis (beams and axially loaded members), design guidelines, introduction to manufacturing methods, repair and nondestructive testing. Prerequisite(s): AE 525, or AE 733, or equivalent.

AE 759. Neural Networks for System Modeling and Control (3).
Introduces specific neural network architectures used for dynamic system modeling and intelligent control. Includes theory of feed-forward, recurrent, and Hopfield networks; applications in robotics, aircraft and vehicle guidance, chemical processes and optimal control. Prerequisite(s): AE 607 or ME 659 or EE 684 or instructor's consent.

AE 760. Selected Topics (1-3).
A special topics course. Special topics are listed in course schedule with a letter after the course number (i.e. ENGL 195A, ENGL 195B). Not all courses are offered each semester – see the course schedule for availability. Students enroll in the special topic lettered courses, not this parent course.Prerequisite(s): instructor's consent.

AE 760AA. Micromechanics and Multi-Scale Modeling (3).
Many materials and structures consist of multiple phases. Micromechanics models can be used to homogenize a structure at some appropriate scale for more practical modeling. Course covers the classical mean-field homogenization models. Explores several state-of-the-art numerical techniques used in micromechanics modeling, such as the method of cells, variational methods and Fourier transforms in addition to finite element techniques for periodicity.

AE 760AB. Structural Acoustics (3).
Introduces the basic concepts of engineering acoustical analysis to study wave propagation, sound radiation from simple sources, absorption and transmission of acoustic wave through partitions, duct acoustics, aircraft noise sources and control techniques.

AE 760AC. Nano-Satellite Engineering (3).
Provides a fundamental understanding of the design of a nano-satellite and mission design catering to given mission requirements. Covers nano-satellite mission analysis, attitude control, electrical power systems, propulsion subsystem, thermal system, telemetry, data handling/processing and systems engineering tests. Includes hands-on experimentation using nano-satellite educational kits.

AE 760AF. Experimental Vibration Analysis (3).
Covers all basic aspects of experimental vibration analysis including modal analysis theory, digital signal processing and experimental modal model development. Includes hands-on vibration testing labs and a basic overview of finite element modeling of dynamic systems and model correlation. Prerequisite(s): AE 777, AE 333 or equivalent; MATH 511 or equivalent, and MATH 555 or equivalent.

AE 760AG. Structural Dynamics and Acoustics (3).
Studies the dynamic response of continuous structural systems subjected to external dynamic forcing functions. Introduces the basic concepts of engineering acoustical analysis to study sound propagation in a medium, acoustic radiation from simple sources, and absorption and transmission of acoustic waves through partitions. Prerequisite(s): AE 777, MATH 555 or equivalent.

AE 760AI. Airframe Analysis and Design (3).
Covers the analysis and design methods for semi-monocoque airframe structures under combined bending, twisting, transverse shear and pressurization loads. Emphasis is on details such as taper, cut-outs, joints, shear lag, buckling, etc. Prerequisite(s): AE 525 or AE 733 or equivalent.

AE 760AL. Nonthesis Option Applied Learning Activity (0).
Applied learning activity for the nonthesis/nonproject option student in the MS degree in aerospace engineering. Prerequisite(s): instructor's consent.

AE 765A. Special Topics - Composite Manufacturing: Technology Safety Awareness I (0.5).
Provides composite materials technologies basic knowledge, an overview of different forms of composites manufacturing, various factory workflows, and the associated regulatory guidance documents. For graduate students only. Repeatable for credit.

AE 765B. Special Topics - Composite Manufacturing: Technology Safety Awareness II (0.5).
Educates students on the issues related to raw material manufacturing, its transport, incoming quality control and storage of composite materials. The preparation of tooling, cutting of composite preforms, layup and bagging of composite parts, and curing are discussed in detail. The use of procurement specifications and process control

documents are emphasized. For graduate students only. Repeatable for credit. Prerequisite(s): AE 765A.

AE 765C. Special Topics - Composite Manufacturing: Technology Safety Awareness III (0.5).
Topics include technical aspects related to trimming and drilling of composites, defects in composites, adhesive bonding and assembly, nondestructive and destructive inspection. For graduate students only. Repeatable for credit. Prerequisite(s): AE 765B.

AE 765D. Special Topics - Composite Manufacturing: Technology Safety Awareness IV (0.5).
Topics include technical aspects related to painting and finishing composites, handling and storage, manufacturing defects and their root causes analyses, and scarf repair of composites. For graduate students only. Repeatable for credit. Prerequisite(s): AE 765C.

AE 765E. Special Topics - Composite Manufacturing: Technology Safety Awareness V (0.5).
Lab course providing students with hands-on experiences on prepreg cutting, manual layup and bagging of simple laminated composite parts, nondestructive inspection, and scarf repair. For graduate students only. Repeatable for credit. Prerequisite(s): AE 765D.

AE 765F. Composite Structural Engineering Technology-0 (0.5).
Provides students with background knowledge related to composite material applications, materials, processes, manufacturing, structural design, proof of structures, maintenance, aeroelastic issues, crashworthiness, fire safety and lightening protection. Course serves as a foundation course for the follow-on courses which elaborate on the aforementioned topics. Prerequisite(s): instructor's consent.

AE 765G. Composite Structural Engineering Technology-1 (0.5).
Provides a historical overview of composites usage in aircraft structures; discusses the key technical characteristics of composite structures; composites safety and certification initiatives by FAA; issues affecting cost of incorporating composites; role of standards organizations; some evolving composite technologies; evolution and objectives of integrated product teams. Pre- or corequisite(s): AE 765F.

AE 765P. Composites Structural Integrity and Repair (0.75).
Exposes students to various aspects of composite manufacturing, inspections, repair and testing. Includes fabrication of monolithic and sandwich panels, joining composites with adhesive bonding, inspecting composites with various nondestructive techniques, machining and hole drilling repair of composite structures (monolithic and honeycomb), instrumentation of composite test articles, and various aspects of mechanical testing of composite structures. Designed as a supplemental course for composite theory classes, thus lab time is maximized so that the students get hands-on experience. Prerequisite(s): instructor's consent.

AE 765Q. Structural Integrity and Repair of Metallic Airframe Structures (0.75).
Provides students with hands-on experience in the structural testing and evaluation of stiffened metallic panels. Students learn the hole drilling methods and use a CNC machine to drill holes and assemble a stiffened picture frame shear specimen. The hands-on experience includes nondestructive inspection of damaged stiffened panels using eddy current, mag. particles, dye penetrant, pulse thermography and X-ray methods. Students install strain gages and crack gages on picture frame shear test article which is tested on a servo hydraulic testing machine. Students are exposed to the basic principles of testing, analysis of test data, and failure analysis using SEM and optical microscope. Prerequisite(s): instructor's consent.

AE 770BA. Badge: Composite Manufacturing Technology Safety Awareness I (0.5).
Students are provided with composite materials technologies basic knowledge, an overview of different forms of composites manufacturing, various factory workflows, and the associated regulatory guidance documents. Graded Bg/NBg.

AE 770BB. Badge: Composite Manufacturing Technology Safety Awareness II (0.5).
Educates students on the issues related to raw material manufacturing, its transport, incoming quality control and storage of composite materials. The preparation of tooling, cutting of composite preforms, layup and bagging of composite parts, and curing are discussed in detail. The use of procurement specifications and process control documents are emphasized. Graded Bg/NBg. Prerequisite(s): AE 770BA.

AE 770BC. Badge: Composite Manufacturing Technology Safety Awareness III (0.5).
Topics include technical aspects related to trimming and drilling of composites, defects in composites, adhesive bonding and assembly, nondestructive and destructive inspection. Graded Bg/NBg. Prerequisite(s): AE 770BB.

AE 770BD. Badge: Composite Manufacturing Technology Safety Awareness IV (0.5).
Topics include technical aspects related to painting and finishing of composites, handling and storage, manufacturing defects and their root cause analysis, and scarf repair of composites. Graded Bg/NBg. Prerequisite(s): AE 770BC.

AE 770BE. Badge: Composite Manufacturing Technology Safety Awareness V (0.5).
Lab course provides students with hands-on experience on prepreg cutting, manual layup and bagging of simple laminated composite parts, nondestructive inspection and scarf repair. Graded Bg/NBg. Prerequisite(s): AE 770BD or instructor's consent.

AE 770BG. Badge: Composite Structural Engineering Technology-0 (0.5).
Provides students with background knowledge related to composite material applications, materials, processes, manufacturing, structural design, proof of structures, maintenance, aeroelastic issues, crashworthiness, fire safety and lightening protection. Course serves as a foundation course for the follow-on courses which elaborate on the aforementioned topics. Graded Bg/NBg. Prerequisite(s): instructor's consent.

AE 770BI. Badge: Composite Structural Engineering Technology-1 (0.5).
Historical overview of composites usage in aircraft structures; discusses the key technical characteristics of composite structures; composites safety and certification initiatives by FAA; issues affecting cost of incorporating composites; role of standards organizations; some evolving composite technologies; evolution and objectives of integrated product teams. Graded Bg/NBg. Pre- or corequisite(s): AE 770BG.

AE 773. Intermediate Dynamics (3).
Extension of AE 373. Studies the kinematics and kinetics of particles and rigid bodies for two- and three-dimensional motion. Includes an introduction to vibratory motion, dynamic stability of linear systems and Lagrange's equations. Prerequisite(s): AE 373.

AE 777. Vibration Analysis (3).
Studies free, forced, damped and undamped vibrations on multi-degree of freedom discrete mechanical systems. Introduces vibration analysis of continuous solids. Prerequisite(s): MATH 555, AE 333, 373.

AGE - Aging Studies

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

AGE 100. Introduction to Aging Studies (3).
Multidisciplinary overview of the field of aging, with attention to cultural, social, psychological, biological and economic factors which influence the circumstances of the elderly. *Course includes diversity content*.

AGE 150. Workshop in Gerontology (1-3).
Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

AGE 404. Psychology of Aging (3).
General education social and behavioral sciences course. Cross-listed as PSY 404. Examines the issues surrounding the adult aging process. Includes personality and intellectual change, mental health of the elderly, and the psychological issues of extending human life. Emphasizes the strengths of the elderly and preventing the psychological problems of the elderly. Prerequisite(s): PSY 111.

AGE 405. Sociology of Aging (3).
General education social and behavioral sciences course. Cross-listed as SOC 405. Analyzes the social dimensions of old age, including changing demographic structures, role changes and their impact on society.

AGE 408. Biology of Aging (3).
Cross-listed as BIOL 408. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, emphasizing humans. Prerequisite(s): a basic course in biology that satisfies the general education requirements.

AGE 422. Introduction to Public Health and Aging (3).
Introductory course for public health and aging. Explores the study of aging and the range of health issues that older persons, their families, their providers and society will face in the next decade. Presents an overview on aging from different perspectives: demography, biology, epidemiology of disease, physical and mental health disorders, functional capacity and disability, social aspects of aging and ethical issues in the care of older individuals.

AGE 481. Cooperative Education (1-6).
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Repeatable for credit up to 6 credit hours. Prerequisite(s): AGE 100 and instructor's consent.

AGE 501. Field Experience (1-6).
Supervised field experience in an agency or organization planning or providing services to older people, individually designed to enhance each student's skills and knowledge of the aging service network. Repeatable for credit up to 6 credit hours. Prerequisite(s): 12 credit hours of aging studies credit and instructor's consent.

AGE 512. Diversity and Aging (3).
General education social and behavioral sciences course. Cross-listed as ETHS 512. Introduces students to issues in aging that are unique to minority older adults. Demonstrates differences in the aging experience by race/ethnicity and addresses the differential patterns of health and illness in later life in relation to race/ethnicity, gender and culture. In addition, the student develops an appreciation for how race/ethnicity affects mental and social dimensions of life. Attention is given to the impact on the social, financial and health aspects of those who speak a language other than English. Course perspective is interdisciplinary, taking into account the physical, psychological, interpersonal and social influences which shape our understanding of the challenges older minorities face when relocating to the United States. *Course includes diversity content*.

AGE 515. Women and Aging (3).
Cross-listed as WOMS 580T. Introduces students to issues in aging that are unique to women, to women's diverse developmental patterns, and to research methods appropriate for studying aging women and their life experiences. Topics include physical change, role transitions and adaptation from a life span perspective. *Course includes diversity content*.

AGE 516. Age, Work and Retirement (3).
Examines the basic implications of population aging on work life and retirement opportunities, now and in the future. Explores factors that may place individuals at risk for economic insecurity as they grow older. Topics covered include the current situation in the United States and other countries, examines the economic status of older Americans, addresses retirement policies in the private sector, social security and health care issues.

AGE 520. Family and Aging (3).
Cross-listed as SOC 520. Analyzes the families and family systems of older people. Emphasizes demographic and historical changes, widowhood, caregiving and intergenerational relationships as these relate to the family life of older people. *Course includes diversity content*.

AGE 525. Dying, Death and Bereavement (3).
A broad overview of the psychological aspects of death and dying in our society. Topics include attitudes toward and preparation for death, the understanding of and care for terminally ill patients, funeral rituals, burial, mourning and grief practices; suicide and euthanasia. The class involves experiential learning activities such as personal preparation for death and field trips such as visiting a funeral home. These learning activities are designed to help the student be better equipped to help those who must make such preparations for themselves or loved ones.

AGE 527. Introduction to Sexuality and Aging (3).
Focuses on all aspects of sexuality and aging and the issues that arise with respect to sexual behavior as humans age. Examines human sexuality over the life course, focused on the experiences of those 65 and older and the impact of chronic disease, cognitive decline and physical disabilities on sexual attitudes and behaviors. Addresses key concerns regarding sexuality and aging, including misconceptions about sexuality and aging as well as the problems with sexuality that members of the aging population sometimes face. It also looks at solutions, treatments and techniques that can be applied to help address some of those problems. The course perspective is interdisciplinary, taking into account the physiological, psychological, interpersonal and social influences which shape our understanding of sexuality in the aged.

AGE 529. Caregiving and Aging (3).
Explores caregivers' gender roles, cost of caregiving, managing stress, respite care, finding resources, financial and legal matters, emerging caregiving trends, and long distance caregiving. Caregiving is often stressful to the caregiver. Attention is given to caring for the caregiver, informal versus formal caregiving, the importance of various services for the health of the caregivers themselves, working with professional caregivers, and emerging trends in caregiving.

AGE 550. Selected Topics in Aging Studies (1-3).
Study in a specialized area of aging studies with the focus upon preprofessional programs and current issues in the field of aging. Emphasizing knowledge and skills in applied areas of aging studies as they relate to an emerging area of research and application. Repeatable for credit up to 6 hours. Prerequisite(s): instructor's consent.

AGE 559. Successful Aging: Theory, Research and Practice (3).
Cross-listed as PSY 559, SCWK 559, and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts and Sciences, and Engineering. *Course includes diversity content*. Prerequisite(s): AGE 100, or PSY 111, or SCWK 201, or SOC 111.

AGE 559H. Successful Aging: Theory, Research and Practice Honors (3).
Cross-listed as PSY 559, SCWK 559, and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts and Sciences, and Engineering. *Course includes diversity content*. Prerequisite: AGE 100, or PSY 111, or SCWK 201, or SOC 111.

AGE 562. Human Resource Management in Long-Term Care (3).
Builds a solid foundation in human resource management principles for professionals working in long-term care. Intended for students who need a skillset in HR management principles for an administrative role, or who will be managing HR professionals. Key human resources functions covered include HR's role as a strategic partner, employment law, recruitment, compensation and payroll, training and development, discipline and termination, and labor relations. Case studies, contemporary issues and discussions focus heavily on becoming an employer of choice in a long-term care environment.

AGE 564. Long-Term Care Management and Operations (3).
Designed to broaden the understanding of operating and managing a long-term care community — specifically assisted living communities. Students gain an understanding of human capital demands, cross-functional departmental dependences, financial and budgetary requirements, as well as the relationship between operational excellence and quality of life for the resident.

AGE 660. Administrator-in-Training Long-Term Care Practicum (1-3).
Academic long-term care administrator training program. Develops a professional competency and personal code of ethics for the field of long-term care administration. Gives students the practical experience required by the state of Kansas in order to sit for the state and national nursing home administrator licensure examination. The required text is the study guide for the national exam. It is the student's responsibility to work through the study materials and seek guidance from their preceptor regarding questions over the material. A total of 480 clock-hours are required by the state of Kansas and must be completed in a licensed long-term care nursing home community under the guidance of an approved preceptor. Repeatable for a total of 3 credit hours. Prerequisite(s): instructor's consent.

AGE 702. Research Methods (3).
Cross-listed as PADM 702. Provides foundational and advanced knowledge and skills to prepare students to develop research studies and locate, appraise and apply age-related research to answer clinical questions. Emphasizes principles of evidence-based practice, research design and methodologies, framing research questions, and interpretation of basic and advanced statistics necessary to critically evaluate, interpret and apply age-related research to industry challenges. Fulfills the university's professional and scholarly integrity training requirement addressing research misconduct, publication practices and responsible authorship, conflict of interest and commitment, research ethics, data management, sharing and ownership.

AGE 710. Systems in Long-Term Care (3).
Analyzes long-term care in the U.S. as a response to chronic illness and disability emphasizing the diversity of long-term care systems and addressing the needs of persons of all ages. Addresses system and organizational aspects that affect organizational outcomes and quality of long-term care services. Considers long-term care policy and management issues. It explicitly applies a trajectory model of chronic illness, conceptualizing formal long-term care services as one series of responses to chronic illness and disability.

AGE 717. Health Communications and Aging (3).
Multidisciplinary, empirically-based consideration of emotions, behaviors, beliefs and attitudes related to aging and the process of communicating with older adults. Topics include: approaches to communication and aging, current evidence about communication and the aging population, interpersonal and intergenerational communication, mass communication and aging, health and health care interactions (patient-physician communication, etc.), older adults and technology, and cultural change. Students develop applied skills and critical thinking. Applications to public health are explored throughout the course.

AGE 720. Independent Readings (1-3).
Supervised study of special topics and problems relating to older adults. Repeatable for credit up to 6 credit hours. Prerequisite(s): program consent.

AGE 765. The Medicare System (3).
Explores the many intricacies of the Medicare and Medicaid programs. Emphasizes the application of course material to the development of the student's understanding of how these two programs affect the use of medical services among covered populations. Includes lecture, group and individual examination of the literature, and analysis of case studies.

AGE 780. Physical Dimensions of Aging (3).
Cross-listed as HPS 780. Develops an understanding of the complex physiological changes that accompany advancing age and the effects of physical activity on these factors. Also develops an appreciation for how functional consequences affect mental and social dimensions of life. Attention is given to sensory, motor, cognitive and psychological changes. Emphasizes factors associated with the preparation, implementation and evaluation of research projects involving older adult populations.

AGE 781. Cooperative Education (3-6).
Provides practical field experience, under academic supervision, that is suitable for graduate credit and complements and enhances the student's academic program. Repeatable for credit up to 6 credit hours. These 3 to 6 credit hours may meet degree requirements (if approved by the academic advisor) in place of AGE 810. AGE 781 is graded Cr/NCr, while AGE 810 is letter graded. Prerequisite(s): 12 credit hours of aging studies and instructor's consent.

AGE 798. Interprofessional Perspectives on Aging (3).
Introduces the advanced study of the process of aging from a multidisciplinary point of view. Not open to students with an undergraduate major or minor in aging studies. Prerequisite(s): admission to Graduate School.

ANTH - Anthropology

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ANTH 101. Biological Anthropology (3).
General education math and natural sciences course. Provides an introduction to the understanding of biological evolution and behavioral

development of humans. Introduces the history and basic concepts of biological/evolutionary thought, genetics and cell biology, human origins, ecology and culture, along with the types of data and modes of analysis currently used in biological anthropology. Formulates explanations of physical and cultural developments of human and nonhuman primates in the last 70 million years. Explores patterns of human variation in biological and behavioral traits among present-day populations and discusses current issues (e.g., the social and biological meaning of variations). *Course includes diversity content*.

ANTH 102. Cultural Anthropology (3).
General education social and behavioral sciences course. The meaning of culture, its significance for human beings and its diverse forms among peoples of the world, past and present. *Course includes diversity content*.

ANTH 103. Introduction to Archaeology (3).
General education social and behavioral sciences course. Introduces the philosophy, theory, tools and techniques of the practicing archaeologist. Illustrates the role of archaeology in understanding cultural change through time, and explains how archaeological method draws on natural sciences and humanities to demonstrate how students learn about past cultures from the material they left behind.

ANTH 106. Biological Anthropology Lab (1).
Students collect and analyze data while learning to apply current techniques to the study of human and/or nonhuman primate skeletal, dental and biological specimens. Pre- or corequisite(s): ANTH 101.

ANTH 107. Cultural Anthropology Laboratory (1).
Students participate in organizing, collecting and analyzing data derived from cultural anthropological investigations. Pre- or corequisite(s): ANTH 102.

ANTH 150. Workshop in Anthropology (1-3).
Provides specialized instruction using a variable format in an anthropologically relevant subject. Repeatable for credit.

ANTH 200. Intercultural Relations (3).
General education social and behavioral sciences course. Examines anthropological perspectives on the contact of individuals and societies which have different cultural histories. Examples are drawn widely from varied contemporary contexts: family life, international business, health and health care, the movement of populations, education in formal and informal contexts, and cultural strategies for survival in the global village. *Course includes diversity content*.

ANTH 303. World Cultures (3).
General education social and behavioral sciences course. Comparative case studies of the cultures of existing societies of varying types, including nonliterate peoples, Third World nations and modern industrialized countries. *Course includes diversity content*.

ANTH 305. World Archaeology (3).
General education social and behavioral sciences course. Introduces the basic concepts, methods, techniques and modes of analysis of scientific archaeology. These are applied to a series of problems of increasing complexity: the emergence of human culture, the development of domestic plants and animals, and the evolution of cities and complex societies.

ANTH 318. Psychological Anthropology (3).
General education social and behavioral sciences course. The relationship of individual psychology (personality, emotion, cognition), both normal and abnormal, to group membership and cultural context.

ANTH 327. Magic, Witchcraft and Religion (3).
General education social and behavioral sciences course. Cross-listed as REL 327. Examines various concepts concerning the realm of the supernatural as held by various peoples around the world. Relates such religious beliefs and the resultant practices to the larger patterns of cultural beliefs and behaviors. *Course includes diversity content*.

ANTH 335. Archaeology of North America (3).
General education social and behavioral sciences course. Surveys the prehistoric cultures of North America north of Mexico from the earliest peopling of the continent to the time of European colonization.

ANTH 344. Ecological Anthropology (3).
General education social and behavioral sciences course. Investigates the relationships of people both to their physical and sociocultural environments, including the effects of these relationships on economic activities, social organizations, and beliefs and behaviors emphasizing the evolutionary development of survival strategies.

ANTH 352. Linguistic Anthropology (3).
General education social and behavioral sciences course. Provides a learning experience engaging students in a more refined understanding of the linguistic dimensions of human culture through the exploration of the most important methods and theories in linguistics. Students are engaged in case studies taken from various social and cultural contexts. Covers basic elements of the study of various aspects of language including phonology, morphology, syntax, semantics and pragmatics. Prerequisite(s): ANTH 102 or a social sciences or humanities introductory course, or instructor's consent.

ANTH 356. Human Variability and Adaptation (3).
General education math and natural sciences course. A critical examination of the biological aspects of contemporary human variation, stressing human adaptations. *Course includes diversity content*. Prerequisite(s): ANTH 101 or BIOL 210 or equivalent.

ANTH 356H. Human Variability and Adaptation Honors (3).
General education math and natural sciences course. A critical examination of the biological aspects of contemporary human variation, stressing human adaptations. *Course includes diversity content*. Prerequisite(s): ANTH 101 or BIOL 210 or equivalent.

ANTH 361. Law, Politics and Society (3).
Studies legal and political systems in non-Western societies. Includes the origin of the state, precolonial law and politics, the impact of colonialism, and problems in state building.

ANTH 397. Topics In Anthropology (3).
Studies current issues in anthropology. Content varies with interests of instructor. Consult current Schedule of Courses for topics.

ANTH 397AB. Anthropology of Food and Nutrition (3).
Explores the relationship between Homo sapiens and the food they eat — holistically pulling from biology, nutrition, history, archaeology, food science and cultural studies. Students participate in a hands-on, applied learning cooking event using ancient techniques.

ANTH 397AJ. Introduction to Human Osteology (2).
Introduces the student to the human skeleton, including basic recognition and identification of skeletal elements, sex and size estimation. Taught in a lab setting giving students access to a hands-on experience working with the human skeleton. Students learn how to complete a skeletal inventory and write a technical report documenting the contents of the skeletal materials assigned to them.

ANTH 397AK. Human Variation Studies (3).
Anthropological human variation explored in terms of physiological, skeletal and cultural adaptation. Make appointment with instructor for arranged class time and syllabus/assignments.

ANTH 397AL. Undergraduate Museum Study (1-3).
Introductory research and application of museum studies. Repeatable for a total of 6 credit hours.

ANTH 397AM. The Politics of Food and Sex (3).
Examines food and sexuality in its relation to society in a comparative perspective. Regional focus on South Asia, in particular India, however other regions of the world are also included where appropriate. Students must be able to oscillate between different cultural and national contexts, confronting familiar phenomena inflected by unfamiliar frames of reference. Emphasizes the analysis of foundational experiences, phenomena such as ingestion, incorporation, disgust, revulsion; as well as the facts of procurement, production and consumption of food substances. Traverses several fields of knowledge while retaining a strong focus in socio-cultural anthropology and in empirical ethnographic accounts.

ANTH 397AN. Fossil Evidence for Human Evolution (3).
Introduces students to a survey of the fossil evidence of a human biological past world-wide. Students are afforded an opportunity to study and discuss first-hand past and present explanation, following class lecture and presentation. Class also engages in debate pertaining to the most recent discoveries and how they affect our understanding of humanity and its history.

ANTH 397AO. Archaeology of Colonialism (3).
Explores the archaeology of colonial situations, from the Roman colonialism of Gaul to the Spanish conquest of California. Explores how new cultural identities form in these situations and how systems of power and resistance have shaped the course of history. Reading/writing heavy course, culminating in a research project of the students' interest. Prerequisite(s): ANTH 103 or instructor's consent.

ANTH 397AP. Current Research in Archaeology and Ethnohistory (3).
Gives students hands-on experience in archaeological and ethnohistorical research by involving them in the Etzanoa Archaeological Project. The project is focused on the archaeological remains of the large town called Etzanoa that was visited by a Spanish expedition in 1601. The project involves not only archaeological excavation (done in the summertime) but also laboratory and library research. Students are involved in creating a complete digital library of documents regarding Wichita archaeology and history (requested by the tribe's cultural affairs officer) with annotations. Project also includes assembling and analyzing historic photographs that can be used in future museum displays. The archaeological work includes processing specimens from the site and doing the background research necessary to interpret them. Some of the results of the research will be posted on Wikipedia.

ANTH 397AR. Independent Museum Study (3).
Arranged course. Introductory research and application of museum studies. The student works independently along with instructor. Repeatable for a maximum of 6 credit hours. Prerequisite(s): ANTH 201.

ANTH 397AT. Kansas Archaeology (3).
Cross-listed as ANTH 597AT. Surveys the first 15,000 years of human behavior in Kansas. Section is designed for upper-division undergraduate students or graduate students.

ANTH 397AV. The Anthropology of Politics in the US: Fractures, Truth, Lies, & Conspiracies in a Divided America (3).
Investigates a problem identified by many students in college classrooms today: the inability of people to communicate clearly with another, especially in the political realm. The United States has encountered a stark decline in the basic principles of political persuasion and debate. With the rise of Fake News, the fracture of political discourse, and the reinforcing echo chambers we all live inside on social media and virtual reality, is there anymore such a thing as reality, truth, and facts that we could agree on? What can individuals do to create a civil sphere where dialogue, disagreement, even consensus might be achieved in ways that are aggressive but nonviolent, passionate but not prejudiced, committed but not disrespectful? How do we recover the essential sense of community that promises each individual a stake in the American Dream? And how do we protect democracy in this city on a hill for now and the future? We will read and view an interdisciplinary set of materials including texts in anthropology, news articles, mainstream publications, and other media, to examine and address these questions. The course will begin with orienting students to the unique perspective of political anthropology as it pertains to the friend-foe binary and alternative political forms. Political Form refers here to social and cultural arrangements that organize individual and collective life in relation to the exercise of power and the construction of authority. In short, let's talk about the Political, the State, and everyday life of persons like you.

ANTH 416. Archaeology of Sex and Gender (3).
General education social and behavioral sciences course. Explores sex and gender in the past. Examines human biology to see how sex is defined and how biological sex is recorded in the archaeological record. Explores how gender, the social categories associated with sex, are recorded in the archaeological record. Students encounter case studies from across the globe and through time to appreciate the human diversity in gender expression and gender systems. Students conduct an independent research project of their interest. *Course includes diversity content*.

ANTH 481. Cooperative Education in Anthropology (1-4).
Provides practical experience that complements the student's academic program. Consultation with, and approval by, an appropriate faculty sponsor are necessary.

ANTH 498. Readings In Anthropology (1-3).
Repeatable for credit up to 6 credit hours. Special problems in anthropology. Prerequisite(s): 12 credit hours of anthropology.

ANTH 502. Introduction to Archaeological Laboratory Techniques (1-3).
Introduces the laboratory processing of archaeology materials. Direct experience in all phases of preparing excavated materials for analysis, including cleaning, restoring, preserving, numbering and cataloging ceramic and lithic artifacts and other remains. Repeatable for a total of 3 credit hours. Prerequisite(s): ANTH 305.

ANTH 511. The Indians of North America (3).
General education social and behavioral sciences course. Surveys tribal societies and native confederations north of Mexico from the protohistoric through the historic period. *Course includes diversity content*. Prerequisite(s): ANTH 102.

ANTH 519. Applied Anthropology (3).
The application of anthropological knowledge in the solution of social problems in industry, public health and public administration. Prerequisite(s): ANTH 102.

ANTH 522. Art and Culture (3).
General education social and behavioral sciences course. Surveys the visual and performing arts of non-Western peoples with special attention to their relationships in the cultural setting. *Course includes diversity content*. Prerequisite(s): ANTH 102.

ANTH 528. Medical Anthropology (3).
General education social and behavioral sciences course. Studies the health and behaviors of various human societies, especially in, but not limited to, those outside the Western scientific tradition. Covers attitudes toward the etiology of disease, the techniques of healing, the use of curative drugs and other agents, the roles of healers and therapists, and the attitudes of the community toward the ill. A library

or field research project is required. Prerequisite(s): 3 credit hours of nursing, or 3 credit hours of anthropology, or instructor's consent.

ANTH 540. The Indians of the United States: Conquest and Survival (3).
Anthropological inquiry into four centuries of cultural contact, conflict, resistance and renascence. Prerequisite(s): ANTH 102 or instructor's consent.

ANTH 542. Women in Other Cultures (3).
Cross-listed as WOMS 542 and ANTH 397R. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies. *Course includes diversity content*.

ANTH 555. Paleoanthropology and Human Paleontology (3).
General education social and behavioral sciences course. Detailed examination of human evolutionary history as evidenced by fossil remains and a survey of various interpretive explanations of the fossil record. Prerequisite(s): ANTH 101 or BIOL 210 or equivalent.

ANTH 557. Human Osteology (3).
Deals with human skeletal and dental materials, with applications to both physical anthropology and archaeology. Lecture and extensive laboratory sessions; includes bone and tooth identifications, measurement and analysis, and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite(s): ANTH 101 or equivalent.

ANTH 562. Introduction to GIS (3).
Skills and techniques course that introduces elementary concepts and tools of geographic information systems and the particular tools available in the program ArcGIS Desktop. Application of GIS tools and concepts to data analysis and interpretation, to behavioral pattern interpretation, and management decisions in using the data available from the WSU City Archeologist program and from the Sedgwick County GIS department are emphasized.

ANTH 597. Topics In Anthropology (3).
Detailed study of topics in anthropology. Content varies with interest of instructor. Consult Schedule of Courses for current topic. Repeatable for credit with a change of content.

ANTH 597AF. The Preservation of Artifacts in Relation to Exhibition (3).
Explores preservation techniques for artifacts on exhibit and the preparation of artifacts to go on exhibit. Techniques include general conservation, lighting and temperature. Students work independently on a project and work with artifacts to prepare for exhibit.

ANTH 597AO. Archaeology of Colonialism (3).
Explores the archaeology of colonial situations, from the Roman colonialism of Gaul to the Spanish conquest of California. Explores how new cultural identities form in these situations and how systems of power and resistance have shaped the course of history. Reading/writing heavy course, culminating in a research project of the students' interest. Prerequisite(s): ANTH 103 or instructor's consent.

ANTH 597AP. Current Research in Archaeology and Ethnohistory (3).
Gives students hands-on experience in archaeological and ethnohistorical research by involving them in the Etzanoa Archaeological Project. The project is focused on the archaeological remains of the large town called Etzanoa that was visited by a Spanish expedition in 1601. The project involves not only archaeological excavation (done in the summertime) but also laboratory and library research. Students are involved in creating a complete digital library of documents regarding Wichita archaeology and history (requested by the tribe's cultural affairs officer) with annotations. Project also includes assembling and analyzing historic photographs that can be used in future museum displays. The archaeological work includes processing specimens from the site and doing the background research necessary to interpret them. Some of the results of the research will be posted on Wikipedia.

ANTH 597AQ. Intro to the Human Skeleton (1).
Introduces the general anatomy of the human skeleton. Prepares students with little or no background in this area of study for more comprehensive coursework in human osteology.

ANTH 597AR. Advanced Anthropology of Food and Nutrition (3).
Explores the relationship between Homo sapiens and the food currently eaten — holistically pulling from biology, nutrition, history, archaeology, food science, and cultural studies. Students participate in a hands-on, applied learning event — cooking using ancient techniques. Graduate study encompasses enhanced reading, presentation and independent study.

ANTH 597AT. Kansas Archaeology (3).
Cross-listed as ANTH 397AT. Surveys the first 15,000 years of human behavior in Kansas. Section is designed for upper-division undergraduate students or graduate students.

ANTH 597AU. Advanced Human Osteology (3).
Detailed study of topics in anthropology. Content varies with interest of instructor. Consult Schedule of Courses for current topic. *Course includes diversity content*. Repeatable for credit with a change of content. Prerequisite(s): ANTH 101 and ANTH 557.

ANTH 597AV. Research Design and Proposal Writing (3).
Introduces students to foundational skills in anthropology: research design and proposal writing. Students choose a research question or appropriate project and develop a grant proposal to an appropriate funding agency. In so doing, they practice writing and mathematical skills appropriate to their subdiscipline.

ANTH 597AW. Human Osteometry and Variation (3).
Covers methods and techniques pertaining to the measuring (quantification) of the bones of the human skeleton. Students learn how to measure and record data, and how to apply the data in analysis of archaeological, historic and forensic skeletal settings. *Course includes diversity content*.

ANTH 600. Forensic Anthropology (3).
Cross-listed as CJ 600. Course focus is on recovery, analysis and identification of human and non-human remains in the area of criminal investigation. Includes lecture and case study presentations, hands-on lab analysis and investigation of human skeletal material, forensic profile estimation, and investigation of trauma and assessment of manner of death; forensic anthropology crime scene survey, mapping and documentation. Covers procedures of collection, recording, stabilization and documentation and anthropological identification. Prerequisite(s): ANTH 101 and ANTH 557 or equivalent is required for all Anthropology, Forensic Science and other non-criminal justice students. All criminal justice students must complete ANTH 101 and CJ 191 prior to taking ANTH 600, and ANTH 557 is highly recommended.

ANTH 602. Archaeological Laboratory Analysis (1-3).
Students analyze archaeological materials, including ceramic, lithic, faunal and vegetal remains according to accepted methods. Students learn to apply standard methods of identification and modes of interpretation to the materials to produce an acceptable archaeological report. Prerequisite(s): ANTH 502 and instructor's consent.

ANTH 606. Museum Methods (3).
Introduces museum techniques relating to the acquisition of collections and related procedures, such as accessioning, cataloging, documentation, presentation and storage. Emphasizes current trends in musicological philosophy concerning purpose, function and relevance of museums, as well as career opportunities. Prerequisite(s): instructor's consent.

ANTH 607. Museum Exhibition (3).
Contemporary philosophy of exhibition design and the application of recent concepts to the planning and installation of an exhibit. Prerequisite(s): ANTH 606 or instructor's consent.

ANTH 609. Biological Anthropology Laboratory Analysis (1-3).
Analyzes biological anthropology materials including human and nonhuman skeletal material of both forensic contemporary or prehistoric origin according to standardized methods for recording and collecting data in biological anthropology. Learn methods of identification, analysis and interpretation and prepare a standard technical report. Repeatable for credit up to 6 credit hours. Prerequisite(s): ANTH 101, 106, 356 or 557.

ANTH 612. Indians of the Great Plains (3).
Investigates the cultural dynamics of the Great Plains area from the protohistoric period to the present. *Course includes diversity content*. Prerequisite(s): 6 credit hours of anthropology and departmental consent.

ANTH 613. Archaeology of the Great Plains (3).
General education social and behavioral sciences course. The archaeology of the Great Plains area from earliest evidence to the historic period. Prerequisite(s): one introductory course in anthropology or departmental consent.

ANTH 647. Theories of Culture (3).
Surveys the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite(s): 6 credit hours of anthropology.

ANTH 651. Language and Culture (3).
Cross-listed as LING 651 and MCLL 651. An introduction to the major themes in the interactions of language and society, and language and culture, including ethnography of communication, linguistic relativity and determinism; types of language contact, the linguistic repertoire, and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite(s): 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

ANTH 662. Topics in Spatial Analysis (3).
Explores ways, means, techniques and methods to analyze geospatial data. Geographic analysis with GIS can identify patterns, relationships and trends that lead to better decision making. The class begins with six of the most common geographic analysis tasks: mapping where things are, mapping the most and least, mapping density, finding a boundary and what is inside the boundary, finding what is nearby, and mapping what has changed. The second half of the class covers analytical topics that range from identifying patterns and clusters, to analyzing geographic relationships. Knowledge of the Microsoft Windows operating system and Microsoft Office software suite is a must. Prerequisite(s): ANTH 562 with a C or better or permission of the instructor.

ANTH 680. CRM Archaeology (3).
Reviews the major federal and selected state laws and regulations affecting the practice of archaeology and anthropology in the area of Cultural Resources Management and historic preservation in the United States. Discussion focuses on the public concern with historic and cultural resources and archaeology, balancing research and planning needs, and interaction between clients and agencies.

ANTH 690. Field Methods in Anthropology (1-8).
Instructs the student in archaeological and ethnological field methods through actual participation in a field research program. The project depends upon the specific summer session and varies from year to year. A maximum of 6 credit hours can be counted toward either the BA or MA degree in anthropology. Prerequisite(s): instructor's consent.

ANTH 736. Advanced Studies in Archaeology and Ethnohistory (3).
Special area and theory problems in a historical approach to culture. Prerequisite(s): graduate standing and 6 credit hours of anthropology.

ANTH 746. Advanced Studies in Cultural Anthropology (3).
In-depth coverage of selected topics in cultural anthropology, including social structure, economic and political organization, religion, personality, arts and knowledge systems, and current research methods. Prerequisite(s): graduate standing and 6 credit hours of anthropology, including ANTH 647 or equivalent as determined by the graduate coordinator.

ANTH 750. Workshop (1-4).
Short-term courses focusing on anthropological problems. Prerequisite(s): instructor's consent.

ANTH 750N. Advanced Museum Independent Study (3).
Arranged course. Advanced research in the application of museum studies. The student works independently in an area pertaining to museum studies including research, preservation, exhibition and education.

ANTH 750P. Museum Internship (3).
Arranged course. For students earning their museum studies certificate. Students intern in an area museum.

ANTH 756. Advanced Studies in Biological Anthropology (1-3).
In-depth coverage of selected topics in biological anthropology, including the history of evolutionary thought, human variation, growth and development, population dynamics, paleoanthropology and primatology. Focuses on current issues, method and theory in biological anthropology. Prerequisite(s): graduate standing and 6 credit hours of anthropology (must include ANTH 101 or instructor's consent).

ANTH 770. Advanced Readings (1-3).
Provides opportunities for additional student research and reading on concepts and topics covered in the core graduate courses, ANTH 736, Advanced Studies in Archeology and Ethnohistory; ANTH 746, Advanced Studies in Cultural Anthropology; and ANTH 756, Advanced Studies in Biological Anthropology. Repeatable for credit up to 6 credit hours. Prerequisite(s): full graduate standing, completion of one core course (ANTH 736, 746 or 756), departmental consent.

ANTH 781. Cooperative Education (1-4).
Provides practical experience that complements the student's academic program. Requires consultation with, and approval by, an appropriate faculty sponsor. May not be used to satisfy degree requirements. Repeatable for credit. Prerequisite(s): graduate status.

ANTH 798. Introduction to Research (3).
Research methodology in anthropology, including bibliography, research design and the philosophy of research. Prerequisite(s): full graduate standing and completion of at least one of the following core courses: ANTH 736, 746, or 756.

ARAB - Arabic

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ARAB 111. Elementary Arabic I (5).
Develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work.

ARAB 112. Elementary Arabic II (5).
Further develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work. Prerequisite(s): one unit of high school Arabic, ARAB 111 or departmental consent.

ARAB 210. Intermediate Arabic (5).
Continues to develop the four fundamental skills in language learning: listening, speaking, reading and writing; emphasizes conversation and cultural readings. Prerequisite(s): two units of high school Arabic, ARAB 112 or departmental consent.

ARTE - Art Education

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ARTE 302. Jewelry Design/Construction (3).
Emphasizes metal working processes (forging, forming, casting, sawing, cutting, fusing, soldering) with subordinate emphasis on soft jewelry and ceramic processes applicable to jewelry.

ARTE 303. Stimulating Creative Behavior (3).
General education fine arts course. Includes theories of creativity; strategies for problem finding and problem solving; identifying various external and internal blocks to creativity; testing for creativity; the relationships of creativity, cognition, and visual thinking; creative challenges; and stimuli. Emphasizes methods to elicit creative behavior. Repeatable once for credit.

ARTE 310. ISAM: Elementary Art Education and Literacy (3).
Introduces practices of art educators for the young student (pre-K-6). Includes philosophical and historical foundations for education; methods, strategies and resources for art education advocacy, leadership and professionalism; relationship between state and national visual arts standards and understanding instructional strategies, assessment and classroom management (ISAM) in elementary art education; methods that emphasize creative and critical thinking; integration of verbal and visual literacy skills (thinking, comprehension, reading, writing and vocabulary); and practical training in the six-trait Analytical Writing Guide for assessing written assignments. Also includes an observation practicum and cultural interview component within an elementary context. Prerequisite(s): Art education major and successful completion of Mid-Program Review or instructor's consent.

ARTE 311. Art Education Curriculum in Elementary School (2).
Studies developmental characteristics of the elementary-age student and the development of the art program with respect to materials, skills and knowledge content.

ARTE 313. Fiber Exploration (3).
Focuses on fiber experiences appropriate for the classroom on the intermediate or secondary level. Explores various kinds of looms weaving, braiding and twisting techniques that result in a fabric or web. Explores simple dye techniques.

ARTE 410. ISAM: Preteaching Internship: Middle (3).
Philosophy, psychology and artistic development of the middle school student, emphasizing content, objectives, methods and evaluation. Principles used in effective instruction that integrate the visual arts with other subjects are incorporated in ways to develop skills in thinking, reading, comprehension, writing and vocabulary. Students further understand instruction, assessment and management (ISAM) in the context of teaching visual arts, verbal analysis and communication. Teacher candidates attend class on campus and participate in a 12-week field experience in the middle school art classroom in order to apply knowledge to planning and implementing a 10-day culturally-relevant unit of study and a pre-KPTP assessment (90 minutes, daily, for this experience). Successful completion of this course precedes enrollment in student teaching courses (ARTE 459/ ARTE 462/ ARTE 517). Prerequisite(s): ARTE 310, 414 with a grade of B- or better, and all Core II pedagogy courses in Curriculum and Instruction.

ARTE 413. Independent Study (1-3).
Directed independent study in art education not normally covered in other coursework. Prerequisite(s): instructor's consent.

ARTE 414. ISAM: Secondary Art Education (3).
Introduces the practices of art educators for students enrolled in both middle and high schools. Philosophical and historical goals for teaching art in the secondary level are included as is the content of the visual arts, objectives in planning lessons, methods and evaluation strategies. Principles used in effective instruction that integrate the visual arts with other subjects are incorporated with ways to develop skills in thinking, reading, comprehension, writing and vocabulary, both visual and verbal. Students further understand instruction, assessment and management (ISAM) in the context of teaching the visual arts and practice using the six-trait Analytical Writing Guide for assessing writing, which is the method used to score the Kansas State Writing Assessment. Prerequisite(s): ARTE 310, or instructor's consent.

ARTE 459. Teaching Internship: Elementary Art (4).
Participate in the elementary-level art classroom during the student teaching semester. Prerequisite(s): acceptance into Core III student teaching semester and successful completion of ARTE 410; CI 427 with a B- or better; minimum 2.500 GPA overall. Corequisite(s): ARTE 462, 517. Student must receive a B- or better in the three student teaching courses: ARTE 459, 462, 517.

ARTE 462. Teaching Internship: Secondary Art (4).
Participate in the secondary level art classroom during the student teaching semester. Prerequisite(s): acceptance into Core III student teaching semester and successful completion of ARTE 410, CI 427 with a B- or better; minimum 2.500 GPA overall. Corequisite(s): ARTE 459, 517 with grade of B- or better. Student must receive a B- or better in the three student teaching courses: ARTE 459, 462, 517.

ARTE 481. Cooperative Education (1-8).
Allows students to participate in the cooperative education program.

ARTE 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ARTE 511. Cross-Cultural Aesthetic Inquiry (3).
Explores aesthetics through critical discourses informing the social and cultural worldviews that frame visual arts practices. Emphasizes how cultural diversity within U.S. global interconnections influences educational theory and practice in art education. Related curriculum development, museum practices and artistic traditions are explored. Students write and discuss critical observations and interpretations in response to artworks, and create aesthetic-based curriculum materials or activities. Topics include feminist art, craft and design, multicultural art, traditional/indigenous art, religious and spiritual art, social practice and social justice, commerce in art, exhibition spaces and museums, art criticism and theories, and censorship and controversies in art. Emphasizes K-12 classroom applications. Prerequisite(s): ARTF 202 or instructor’s consent.

ARTE 515. Developing Visual Materials for Art Education (3).
Production laboratory emphasizing the integration and selection of appropriate visual media for art instruction. Prerequisite(s): ARTE 310 or equivalent.

ARTE 517. Teaching Internship Seminar (1).
Analyzes problems encountered in the art classroom during the second semester of the internship year. For undergraduate credit only. Prerequisite(s): acceptance in Core III internship, grade of B- or above in ARTE 310, 410, 414 and CI 427; minimum GPA of 2.500 overall. Corequisite(s): ARTE 459, 462. Student must receive a B- or better in the three student teaching courses: ARTE 459, 462, 517.

ARTE 550. Art Workshop (1-3).
Repeatable for credit. Area covered is determined at the time the course is offered.

ARTE 550B. Book Arts and Mixed Media (1-3).
Students challenge their personal creativity and enrich their artistic skills through weekly workshop explorations that include a variety of media and processes linked to cross-cultural, contemporary concepts in art. Each week is a new focus, required weekly attendance varies based on credit hour enrollment. Connections for future personal art exploration or classroom applications are addressed.

ARTE 702. Metal Processes for Jewelry Construction (3).
Emphasizes fabrication techniques, design analysis and function of jewelry designed and produced by students and acknowledged craftsmen. Repeatable once for credit. Prerequisite(s): ARTE 302 or instructor's consent.

ARTE 710. Creative Behavior and Visual Thinking (3).
Identification and application of theories for creative and critical thinking. Emphasizes strategies for problem solving and visual thinking and procedures to implement those strategies. Student identifies an area for individual investigation. Repeatable once for credit.

ARTE 711. Seminar In Art Education (1-3).
Supervised study and research of contemporary issues in art education. Repeatable for credit with departmental consent.

ARTE 713. Fiber and Fabric Processes (1-3).
Fiber processes using traditional and experimental techniques in woven forms and other structural techniques using natural and man-made fibers. Repeatable once for credit. Prerequisite(s): instructor's consent.

ARTE 714. Aesthetics for Classroom (3).
Focuses on applying the issues and theories of aesthetics to the K-12 classroom. Students participate in discussions and demonstrations of these theories through critical and reflective writing as well as curricular planning. Students consider aesthetic development and construct lessons to integrate strategies involving aesthetic concepts into their teaching.

ARTF - Art Foundation

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ARTF 102. Introduction to Art and Design (3).
Introduces fundamental concepts in analyzing and interpreting visual art and resources available in the university and community. Employs lectures and collaborative and/or experiential modes of learning. Written assignments introduce students to various interpretive and analytical models for determining meaning and cultural value in art. Attendance at art exhibitions, receptions and lectures is required.

ARTF 136. Foundation 2-D Design (3).
Introduces design for visual communication. Studies the elements of art and the principles of design relating to formal, Gestalt and conceptual organization of the two-dimensional surface. Includes elements of line, shape, space, texture and value. Instructional process includes lecture, critique and supervised studio practice.

ARTF 145. Foundation Drawing (3).
Introduces visual arts concepts, vocabulary, tools, materials, basic drawing skills and attitudes through the drawing experience. Teaches perceptual skills and the ability to represent objects in space and organize them into a coherent pictorial statement along with technical and expressive competence with a limited range of media. Structured homework assignments.

ARTF 189. Foundation 3-D Design (3).
Lectures, research and studio methods on the evolutionary role of three-dimensional design in contemporary society using a variety and combination of materials, techniques, forms and concepts. Also emphasizes learning to handle equipment and tools properly.

ARTF 202. Mid-Program Review (1).
Students receive information about degree options and career choices in art and design; prepare a plan of study for upper-division coursework; exhibit a portfolio or dossier for faculty evaluation of readiness for upper-division coursework; and apply to one of the majors in the school with portfolio and plan of study. Prerequisite(s): completion of ARTF 102, 136, 145, 189; completion of three of the general education foundation courses; completion of/concurrent enrollment in 6 credit hours of ARTH 125A-Z; completion of/concurrent enrollment in any two 200+ courses from ARTE, ARTS and/or ARTG.

ARTG - Graphic Design

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ARTG 110. Vector Applications (1).
Introduces using vector drawing applications like Adobe Illustrator to create artwork.

ARTG 111. Pixel-Based Applications (1).
Introduces using pixel-based applications like Adobe Photoshop to create artwork.

ARTG 112. Layout Applications (1).
Introduces using layout applications like Adobe InDesign to create artwork.

ARTG 216. Typography I (3).
Introduces the study and use of type and typefaces in design, including history, comping skills, stylistic considerations, grid structures, working with copy, and visual and informational hierarchal arrangement upon a single page. Prerequisite(s): ARTF 136, 145.

ARTG 234. Introduction to Graphic Design (3).
Studies graphic design theory, application of design principles in communication problems, mark/symbol making and basic layout principles. Prerequisite(s): ARTF 136, 145.

ARTG 235. Graphic Design Concepts (3).
Studies graphic design theory, philosophy, history and approaches to creative problem solving including brainstorming, concept generation and application of solutions. Prerequisite(s): ARTF 136, 145.

ARTG 238. Graphic Materials and Processes (3).
Explores the possibilities of paper manipulation including cut-paper embossment, box building, pop-up structures, and assorted binding and presentation techniques. Prerequisite(s): ARTF 136, 145.

ARTG 316. Typography II (3).
Studies type as form, symbol and communication with exploration of letterforms and their applications using traditional and computer

skills and media. Prerequisite(s): acceptance to the graphic design BFA program or ARTG 216 and instructor's consent.

ARTG 334. Exploration of Graphic Design Media (3).
Building on the principles covered in ARTG 234 and 235. Emphasizes using original imagery in each project. Prerequisite(s): ARTG 235, acceptance to the graphic design BFA program.

ARTG 335. Sequential Media (3).
Emphasizes sequential design and investigating color in graphic design problem solving. Repeatable for credit. Prerequisite(s): ARTG 316, 334.

ARTG 337. Drawing for Visual Communication (3).
Applied drawing for graphic design. Prerequisite(s): acceptance to the graphic design BFA program or instructor's consent.

ARTG 339. Package Design (3).
Box construction and surface treatment in product design. Prerequisite(s): ARTG 238, 334.

ARTG 354. Professional Practices in Graphic Design (1).
Research into and practical application of professional practices, portfolio development, business skills and career planning specific to the field of graphic design. Requires attendance at professional design events and creation/maintenance of a professional portfolio. Repeatable for credit. Prerequisite(s): acceptance to the graphic design BFA program.

ARTG 434. Graphic Design Campaigns (3).
Publication design, identity and sequence. Prerequisite(s): ARTG 335.

ARTG 435. Graphic Design Capstone (3).
Using media and formats to create visually cohesive advertising and promotional campaigns. Prerequisite(s): ARTG 434.

ARTG 437. Drawing for Visual Communication II (3).
Concentration in editorial and narrative illustration emphasizing visualization and creative problem solving while exploring a variety of color media and techniques. Prerequisite(s): ARTG 337 or instructor's consent.

ARTG 481. Cooperative Education (1-8).
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Prerequisite(s): departmental consent.

ARTG 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Repeatable for credit. Prerequisite(s): departmental consent.

ARTG 490. Graphic Design Applications (3).
Focuses on emerging technologies for various media. Repeatable for credit. Prerequisite(s): acceptance to the graphic design BFA program or instructor's consent.

ARTG 491. Interactive Design (3).
Introduces the history, theories, concepts, production techniques and software necessary to produce interactive design solutions for the marketplace. Repeatable for credit up to 9 credit hours. Prerequisite(s): acceptance to the graphic design BFA program or instructor's consent.

ARTG 493. Book Design and Production (3).
A laboratory course encompassing all facets of the book including design, type composition, proofreading, illustration, manufacturing, binding materials (cloths, paper and boards), distribution, copyright, royalties and remaindering. Students are responsible for the development and publication of a limited edition book. Prerequisite(s): ARTG 334, 337, or instructor's consent.

ARTG 530. Seminar in Graphic Design (1-3).
Supervised study and research. Requires weekly consultation and reports. Repeatable for credit. Prerequisite(s): instructor's consent.

ARTG 530AA. Working with Design (3).
Studies the elements and principles of graphic design. Course is offered for nonmajors.

ARTG 530F. Seminar in Graphic Design: Graphic Design Studio Practice (3).
Supervised study and research. Requires weekly consultation and reports. Repeatable for credit. Prerequisite(s): instructor's consent.

ARTG 530S. Seminar in Graphic Design: Graphic Design Studio (3).
Supervised study and research. Requires weekly consultation and reports. Repeatable for credit. Prerequisite(s): instructor's consent.

ARTH - Art History

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ARTH 103. Art Appreciation (3).
General education fine arts course. Introduces art as a philosophical expression simultaneously reflecting and influencing contemporary culture. Introduces terms and tools, physical and psychological aspects of seeing, interpretive methods, value of art and design in culture, prevalence of art and design in everyday environment. Required attendance at lectures and art events.

ARTH 125. Introduction to Visual and Material Culture (3).
General education fine arts course. Examines selected themes, ideas and concepts that have informed visual and material practices across time and across cultures. Beginning with terms that are likely familiar to students and instructors alike, this class traces the ways in which these concepts have informed artists, designers and other creative minds to create their works and change their thinking about their medium, their philosophies of making and doing, and their views of self and the world. Repeatable for credit when taken with different alpha designators (i.e., ARTH 125A, 125B, 125C, etc.).

ARTH 125A. Introduction to Visual and Material Culture: Play (3).
General education fine arts course. Using play as a lens, students explore artistic, popular culture, and design practices as they intersect across eras, cultures and media. Focuses on articulations of play as critical and diverse forms of human expression related to, but not limited to, entertainment.

ARTH 125B. Introduction to Visual and Material Culture: Bodies (3).
General education fine arts course. Using a thematic approach, this course introduces students to the discipline of art history. Students engage with a variety of cultures and historical periods in which the human body was the primary vehicle of artistic expression (including ancient Egypt, classical Greece, revolutionary France and more) in order to understand the range of meanings the body can hold, and to explore the historical underpinnings of our contemporary culture's obsession with the body.

ARTH 125C. Introduction to Visual and Material Culture: Power and Propaganda (3).
General education fine arts course. Using power and propaganda as a lens, this course examines a variety of cultures and historical periods in which visual art (including architecture) was used as a means of gaining or maintaining political, religious or social power.

ARTH 346. Modernisms I (3).
General education fine arts course. Explores a changing array of social, cultural, political and medium-specific issues that have impacted the development of modern art and design and the notion of modernism as an important theoretical term. Themes, topics and artistic/design-based references in this class change and respond to current debates and dialogues informing art and design practices. Note: This course offers a graduate section under the number ARTH 546. Prerequisite(s): 3 credit hours of ARTH 125A-Z for non-ADCI majors; 6 credit hours of ARTH 125A-Z for ADCI majors; or instructor's consent.

ARTH 347. Themes in Contemporary Art and Design I (3).
General education fine arts course. Explores the historical foundations of contemporary art and design, as well as the various social, cultural, political and medium-specific issues that influence creative citizenship, contemporary practices, theories of postmodernism and globalization, existing and emerging exhibition strategies, and changing audiences and environments. Themes, topics and artistic/design-based references of this class change and respond to current debates and dialogues. Note: This course offers a graduate section under the number ARTH 547. Prerequisite(s): 3 credit hours of ARTH 125A-Z for non-ADCI majors; 6 credit hours of ARTH 125A-Z for ADCI majors; or instructor's consent.

ARTH 370. Modern and Contemporary Sculpture I (3).
Addresses selected works of sculpture from modern and contemporary periods. Emphasizes major artists and movements, such as cubism and minimalism; identifies stylistic differences between movements in respect to their larger socio-historical contexts, addressing why and how artists developed different styles and/or subject matters at different times. Note: This course offers a graduate section under the course number ARTH 570. Prerequisite(s): 3 credit hours of ARTH 125A-Z for non-ADCI majors, 6 credit hours of ARTH 125A-Z for ADCI majors.

ARTH 387. Theories of Art and Culture (3).
General education fine arts course. Explores a range of theoretical models from various cultures and periods that have been used to better understand, contextualize, interpret and analyze visual culture and a range of art and design practices. Structuralism, poststructuralism, modernism, postmodernism, cultural theory (including postcolonial theory, queer theory and feminism), material theory, aesthetics, and theories of connoisseurship are discussed as contributing influences to successful creative practice and useful tools for its subsequent interpretation. Note: This course offers a graduate section under the number of ARTH 587. *Course includes diversity content.* Prerequisite(s): 3 credit hours of ARTH 125A-Z for non-ADCI majors; 6 credit hours of ARTH 125A-Z for ADCI majors; or instructor's consent.

ARTH 390. QuickFire Topics (1-3).
QuickFire courses are special courses of variable duration that emphasize highly focused learning opportunities in art, design and creative industries. QuickFire courses may involve travel opportunities, study with visiting artists and designers, specialized engagement with current events or issues, or collaborative partnerships within and outside the university. QuickFire topics are announced the semester preceding enrollment. Repeatable for credit, provided course content of each ARTH 390 class is different. Prerequisite(s): ARTH 125A-Z or instructor's consent.

ARTH 390B. QuickFire: Art and Films of Lynn-Hershman Leeson (1).
Leeson's work, spanning photography, digital installation and film, serves as a lens to consider significant developments and issues in the media arts from the vantage point of a woman artist recognized for helping shape and articulate this genre since the 1970s.

ARTH 390D. QuickFire: Street Photography of the 1950s and 1960s (1).
Explores the rich American documentary photography of the 1950s and 1960s and focuses on seminal artists like Robert Frank, Gary Winograd, Lee Friedlander, and Diane Arbus. There is a special emphasis on Gordon Parks, in conjunction with the upcoming exhibition of his works at the Ulrich Museum of Art.

ARTH 390F. QuickFire: "Sensation" and the Young British Artists (1).
Course delves into contemporary British art, from diamond-encrusted skulls to self-portraits in blood. Engages the controversies caused by the so-called "Brit Pack" and discovers why their debut caused such a sensation.

ARTH 390M. QuickFire: Modern and Contemporary Kansas Art and Collections (1).
Introduces students to a range of modern and contemporary works by Kansas artists — all of which form part of the collection of Emprise Bank and course instructor, Mike Michaelis. Students meet on-site in downtown Wichita and discuss the paintings, prints, sculptures and ceramic works that form part of this important collection. Other topics include different collection priorities, different interactions between artists and collectors, issues specific to Kansas artists and their work, presidential painters, and various trends in modern and contemporary Kansas art.

ARTH 390N. QuickFire: Riverfest with Harvester Arts (1).
Students work closely with the organization Harvester Arts, and ultimately have the chance to meet with acclaimed artist Michael Jones McKean. Discussion topics include how to conduct productive critiques, and the process of making critically engaged art that resonates with many segments of the community.

ARTH 390O. QuickFire: Networks (1).
Examines the concept of networks as it pertains to social practice in contemporary arts. Considers the social, political, cultural and technological dimensions of networks, with a particular focus on work concerning the creation of alternative modes of production and distribution of information and art. Additionally, students participate in an art project with Cuban artist Nestor Siré. Created work is exhibited in Havana, Cuba and in Wichita.

ARTH 390P. QuickFire: Carnival and Power (1).
Examines the carnival tradition as a locus of resistance as well as an exercise in and affirmation of power. Builds on an exhibition and events at the Ulrich Museum focusing on carnival in the context of diaspora. Students are required to attend lectures connected to the exhibition. Additionally, students have the opportunity to be guided through the exhibition in discussion with the curator. Lastly, students participate in an art project with an invited artist in connection with Wichita’s local event, Riverfest.

ARTH 390Q. QuickFire: Kansas Artists/Kansas Schools (1).
In this applied-learning course, students choose a Kansas artist or work by a Kansas artist from the Emprise Bank collection to research. They present their artist’s work to a Kansas elementary, middle, or high school class, and engage their audience with an art project focusing on a theme or idea from the researched artist’s work.

ARTH 390R. Quickfire: Environments in Art of the 1960s and 1970s (1).
This short course examines the history of environmental art in the 1960s and 1970s. The central focus is the concept of systems ecology

and its materializations in artistic and countercultural expressions in North and South America.

ARTH 390S. Quickfire: Environmental Interventions (1).
This short course focuses on the intersections between environmental, media, gender and race activisms in the last two decades in North America.

ARTH 390T. Quickfire: Art in the Anthropocene (1).
This short course investigates contemporary artistic responses to debates about the Anthropocene, defined as a new geological era precipitated by human prejudicial interventions into all of the earth's systems. The focus is on critical visions of the Anthropocene, and in particular, on work that connects these debates with ongoing decolonizing processes in the Global North and South.

ARTH 391. Topics in Art History (3).
Lecture course with selected readings on various topics in art history. Course content varies but individual areas are not repeatable for credit. Prerequisite(s): 3 credit hours of ARTH 125A-Z for non-ADCI majors; 6 credit hours of ARTH 125A-Z for ADCI majors; or instructor's consent.

ARTH 391E. History of Graphic Design (3).
Explores graphic design as a key element in the development of visual culture across a variety of historical periods and geographical locations. Emphasizes important artists, developing technology, and design movements, covered in a roughly chronological fashion. Historical periods discussed include Northern Renaissance and Baroque with special attention paid to printmaking, France and Spain during the Revolution, Russia after the fall of the Czars, American modernism, and more.

ARTH 391F. Islamic Art (3).
Explores the relationship between the Islamic faith and various art forms. Muslim societies have produced artworks of extraordinary vitality and diversity across three continents over the course of 1500 years. Course examines this art thematically. Topics include: introduction to Islam, mosque architecture, calligraphy, Islamic ornament, ceramics, contemporary video/performance art, and more. Students gain a greater familiarity with the vibrant Islamic community in Wichita through guest speakers, field trips, and cultural exchanges.

ARTH 395. SlowBurn Topics - 1st Semester (3).
Course travel fee may apply. Long-term projects consisting of experiential coursework whose planning and implementation extend across two successive semesters, with the first semester course typically devoted to research and planning. Requires enrollment in consecutive semesters of a single sequence of two SlowBurn Topics courses. Topics vary. Repeatable for credit. Prerequisite(s): 6 credit hours of ARTH 125A-Z or instructor's consent.

ARTH 395A. SlowBurn Topics - 1st Semester: Curation and Installation of "Do It" (3).
This hands-on, applied learning course explores all the possibilities for working in a museum environment. Students collaborate closely with the staff of the Ulrich Museum of Art to curate the upcoming Do It exhibition, choosing works, installing the show, designing publicity materials and helping with events planning.

ARTH 395B. SlowBurn: Exhibition Curation and Installation (3).
This two-semester course allows students to research, plan, curate and install an exhibition at a local gallery space. Each iteration of the class deals with a different subject as the basis of the exhibition. Based on readings and research assigned during the course, students have the opportunity to curate and install an exhibition, and gain hands-on experience with publicity, education and event planning related to the exhibition. Repeatable for credit. Prerequisite(s): 6 credit hours of ARTH 125A-Z or instructor's consent.

ARTH 396. SlowBurn Topics - 2nd Semester (3).
Course travel fee may apply. Long-term projects consisting of experiential coursework whose planning and implementation extend across two successive semesters, with the second semester course typically devoted to the experience researched and planned in the first semester SlowBurn Topics course. Requires enrollment in consecutive semesters of a single sequence of two SlowBurn Topics courses. Topics vary. Repeatable for credit. Prerequisite(s): 6 credit hours of ARTH 125A-Z, approved ARTH 395 in sequence; or instructor's consent.

ARTH 396A. Slow Burn Topics - 2nd Semester: Curation and Installation of "Do It" II (3).
This hands-on, applied learning course explores all the possibilities for working in a museum environment. Students collaborate closely with the staff of the Ulrich Museum of Art to curate the upcoming Do It exhibition, choosing works, installing the show, designing publicity materials and helping with events planning. Course is the second part of a two-semester SlowBurn course.

ARTH 520. Seminar In Art History (1-3).
Systematic study in selected areas of art history. Course content varies but individual areas are not repeatable for credit.

ARTH 532. Independent Study in Art History (1-3).
Work in a specialized area of the study of art history. Directed readings and projects. Prerequisite(s): instructor's consent.

ARTH 533. Seminar: Topics in Modern Art (3).
Selected readings and problems in art of the modern era. Course content varies but individual areas are not repeatable for credit.

ARTH 533AB. Islamic Art (3).
Explores the relationship between the Islamic faith and various art forms. Muslim societies have produced artworks of extraordinary vitality and diversity across three continents over the course of 1500 years. Course examines this art thematically. Topics include: introduction to Islam, mosque architecture, calligraphy, Islamic ornament, ceramics, contemporary video/performance art, and more. Students gain a greater familiarity with the vibrant Islamic community in Wichita through guest speakers, field trips, and cultural exchanges.

ARTH 533AC. Curation and Installation of "Do It" Exhibition (3).
This hands-on, applied learning course explores all the possibilities for working in a museum environment. Students collaborate closely with the staff of the Ulrich Museum of Art to curate the upcoming Do It exhibition, choosing works, installing the show, designing publicity materials and helping with events planning.

ARTH 533AF. Realism/Activism/Prints (3).
Working closely with the director of the Ulrich Museum of Art and the museum's notable collection of works on paper, students explore regional and national printmakers of the past century who engaged in social activism. Students have the opportunity to view firsthand the works discussed in the class, and to research and write critically about those works for an exhibition at the Ulrich Museum of Art the following semester.

ARTH 533AG. Contemporary Sculpture (3).
This class will address selected works of sculpture from the modern and contemporary period. Emphasis will be placed on major artists and movements, such as cubism and minimalism. This course will help students identify stylistic differences between these movements and place them in their larger socio-historical contexts, allowing students

to understand why different artists developed different styles or subject matters at different times.

ARTH 533AI. History of Photography (3).
Explores the major conceptual, ideological and cultural issues that have impacted the history of photography from the 19th century to the present. Emphasizes the sociopolitical forces, technological developments and aesthetic innovations that have determined the trends of photographic theory and production.

ARTH 540D. Concepts in Creative Industries: Funding and Promotion (3).
Focuses on applied learning through partnerships with on- and off-campus arts and cultural organizations. Working closely with their partner organizations, students learn the basics of funding and resource management for those organizations, such as grant writing, discovering alternative revenue streams, and collaborating with existing and prospective donors or commercial sponsors. Students also learn about promotional strategies by participating in the venues' publicity and marketing efforts and by helping to create promotional materials, to plan events, to find advertising opportunities, and more. For undergraduate credit only. Prerequisite(s): ARTH 125A-Z and at least one 300-level ARTH course; or instructor's consent.

ARTH 546. Modernism II (3).
Explores a changing array of social, cultural, political and medium-specific issues that have impacted the development of modern art and design and the notion of modernism as an important theoretical term. Themes, topics and artistic/design-based references in this class change and respond to current debates and dialogues informing art and design practice. Requires in-depth research and analysis in oral and written communication. Prerequisite(s): ARTH 346, graduate standing, or instructor's consent.

ARTH 547. Themes in Contem Art/Design II (3).
Explores the historical foundations of contemporary art and design, as well as the various social cultural, political and medium-specific issues that influence creative citizenship, contemporary practices, theories of postmodernism and globalization, existing and emerging exhibition strategies, and changing audiences and environments. Themes, topics and artistic/design-based references of this class change and respond to current debates and dialogues. Note: This course offers an undergraduate section under the number ARTH 347. Prerequisite(s): ARTH 347, graduate standing, or instructor’s consent.

ARTH 550B. Contemporary Art & Technology (3).
Examines the role of mechanical, electronic and digital technologies in the creative practices of the late 20th and 21st centuries with emphasis on Europe and North America. Beginning with kinetic and moving to cybernetically inspired art, this course explores early uses of computer technology, including early experiments in synthetic video and interactivity. Critical investigations of new media art such as computer games, bio and sound art, and art for mobile devices, as well as examinations of new media arts beyond Western traditions are integral parts of the course. Prerequisite(s): ARTH 125A-Z and at least one 300-level ARTH course; or instructor's consent.

ARTH 560G. Art and Surveillance (3).
Considers how the concept of The Body, Space and Place as well as Archive intersect with surveillance. Course comprises three key components: First, how artists have responded to old and new surveillance methods that codify our ideas of gender/sexuality, race/ethnicity, and religion. Second, how artists have responded to old and new surveillance methods that shape our relationship with space in its various forms including public/private, national/international/transnational, and digital environments. Third, how artists have addressed personal, institutional, military and governmental archives as forms of surveillance. Also examines related cultural theory and contemporary issues. Students engage with these ideas through three creative projects-one for each of the focal areas of this course. Students working in any artistic discipline are welcome; no photo experience required.

ARTH 587. Theories of Art History and Culture II (3).
Explores a range of theoretical models from various cultures and periods that have been used to better understand, contextualize, interpret and analyze visual culture and a range of art and design practices. Structuralism, poststructuralism, modernism, postmodernism, cultural theory (including postcolonial theory, queer theory and feminism), material theory, aesthetics, and theories of connoisseurship are discussed as contributing influences to successful creative practice and useful tools for its subsequent interpretation. Note: This course offers an undergraduate section under the number of ARTH 387. Prerequisite(s): ARTH 387, graduate standing, or instructor’s consent.

ARTH 732. Independent Study in Art History (1-3).
Work in specialized area of the study of art history. Directed readings and projects for graduate students in all disciplines. Prerequisite(s): instructor's consent.

ARTS - Studio Art

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ARTS 195. Studio Tools Workshop (1).
Introduces fundamental tools of studio artmaking, including wood shop training, documenting artwork/digital camera operations, computer software basics.

ARTS 211. Introduction to Community and Social Practice (3).
General education social and behavioral sciences course. Led by study of socially engaged artists and theories, students explore artists and methods of art practice that extend into specific communities and the social realm. Topics include (but are not limited to) art and commodity, the art market, the politics of audience, art as object or action, art as labor, and art as social justice. Lectures, readings, writings and project(s) based on these themes. *Course includes diversity content*.

ARTS 211H. Introduction to Community and Social Practice Honors (3).
General education social and behavioral sciences course. Led by study of socially engaged artists and theories, students explore artists and methods of art practice that extend into specific communities and the social realm. Topics include (but are not limited to) art and commodity, the art market, the politics of audience, art as object or action, art as labor, and art as social justice. Lectures, readings, writings and project(s) based on these themes. *Course includes diversity content*.

ARTS 232. Introduction to Photography (3).
Introduces students with little or no formal experience to fundamentals of the medium, its history and its relationship to contemporary culture. First half covers exposure, 35mm B&W film developing and silver gelatin darkroom printing; second half covers digital capture with DSLR cameras, image correction in Lightroom, and inkjet printing.

ARTS 240. Introduction to Life Drawing (3).
Introduces drawing the human form through analytical observation. Students develop accuracy in rendering and understanding the skeletal and muscular structure of the figure. Opportunities to explore the figure's expressive potential through materials, varied scale, anatomical studies and application of visual principles such as contour, line, shape and value.

ARTS 245. Digital Studio (3).
Introduces processes, tools, history and contemporary practice of creating artworks with and for computers and software. Includes drawing, printing, video and web-based media.

ARTS 252. Introduction to Painting Media (3).
Explores fundamental painting methods using a variety of painting media and application techniques. Considers historical and contemporary styles and painting's role in media and culture.

ARTS 261. Introduction to Printmaking (3).
Focuses on intaglio, relief, silkscreen and simplified lithography. Overview of established processes with emphasis on experimental approaches to print media and connections between printmaking and drawing.

ARTS 270. Introduction to Ceramics (3).
General education fine arts course. Offers experience with basic practices in ceramics. Students have the opportunity to explore creative thinking by solving problems in the design, craftsmanship and content in ceramic art. Builds experience in hand building, wheel throwing, glazing/decorating methods. Lecture periods involve general knowledge of clays, glazes, kilns, historical ceramics and pottery of the world. Repeatable for credit as studio art elective.

ARTS 282. Introduction to Sculpture and Extended Media (3).
Introduces basic materials and processes used in sculpture as well as extending the media options to nontraditional and new approaches to creating three-dimensional art. Introduces wood and steel fabrication, mold making, aluminum casting; incorporating nontraditional materials. Emphasizes creative problem solving.

ARTS 283. Digital 3-D Tools in Sculpture (3).
Introduces computer-assisted design and computer controlled equipment to create sculpture. Students are instructed in the basics of CAD computer programs and how to use a CNC router and 3D printer to create objects. Emphasis on using technology to expand options for artmaking.

ARTS 312. Community Arts Engagement (3).
General education social and behavioral sciences course. Exploration of possible connections between art and communities through making, collaboration, discussion, essays and socially-engaged projects. Students take part in one or more semester-long community-based projects and work collaboratively as they explore the intersection of community activism and art as social responsibility, often with a goal of facilitating the creativity of community participants. *Course includes diversity content.*

ARTS 312H. Community Arts Engagement Honors (3).
General education social and behavioral sciences course. Exploration of possible connections between art and communities through making, collaboration, discussion, essays and socially-engaged projects. Students take part in one or more semester-long community-based projects and work collaboratively as they explore the intersection of community activism and art as social responsibility, often with a goal of facilitating the creativity of community participants. *Course includes diversity content.*

ARTS 322. Video, Sound and Performance (3).
General education social and behavioral sciences course. Topics include electronic media techniques for artmaking or other forms of visual communication along with the historical and contemporary context of video, sound, performance, and their interrelationships through assigned artworks, readings and discussion.

ARTS 324. Art and Social Media (3).
General education social and behavioral sciences course. Study and practice of designing and creating and/or distributing artwork that uses social media in its various forms and formats. Considerations require an understanding of target audience, target space, target message, culture jamming, art as activism, and media theory. Along with a clear understanding of the social context of the work, the practical parameters of creation or distribution are considered. Lectures, discussion, readings, written essay requirements. Digital media are used along with physical materials.

ARTS 326. The Moving Image (3).
Introduces processes, tools, history and contemporary practice of creating moving images/animations using traditional and digital materials and resources for final presentation and discussion. Exploration and consideration is placed on formal and conceptual concerns, including how traditional art studio materials and practices might play a role in the development process and final understanding of the digital media. Includes experimental film, video art practices, and social communication and personas. Prerequisite(s): ARTS 245. Pre- or corequisite(s): ARTF 202.

ARTS 330. Analog Photographic Techniques (3).
Designed for students who already have a basic understanding of fundamental aspects of photography using manual cameras and proficiency with silver gelatin printing. Continued development in traditional darkroom printing; experimentation with alternative photographic processes; emphasis on challenging the boundaries of the medium. Students make their own cameras, film, printing paper and chemistry; processes covered include cyanotypes, chlorophyll prints, Van Dyke brown and liquid light. Additionally, working with a partner, students learn an additional technique and present it to the class as a demonstration. Prerequisite(s): ARTS 232. Pre- or corequisite(s): ARTF 202.

ARTS 331. Digital Photographic Techniques (3).
Designed for students who already have a solid understanding of fundamental aspects of photography and using manual SLR and DSLR cameras. Photoshop, Bridge and Lightroom are used for digital capture, scanning (film, prints and objects), proper workflow and file management, studio lighting, manipulation of the photographic image, and exhibition quality inkjet printing. Considers history of the digital photographic image, discusses how technical advancements have changed culture and art, and considers various means of presentation and output (projection, video, installation, web-based). Students gain a broad range of technical skills, yet are also encouraged to work experimentally and produce work that exists off the wall. Prerequisite(s): ARTS 232. Pre- or corequisite(s): ARTF 202.

ARTS 334. Photo Media Topics (3).
Offers opportunities for engaging deeply with photography from a variety of standpoints through specific topics varying semester-to-semester. Topics include contemporary documentary, appropriated imagery, community-oriented projects, professional practices, 19th century processes, and cross-disciplinary photographic practices. Prerequisite(s): ARTS 232. Pre- or corequisite(s): ARTF 202.

ARTS 335. Contemporary Photography Studio (3).
Builds on analog and digital techniques covered in previous courses to enable refined, conceptually oriented work using medium/large format cameras, large-scale printing, hybrid processes, and experimental presentation methods. Discusses the cultural significance of photography today and the ways artists are reacting to the changing medium. Students generally have great latitude regarding their methods of approaching projects; emphasis on working toward an individual artistic voice. Keystone course for proceeding to advanced photo courses. Prerequisite(s): ARTS 232. Pre- or corequisite(s): ARTF 202.

ARTS 341. Life Drawing Studio (3).
Advanced analysis and interpretation of the human figure through individualized projects and assignments in multiple art and design applications. Emphasizes individual development, technical advancement and personalized interpretation. Repeatable for credit. Prerequisite(s): ARTS 240. Pre- or corequisite(s): ARTF 202, or instructor's consent.

ARTS 345. Intermediate Drawing (3).
Drawing projects including problems of style, suites of related works, and media, materials and technical exploration. History of drawing techniques and materials. Prerequisite(s): ARTS 240. Pre- or corequisite(s): ARTF 202 or instructor's consent.

ARTS 347. Mixed Media in Drawing (3).
Uses visualization, color, collage, abstraction, digital manipulation, invented processes and varied sources for artmaking. Students experiment with traditional and nontraditional drawing methods and materials toward development of a personal visual language. Pre- or corequisite(s): ARTF 202 or instructor's consent.

ARTS 350. Workshop (1-5).
Intensive study of topics related to studio arts. Differing topics are denoted by a letter following the course number (i.e., ARTS 350C, ARTS 350P, etc.).

ARTS 350AC. Relief and Silkscreen (3).
Investigates various means of creating images by relief and silkscreen techniques. Processes include linocut, woodcut, wood engraving and silkscreens created with stencils, hand drawn, photos and digital imagery printed on paper. Includes examination of historical and contemporary approaches and relevance to contemporary culture. Prerequisite(s): ARTS 261. Pre- or corequisite(s): ARTF 202.

ARTS 350AD. JUMP!STAR Sculpture & Ritual (3).
JUMP!STAR is an interdisciplinary experiment in culture-making and recalibrating our relationship with time. This initiative involves artists, musicians and scientists working with communities in Kansas to invent future cultural traditions that would accompany the eventual transitioning of our North Star, which will occur in about a thousand years. In this course, students focus on the sculptural components of this future celebration. Students learn the traditional Japanese techniques for making very large-scale paper sculptures that are used in Nebuta festivals in the Aomori region of Japan. They work with artist George Ferrandi on the fabrication of one of a series of twelve JUMP! STAR sculptures, each representing one of the earth’s eventual pole stars.

ARTS 354. Painting Materials and Processes (3).
Explores varied materials, methods, surfaces and processes in painting. Considers historical and contemporary styles and painting's role in media and culture. Prerequisite(s): ARTS 252. Pre- or corequisite(s): ARTF 202.

ARTS 356. Painting with Narrative and Sequence (3).
Explores painting in relationship to sequential and narrative forms and media, including time-based and extended media applications. Lectures and research. Prerequisite(s): ARTS 252. Pre- or corequisite(s): ARTF 202.

ARTS 358. Painting in the Expanded Field (3).
Explores painting as a concept and a form through its relationship to installation, sculpture, performance, community arts and other creative possibilities. Lectures and research. Prerequisite(s): ARTS 252. Pre- or corequisite(s): ARTF 202.

ARTS 360. Intaglio (3).
Investigates various processes of drawing, coloring, etching and printing images from metal substrates on paper. Includes examination of historical and contemporary approaches and relevance to contemporary culture. Prerequisite(s): ARTS 261. Pre- or corequisite(s): ARTF 202.

ARTS 361. Lithography (3).
Investigates various processes of drawing, coloring, etching and printing images from lithographic stone and aluminum plates to paper. Examines historical and contemporary approaches and relevance to contemporary culture. Prerequisite(s): ARTS 261. Pre- or corequisite(s): ARTF 202.

ARTS 366. Silkscreen (3).
Investigates various means of creating images by printing through silkscreens with stencils, hand drawn, photo and digital imagery on paper. Examines historical and contemporary approaches and relevance to contemporary culture. Prerequisite(s): ARTS 261. Pre- or corequisite(s): ARTF 202.

ARTS 367. Relief (3).
Investigates the various processes of linocut, woodcut and wood engraving. Students create images by cutting into various materials and print from the remaining raised surfaces. Examines historical and contemporary approaches and relevance to contemporary culture. Prerequisite(s): ARTS 261. Pre- or corequisite(s): ARTF 202.

ARTS 369. Intermediate Printmaking Studio (3).
Explores concepts and aesthetic development in print media. Investigates the historical and contemporary application of the multiple, while developing an understanding of both its function and aesthetics within our culture. Repeatable for credit. Prerequisite(s): ARTS 261. Pre- or corequisite(s): ARTF 202.

ARTS 370. Studio Pottery (3).
Explores the use of the potter's wheel to develop a vocabulary of functional forms that express personal creativity and vision. Contemporary approaches to form, surface technique and firing are introduced through studio work, demonstrations and lectures. Repeatable for credit. Prerequisite(s): ARTS 270. Pre- or corequisite(s): ARTF 202.

ARTS 372. Sculptural Ceramics (3).
Using a variety of hand-building and/or wheel-throwing techniques, students explore a range of formats, including the vessel, the figure, abstraction, installation and mixed media. Various firing techniques and solutions to issues of surface are addressed. Emphasizes creative thinking in clay to make a personal statement. Prerequisite(s): ARTS 270.

ARTS 373. Intermediate Ceramics Studio III (3).
Emphasizes self-directed studies focused around specific artistic themes and subjects. Course discussions, readings and videos guide students through the generation of ideas and their implementation in studio ceramics. Students also develop tools of creativity such as mind-mapping and creating a visual journal. Repeatable for credit. Prerequisite(s): ARTS 270, instructor's consent. Pre- or corequisite(s): ARTF 202.

ARTS 374. Atmospheric Firing (3).
In-depth explorations of atmospheric firing processes, such as wood-firing and salt glazing. Emphasizes value-added content though historical/cultural awareness as well as formal relationships and personal expression. Repeatable for credit. Prerequisite(s): ARTS 270. Pre- or corequisite(s): ARTF 202.

ARTS 375. Special Topics in Ceramics (1).
Short-form workshops exploring a rotating range of subjects pertaining to ceramics practices. Substitutable for QuickFire elective. Prerequisite(s): ARTS 270. Pre- or corequisite(s): ARTF 202.

ARTS 375A. Special Topics: Kilns and Firing (1).
Familiarizes students with the principles and practices of various types of kilns and firing solutions. Substitutable for QuickFire elective. Prerequisite(s): ARTS 270. Pre- or corequisite(s): ARTF 202.

ARTS 375B. Special Topics: Tableware Design (1).
Familiarizes students with the issues and concerns involved with the design and use of pottery for the table. Students have the opportunity to learn from professionals in the food industry about what matters to those who use pottery to present their culinary works. Substitutable for QuickFire elective. Prerequisite(s): ARTS 270. Pre- or corequisite(s): ARTF 202.

ARTS 375C. Special Topics: Ceramics Materials (1).
Familiarizes students with the materials, tools and technical procedures of formulating and mixing clay bodies and glazes. Substitutable for QuickFire elective. Prerequisite(s): ARTS 270. Pre- or corequisite(s): ARTF 202.

ARTS 375D. Special Topics: Contemporary Pottery Practices (1).
Familiarizes students with issues in contemporary ceramic practices, including professional networking, marketing and public presentation of pottery in various contexts. Course may involve student travel to regional art fairs, sales, and exhibitions. Substitutable for QuickFire elective. Prerequisite(s): ARTS 270. Pre- or corequisite(s): ARTF 202.

ARTS 376. Ceramic Design/Mold-Making for Ceramics (3).
Explores digital and analog methods of prototype development for mold-forming and casting processes. Students engage the design process from idea generation to the final production of one-of-a-kind and serially reproduced objects. Emphasizes design thinking and solutions for living. Repeatable for credit. Prerequisite(s): ARTS 270. Pre- or corequisite(s): ARTF 202.

ARTS 380. Intermediate Sculpture (3).
Emphasizes individual artistic development by stressing concepts, methods of creation and research on the historical context of student work. Includes instruction in contemporary and traditional sculpture techniques. Repeatable once for credit. Prerequisite(s): completion of art foundation program and ARTS 282, 283.

ARTS 381. Materials, Techniques and Extended Media in Sculpture (3).
In-depth instruction in various methods and materials in creating sculpture. Traditional processes such as casting and fabrication in wood and steel are covered, with an emphasis on how material choices extend into nontraditional media. Course objectives are to develop technical skills and an ability to creatively use different materials in creating artwork. Prerequisite(s): ARTS 282. Pre- or corequisite(s): ARTF 202.

ARTS 383. Time as Media in Sculpture (3).
Encourages experimentation in incorporating time and change as core elements of artworks. Investigates a wide range of materials, methods and processes with focus on different ways that change can influence artwork and be incorporated within students' artistic vision. Prerequisite(s): ARTS 282. Pre- or corequisite(s): ARTF 202.

ARTS 390. QuickFire Topics (1-3).
Immersive, experiential condensed coursework designed to provide research, intern and similar experiences per student's interest. Interchangeable with ARTH 390. Repeatable for credit. Prerequisite(s): ARTF 202.

ARTS 390AA. QuickFire: Travel Engagement (1).
Short course that features travel to art galleries, museums, conferences, historic venues, or other places of interest. Variable in location, format, duration, and media emphasis; includes occasional international travel opportunities. Academic and/or studio work may also be required. A travel fee is required.

ARTS 390E. Kiln Building (3).
Students learn about the materials, design and construction of various types of kilns through both theoretical and hands-on activities. In addition to producing kiln construction plans of their own design, students participate in building a wood-burning, anagama-style kiln on site.

ARTS 390S. QuickFire: Drawing Marathon (1).
Takes place over four consecutive Saturdays. Investigates the potential of drawing as an expressive tool in the context of eight-hour long sessions. What happens when sustained attention and endurance become part of one's creative practice? Each session has a different topic to explore and the course requires three hours of outside work per week.

ARTS 390W. QuickFire: Mural Painting (1).
Offers a small group of students the opportunity to work on a commissioned mural project from planning to completion. Students learn how to gather design and theme information from the commissioning client, brainstorm and sketch concept drawings based on this information, and finally carry out the completion of the mural based on the most successful proposal.

ARTS 390X. QuickFire: Art and Archaeology in the Streets of Mexico City (1).
Week-long trip to Mexico City to view and discuss street art, Mexican muralism, archaeological sites, and indigenous influences present in the art, daily life, and rhythms of North America's largest city. Experiences planned include Casa Azul (Frida Kahlo's house), the murals of Chapultepec Castle, the murals of the Palacio de Bellas Artes, the Diego Rivera murals in the National Palace, and the archeological sites of the Templo Mayor and Teotihuacan.

ARTS 390Y. QuickFire: Metal Forming and Shaping (1).
Students are instructed how to hollow form sheet metal and shape and forge steel bar stock. Goals are to understand the processes and to put them into practice to create creative projects.

ARTS 390Z. QuickFire: Art in New Mexico/Meow Wolf (1).
Travel course: week-long trip to visit sites and unique experiences in Santa Fe, Albuquerque and rural areas of northern New Mexico including Meow Wolf, Santa Fe galleries, studio of Georgia O'Keefe. Site: Santa Fe contemporary art center, Museum of International Folk Art, Acoma Sky City Pueblo, Bandelier National Monument. Course fee required, covers travel, accommodation, and other costs.

ARTS 481. Cooperative Education (1-8).
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Prerequisite(s): departmental consent.

ARTS 481N. Internship (1-8).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ARTS 495. Professional Practices in Studio Art (3).
Research into and practical application of professional practices, business skills and career planning specific to the discipline of studio art. Provides a foundation of practical information to assist the undergraduate studio art major in building a successful professional career. Prerequisite(s): junior standing in a studio art major or instructor's consent.

ARTS 517. Community and Social Practice Senior Project (1).
BFA in art - studio art with community and social practice concentration capstone course. Emphasizes individual development of research and/or artistic content. For undergraduate credit only.

Prerequisite(s): ARTS 481N, instructor's consent. Pre- or corequisite(s): ARTS 599.

ARTS 525. Advanced Electronic Media (3).
Focuses on further development of thematic content, creative problem solving, and producing original artwork that makes a personal artistic statement. Explores the field through presentations and/or research papers. Repeatable for credit. Prerequisite(s): ARTS 322, instructor's consent.

ARTS 527. Electronic Media Senior Project (1).
BFA in art-studio art with electronic media concentration capstone course. Emphasizes individual development of research and/or artistic content. Limited to undergraduate students. Prerequisite(s): ARTS 525, instructor's consent. Corequisite(s): ARTS 599.

ARTS 535. Advanced Photo Media (3).
Focuses on further development of thematic content, creative problem solving, and producing original artwork that makes a personal artistic statement. Explores the field through presentations and/or research papers. Repeatable for credit. Prerequisite(s): ARTS 335, instructor's consent.

ARTS 537. Photo Media Senior Project (1).
BFA in art-studio art with photo media concentration capstone course. Emphasizes individual development of thematic content. Limited to undergraduate students. Prerequisite(s): ARTS 535, instructor's consent. Corequisite(s): ARTS 599.

ARTS 545. Advanced Drawing Studio (3).
Independently defined projects and directions in drawing and drawing-related media aimed toward developing a drawing practice, process or portfolio. Research, readings and/or lectures investigating historical, contemporary and applied approaches to drawing in both fine art and popular applications. Repeatable for credit. Prerequisite(s): ARTS 341 or 345, or instructor's consent.

ARTS 547. Drawing Senior Project (1).
BFA in art-studio art with applied drawing concentration capstone course; emphasizes individual development of thematic content. For undergraduate credit only. Prerequisite(s): ARTS 545, instructor's consent. Corequisite(s): ARTS 599.

ARTS 549. Independent Study-Drawing (1-3).
Professional emphasis on technical or aesthetic research in the drawing area. Available only for the advanced drawing student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite(s): ARTS 340, 345, instructor's consent.

ARTS 550. Art Workshop (1-3).
Intensive study of topics related to studio arts. Differing topics are denoted by a letter following the course number (i.e., ARTS 550C, ARTS 550P, etc.).

ARTS 550AA. Photography Abroad: Paris (3).
Class travels to Paris, France, to make photographs, study the history of the area, and see amazing ancient and contemporary art over spring break. Cost varies depending on prices at the time of travel, but includes all travel and lodging. Contact instructor for details. Prerequisite(s): instructor’s consent.

ARTS 550AB. Photography Abroad: Italy (3).
Class travels to Northern Italy to make photographs, study the history of the area, and see amazing ancient and contemporary art over spring break. Fly from Wichita to Rome, drive a rental van from Rome to Florence, stop in several small hill-towns in northern Italy and finish in Venice. Cost varies depending on prices at the time of travel, but includes all travel and lodging. Contact instructor for details. Prerequisite(s): instructor’s consent.

ARTS 550AC. Art and Archaeology in the Streets of Mexico City (3).
Three-week course investigating Mesoamerican imagery and traditions, Mexican history and politics, and the importance of the public sphere on Mexican muralism and contemporary art and life in Mexico City; classes meet in June, then students travel for one week to Mexico City (June 16-23). Upon return, students independently pursue a research or creative project within the remaining weeks of the semester. Experiences planned during travel include Casa Azul (Frida Kahlo's house), the murals of Chapultepec Castle, the murals of the Palacio de Bellas Artes, the Diego Rivera murals in the National Palace, and the archeological sites of the Templo Mayor and Teotihuacan.

ARTS 550AD. JUMP!STAR Sculpture & Ritual (3).
JUMP!STAR is an interdisciplinary experiment in culture-making and recalibrating our relationship with time. This initiative involves artists, musicians and scientists working with communities in Kansas to invent future cultural traditions that would accompany the eventual transitioning of our North Star, which will occur in about a thousand years. In this course, students focus on the sculptural components of this future celebration. Students learn the traditional Japanese techniques for making very large-scale paper sculptures that are used in Nebuta festivals in the Aomori region of Japan. They work with artist George Ferrandi on the fabrication of one of a series of twelve JUMP! STAR sculptures, each representing one of the earth’s eventual pole stars.

ARTS 550AF. Photography Abroad: Cuba (3).
During this course, students and the instructor plan, prepare for and undertake a trip to Cuba. During the first part of the semester, students study aspects of the history, culture, politics and current events of Cuba. Students travel over spring break, on a trip ranging from approximately 10 to 14 days. While in the country, students carry out their own photographic/artistic projects, meet other artists and curators, visit exhibitions, and see culturally significant locations. Students edit and print images made during the trip after their return. Cost varies depending on prices at the time of travel, but includes all travel and lodging. Contact instructor for details. *Course includes diversity content*. Prerequisite(s): instructor's consent.

ARTS 553. Independent Study: Painting (1-3).
Professional emphasis on technical or aesthetic research in the painting area. Available only for the advanced painting student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite(s): departmental consent.

ARTS 554. Advanced Painting (3).
Focuses on further development of thematic content, creative problem solving and producing original artwork that makes a personal artistic statement. Explores the field through presentations and/or research papers. Repeatable for credit. Prerequisite(s): 6 credit hours from ARTS 354, 356, 358; instructor's consent.

ARTS 557. Painting Senior Project (1).
BFA in art-studio art with painting concentration capstone course; emphasizes individual development of thematic content. Limited to undergraduate students. Prerequisite(s): ARTS 554, instructor's consent. Corequisite(s): ARTS 599.

ARTS 560. Advanced Printmaking (3).
Focuses on further development of thematic content, creative problem solving, and producing original artwork that makes a personal artistic statement. Explores the field through presentations and/or research

papers. Repeatable for credit. Prerequisite(s): ARTS 369, instructor's consent.

ARTS 565. Independent Study: Printmaking (1-3).
Professional emphasis on technical and aesthetic research in the printmaking area. Only for the advanced printmaking student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite(s): departmental consent.

ARTS 567. Printmaking Senior Project (1).
BFA in art-studio art with printmaking concentration capstone course. Emphasizes individual development of thematic content. Limited to undergraduate students. Prerequisite(s): ARTS 560, instructor's consent. Corequisite(s): ARTS 599.

ARTS 570. Advanced Ceramics (3).
Focus on further development of thematic content, creative problem solving, and producing original artwork that makes a personal artistic statement. Exploration of the field through presentations and/or research papers. Repeatable for credit. Prerequisite(s): ARTS 373, instructor's consent.

ARTS 577. Ceramics Senior Project (1).
BFA in art-studio art with ceramics concentration capstone course; emphasizes individual development of thematic content. Limited to undergraduate students. Prerequisite(s): ARTS 570, instructor's consent. Corequisite(s): ARTS 599.

ARTS 578. Independent Study in Ceramics (1-3).
A professional emphasis on technical or aesthetic research in the ceramics field. Available only for the advanced ceramics student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite(s): departmental consent.

ARTS 580. Advanced Sculpture (3).
Focuses on further development of thematic content, creative problem solving, and producing original artwork that makes a personal artistic statement. Explores the field through presentations and/or research papers. Repeatable for credit. Prerequisite(s): ARTS 380 and instructor's consent.

ARTS 585. Independent Study in Sculpture (1-3).
Professional emphasis on technical or aesthetic research in the sculpture area. Available only for the advanced sculpture student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite(s): ARTS 282, 283, departmental consent.

ARTS 587. Sculpture Senior Project (1).
BFA in art-studio art with sculpture concentration capstone course; emphasizes individual development of thematic content. Limited to undergraduate students. Prerequisite(s): ARTS 580, instructor's consent. Corequisite(s): ARTS 599.

ARTS 590. SlowBurn Topics - First Semester (3).
Long-term projects consisting of experiential coursework whose planning and implementation extend across two successive semesters, with the first semester course typically devoted to research and planning. Course travel fee may apply. For undergraduate credit only. Requires enrollment in consecutive semesters of a single sequence of two SlowBurn Topics courses. Repeatable for credit. Prerequisite(s): ARTF 202; senior standing; or instructor's consent.

ARTS 590G. SlowBurn Topics - First Semester: Artist As Administrator (3).
First semester of two semester sequence in which students design a professional project suiting their interests. Students may work with partners, groups, the entire class, or individually, and will execute and evaluate the project in the second semester. Project may include an organizational connection if desired. Nature and form of the project are determined through student interests, readings, discussions, professional speakers, and consultations with instructor.

ARTS 591. SlowBurn Topics - Second Semester (3).
Course travel fee may apply. Long-term projects consisting of experiential coursework whose planning and implementation extend across two successive semesters, with the second semester course typically devoted to the experience researched and planned in the first semester SlowBurn Topics course. Requires enrollment in consecutive semesters of a single sequence of two SlowBurn Topics courses. Repeatable for credit. Prerequisite(s): ARTF 202; approved ARTS 590 in sequence; senior standing in an ARTS major or instructor's consent.

ARTS 591G. SlowBurn Topics - Second Semester: Artist As Administrator (3).
Second semester of two semester sequence in which students design a professional project suiting their interests. Students execute and evaluate the project designed in the first semester. Project may include an organizational connection if desired. Prerequisite(s): successful completion of ARTS 590G during the Fall 2017 semester.

ARTS 595. Galleries and Exhibitions (3).
Professional, practical, theoretical aspects of managing, organizing, marketing, funding and designing art exhibitions through installations in student art galleries, readings and lectures. Includes experiential assignments. Repeatable for credit. Prerequisite(s): ARTF 202 or faculty approval.

ARTS 599. Senior Exhibition (3).
Creation of artwork and research for public group exhibition as part of programmatic capstone requirement for BFA in studio art. For undergraduate students only. Prerequisite(s): either ARTS 481N, 525, 535, 545, 554, 560, 570, or 580. Corequisite(s): either ARTS 527, 537, 547, 557, 567, 577, or 587.

ARTS 790. Graduate Teaching Seminar (1).
Discussion seminar for graduate students already teaching or intending to teach. Meets six to eight times per semester. Class format is discussion. Students participate in discussions, read articles and essays, create teaching philosophy, create academic portfolio.

BADM - Business Administration

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

BADM 101. Becoming a Business Student I (1).
Required orientation class for new business students who are first-time freshmen. Covers various university policies, academic requirements for a degree, campus resources, study skills and career opportunities. Facilitates connections with faculty staff and other students. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center.

BADM 102. Becoming a Business Student II (1).
Required continuation of BADM 101 for second-semester freshmen who are planning for their sophomore year in the Barton School of Business. Involves students in more in-depth career, academic planning and involvement with the Barton School of Business community. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisite(s): BADM 101.

BADM 161. Business Software: Word (1).
Provides instruction using software that simulates Microsoft Word. Students learn to perform tasks such as: adding an index, a table of contents, a bibliography, citations, columns and section breaks to a Word document. Students with significant skills in Word may be able to test out of the course. Required for advanced standing in the Barton

School; Barton School students should take this course during their freshman year. Not open to students with credit in BADM 160. Pre- or corequisite(s): MATH 111 or equivalent.

BADM 162. Business Software: Excel (1).
Provides instruction using software that simulates Microsoft Excel. Students learn to perform tasks such as: creating formulas (e.g., nested IF, PMT, FV, etc.), functions (e.g., Date, CONCAT, MODE.MULT, etc.), charts (e.g., PivotChart, etc.) in Excel. Students with significant skills in Excel may be able to test out of the course. Required for advanced standing in the Barton School; Barton School students should take this course during their freshman year. Not open to students with credit in BADM 160. Pre- or corequisite(s): MATH 111 or equivalent.

BADM 163. Business Software: Access and PowerPoint (1).
Provides instruction using software that simulates Microsoft Access and PowerPoint. Students learn to perform tasks such as: creating and modifying tables, forms, reports and queries in Access; and incorporating themes, images, audio, video, transitions and animations into PowerPoint presentations. Students with significant skills in Access and PowerPoint may be able to test out of the course. Required for advanced standing in the Barton School; Barton School students should take this course during their freshman year. Not open to students with credit in BADM 160. Pre- or corequisite(s): MATH 111 or equivalent.

BADM 190. Selected Topics (1-3).
Repeatable for credit with departmental consent.

BADM 191. Professional Edge I (0).
Through a series of seminars, events and workshops this course provides opportunities to develop and refine critical skills and competencies for career progression. It is recommended that the four Professional Edge courses be taken in sequence. *Course includes diversity content*. Open to students in the Barton School of Business only.

BADM 192. Professional Edge II (0).
Through a series of seminars, events and workshops this course provides opportunities to develop and refine critical skills and competencies for career progression. It is recommended that the four Professional Edge courses be taken in sequence. *Course includes diversity content*. Open to students in the Barton School of Business only.

BADM 281. Cooperative Education (1).
Academic program that integrates academic theory with professional experience through paid employment in a supervised work setting related to the student's career focus. Course does not satisfy elective requirements for any major or minor offered by the Barton School. Repeatable for a total of 3 credit hours. Prerequisite(s): sophomore standing and 2.250 GPA.

BADM 290. Selected Topics (1-3).
Repeatable for credit with departmental consent.

BADM 290B. Foundations of Business (3).
This foundations of business course is an integral part of students' education at Wichita State University. The overall goals are to develop an appreciation for key foundational business concepts, gain familiarity with the major business disciplines and form a professional development plan. To achieve these goals, students first learn about business innovation, how markets operate, entrepreneurial activities and socially responsible business decisions. They then explore each of the major business disciplines, in the context of an organization. Additionally, students are provided with the resources to develop a professional development plan.

BADM 293. Professional Edge III (0).
Through a series of seminars, events and workshops, this course provides opportunities to develop and refine critical skills and competencies for career progression. It is recommended that the four Professional Edge courses be taken in sequence. *Course includes diversity content*. Open to students in the Barton School of Business only.

BADM 294. Professional Edge IV (0).
Through a series of seminars, events and workshops, this course provides opportunities to develop and refine critical skills and competencies for career progression. It is recommended that the four Professional Edge courses be taken in sequence. *Course includes diversity content*. Open to students in the Barton School of Business only.

BADM 301. Transferring to the Barton School of Business (1).
Required for students transferring from other institutions who are planning to pursue a business degree. Designed to offer a smooth transition from a prior institution, to integrate the student into the WSU campus and provide information about various university policies, academic requirements for a degree, campus resources, study skills and career opportunities in the field of business.

BADM 490. Selected Topics (1-3).
Repeatable for credit with departmental consent.

BIOL - Biology

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

BIOL 103. Microbes and You (3).
General education math and natural sciences course. Surveys general information about microbial physiology, biochemistry and ecology that supports more detailed discussion of interesting topics in food, medical and environmental microbiology. Includes subjects of general interest and current newsworthy topics. Credit will not be given if the student has completed any biology course beyond the 100-level prior to enrollment. Suitable for general education requirements, but cannot be used for credit toward the major or minor in biological sciences.

BIOL 106. The Human Organism (3).
General education math and natural sciences course. Introduces the nonscience major to certain biological principles as they relate to the human organism, provides biological information and understanding of subjects which are relevant to the student's own well-being and role as a world citizen, and increases awareness of the human place in the biosphere. Concurrent or subsequent enrollment in BIOL 107 is recommended for students needing general education credit for a natural sciences laboratory experience. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences. Only one of the following may be taken for credit: BIOL 104, 105, 106 and/or 107. Students wishing to repeat BIOL 105 (no longer offered) should enroll in BIOL 106 and 107.

BIOL 107. The Human Organism Laboratory (1).
2 Lab hours. *General education math and natural sciences course*. For the nonscience major. Supplements and reinforces the material covered in BIOL 106 with a laboratory experience. Uses a hands-on approach and covers topics relevant to students and their role in the biosphere. Topics include cell structure, human organ systems, the role of microorganisms in the environment, metabolism, genetics and cancer. Requires no animal dissection. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences. Only one of the following may be taken for credit: BIOL 104,

105, 106 and/or 107. Students wishing to repeat BIOL 105 (no longer offered) should enroll in BIOL 106 and 107.

BIOL 210. General Biology I (4).
3 Classroom hours; 3 Lab hours. *General education math and natural sciences course*. Introduces fundamental concepts in cellular and molecular biology. Includes basic biological chemistry; cell and membrane structure and function; aerobic and anaerobic respiratory pathways; intermediary metabolism and photosynthesis; regulation of cellular activities at genetic and protein levels; cellular reproduction; mechanisms of inheritance at molecular, organismal and population levels; phylogeny and evolution. The laboratory develops skills in the experimental method, basic laboratory procedures and written communication of scientific information using topics related to the lectures. Students may not receive credit for both BIOL 204 (no longer offered) and BIOL 210. Students wishing to repeat BIOL 204 may enroll in this course, subject to the credit limitations indicated above. Corequisite(s): BIOL 210L, CHEM 211 recommended.

BIOL 211. General Biology II (4).
3 Classroom hours; 3 Lab hours. *General education math and natural sciences course*. Introduces fundamental concepts of biology as they apply to levels of organization from organisms through ecosystems. Focuses on morphology, physiology, diversity and ecology of organisms. Introduces growth and anatomy, transport of materials, regulatory mechanisms and reproduction in plants; also nutrient procurement, circulation, neural and hormonal regulation, reproduction, immune responses and behavior in animals. Principles of ecology presented include population growth and regulation, interspecific interactions and food webs, and energy flow and material cycling through ecosystems. The laboratory includes a survey of organismal diversity including prokaryotes, protists, fungi, plants and animals. Emphasizes evolutionary trends in the plant and animal kingdoms. Prerequisite(s): BIOL 210. Corequisite(s): BIOL 211L; concurrent enrollment in CHEM 212 is recommended.

BIOL 220. Introduction to Microbiology (4).
3 Classroom hours; 2 Lab hours. *General education math and natural sciences course*. For students in allied health fields. Introduces eucaryotic and procaryotic microorganisms and viruses and develops an understanding of microbial growth, including the use of antiseptics, disinfectants, and antibiotics; DNA as the genetic material including DNA replication, protein synthesis, gene regulation, mutation and gene exchange in bacteria; applied and environmental microbiology including water and sewage treatment and food microbiology; resistance to infection, basic mechanisms of pathogenesis, and selected microbial diseases. The lab reinforces concepts learned in lecture and helps the student gain an understanding of and develop competence in basic microbial techniques including the safe handling of microorganisms. Credit earned in this course may not be applied toward the requirements for a major or minor in biological sciences. Students may not receive credit for both BIOL 120 (no longer offered) and BIOL 220. Students wishing to repeat BIOL 120 may enroll in this course. Prerequisite(s): CHEM 101 or 103 or 211. Corequisite(s): BIOL 220L.

BIOL 223. Human Anatomy and Physiology (5).
4 Classroom hours; 2 Lab hours. *General education math and natural sciences course*. Presents the structure and function of the major human body systems. Demonstrates the structure and function of certain systems further in the laboratory setting. For students majoring in programs other than biological sciences or biochemistry. Students who have completed BIOL 225 or 226 (both no longer offered) may not receive credit for prior enrollment in these courses and subsequent enrollment in BIOL 223. Students seeking to repeat BIOL 225 or 226 may enroll in this course, subject to the credit limitations indicated above. Students may receive credit for only one of the following: HS 290 or BIOL 223. Prerequisite(s): CHEM 101 or 103 or 211. Corequisite(s): BIOL 223L.

BIOL 309. Foundations of Human Heredity (3).
General education math and natural sciences course. Introduces the mechanisms and societal significance of development, transmission and population genetics of humans. Draws attention to inborn errors of metabolism and development and the roles of genetic counseling and genetic engineering in their management. Designed for students majoring outside the natural sciences and cannot carry credit toward a biological sciences major or minor.

BIOL 309H. Foundations of Human Heredity Honors (3).
General education math and natural sciences course. Introduces the mechanisms and societal significance of development, transmission and population genetics of humans. Draws attention to inborn errors of metabolism and development and the roles of genetic counseling and genetic engineering in their management. Designed for students majoring outside the natural sciences and cannot carry credit toward a biological sciences major or minor.

BIOL 310. Human Reproduction: Issues and Perspectives (3).
General education math and natural sciences course. Comprehensive survey of the many biological aspects of reproduction. Covers structure and function of the reproductive system, as well as information on in vitro fertilization, fertility testing, contraception, population problems, AIDS, cancer, reproductive issues, ethical problems and other concerns about the control of human reproduction.

BIOL 330. General Microbiology (5).
3 Classroom hours; 6 Lab hours. Introduces the structure, function, systematics, ecology and population dynamics of microorganisms emphasizing prokaryotes. Prerequisite(s): BIOL 204 (no longer offered) or 211, CHEM 212. Corequisite(s): BIOL 330L.

BIOL 360. How Evolution Explains the Living World (3).
General education math and natural sciences advanced further study course. Helps students understand the complexity and unity of life through the lens of evolution. Students delve into the biodiversity of the living world and how fossils and phylogenies relate to these species. Students also practice primary literature review and how to discuss potentially sensitive topics with nonscientists. The course ends on an illuminating discussion of the concept of race in humans.

BIOL 370. Introductory Environmental Science (3).
General education math and natural sciences course. Examines the relationship of the earth's human populations to resource use/depletion and to the impact of human activities on the environment. Introduces and uses basic concepts relating to energy, populations and ecosystems as a basis for understanding environmental problems on the local, regional, national and international levels. *Course includes diversity content*.

BIOL 408. Biology of Aging (3).
Cross-listed as AGE 408. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, emphasizing humans. Prerequisite(s): a basic course in biology that satisfies the general education requirements.

BIOL 418. General Ecology (4).
3 Classroom hours; 3 Lab hours.Principles underlying the interrelationships of living organisms and their environments from the biosphere to the population level of organization. Some laboratory exercises and class projects conducted at local field sites. *Course includes diversity content*. Prerequisite(s): BIOL 204 (no longer offered) or 211, CHEM 212. Corequisite(s): BIOL 418L.

BIOL 419. Genetics (4).
3 Classroom hours; 3 Lab hours. The mechanisms of heredity and variation in animals, plants, and prokaryotes with a critical review of gene structure and function. Prerequisite(s): BIOL 204 (no longer offered) or 211, CHEM 212. Corequisite(s): BIOL 419L.

BIOL 420. Molecular Cell Biology (4).
3 Classroom hours; 3 Lab hours. Concerned primarily with the molecular biology of eukaryotic cells. Covers individual cellular components (organelles) and processes including the plasma membrane, mitochondrion and energy conversion, intracellular sorting, the cell nucleus and genetic mechanisms, control of gene expression, cell signaling, cell growth and division, cancer, and cellular mechanisms of development. Reviews and demonstrates current techniques and experimental approaches for studying cells. Prerequisite(s): BIOL 204 (no longer offered) or 211, CHEM 212. Corequisite(s): BIOL 420L.

BIOL 481. Cooperative Education (1-4).
Course complements and enhances the student's academic program by providing an opportunity to apply knowledge gained through coursework to job-related situations. For information, contact the coordinator of undergraduate studies or the cooperative education program office. No more than 4 credit hours earned in BIOL 481 may be applied toward satisfying the requirements for a major in biological sciences. Prerequisite(s): applicant and cooperative education position approved by the departmental affairs committee.

BIOL 481N. Internship (2-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

BIOL 497. Biology Colloquium (1).
Research seminars presented by graduate students, faculty and visiting researchers. Requires a written term paper on one of the presented topics. Repeatable once for credit. Prerequisite(s): two of the following - BIOL 418, 419, 420.

BIOL 498. Undergraduate Independent Reading (1-2).
Students perform library scholarship under the direct supervision of faculty and write a report. No more than 6 credit hours earned from BIOL 498, 499 or equivalent independent study courses may be applied toward departmental major graduation requirements. Prerequisite(s): at least 20 credit hours of biology coursework that satisfies the major requirements, instructor's consent, a Directed Independent Study Abstract form, and departmental consent.

BIOL 499. Undergraduate Research (1-4).
Students perform library scholarship under the direct supervision of faculty and write a report. No more than 6 credit hours earned from BIOL 498, 499 or equivalent independent study courses may be applied toward departmental major graduation requirements. Prerequisite(s): at least 20 credit hours of biology coursework that satisfies the major requirements, instructors consent, a Directed Independent Study Abstract form, and departmental consent.

BIOL 502. Vascular Plants (4).
2 Classroom hours; 4 Lab hours. Introduces the structure, reproduction, and evolution of the major groups of living and extinct vascular plants. Includes an introduction to flowering plant systematics. Students earning graduate credit perform a primary literature survey on a topic selected in consultation with the instructor and deliver a 30-minute oral presentation to the class. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212.

BIOL 503. Field Botany (4).
Introduces the field identification of common flowering plants using technical scientific keys, distributional patterns and general principles of taxonomy. In addition to lecture and laboratory activities, numerous field trips develop botanical skills and reinforce principles covered in lecture. Prerequisite(s): BIOL 211, CHEM 212, or instructor's permit.

BIOL 510. Ecosystem Management & Restoration (3).
Examines the design, implementation, and evaluation of land management plans and restoration projects. Restoration case studies covering a wide-array of ecological systems (e.g. grassland, forest, wetland, aquatic and marine) are used to examine the strengths and weakness of different approaches in these contexts with particular attention to key ecological principles and socio-economic realities. Students produce a written management plan for a site in south-central Kansas. *Course includes diversity content*. BIOL 418 is recommended. Prerequisite(s): BIOL 211 or instructor's permission.

BIOL 523. Freshwater Invertebrates (4).
2 Classroom hours; 4 Lab hours. Emphasizes the ecology, taxonomy, form and function of free-living, freshwater invertebrates. Half of the course deals with arthropods. Includes methods of collecting, culturing and preserving specimens. Part of the course grade is based on a collection of invertebrates correctly prepared and identified. For graduate credit, students submit a term paper or a more extensive collection within a given taxon. Prerequisite(s): BIOL 211, CHEM 212.

BIOL 524. Vertebrate Zoology (3).
Evolution, distribution, natural history and special characters of vertebrate animals. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with instructor. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212; BIOL 527 is also recommended.

BIOL 527. Comparative Anatomy (5).
3 Classroom hours; 4 Lab hours. Intensive study of representative chordates emphasizing vertebrate anatomy. Students earning graduate credit complete additional assignments chosen in consultation with the instructor, such as a term paper based on technical literature, dissection of additional animals, etc. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212. Corequisite(s): BIOL 527L.

BIOL 528. Parasitology (4).
2 Classroom hours; 4 Lab hours. Studies the parasites of man and other vertebrate hosts. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212.

BIOL 530. Applied and Environmental Microbiology (3).
A characterization of the roles of microbes in natural and man-made environments. Discussions of microbial ecology and communities, interrelationships with higher organisms, biogeochemical cycling, biotechnology and bioremediation. Students earning graduate credit produce an additional research paper based on primary literature on a topic chosen in consultation with the instructor. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212.

BIOL 532. Entomology (4).
2 Classroom hours; 4 Lab hours. Introduces the morphology, physiology, life cycles, behavior, ecology and economic significance of insects. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor or develop proficiency in a specific taxon by performing an individual systematics project. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212.

BIOL 534. Human Physiology (3).
Organ systems approach to human physiology. Emphasizes nervous and endocrine control systems and the coordination of body functions. Students earning graduate credit submit a term paper based upon library research on a topic in human physiology chosen in consultation with the instructor. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 531, or instructor's consent.

BIOL 535. Human Physiology Lab (2).
4 Lab hours. Empirical approach to human physiology. Students seeking graduate credit submit an additional laboratory report relating the results of a laboratory experiment to those found in the current technical literature. Pre- or corequisite(s): BIOL 534.

BIOL 540. Developmental Biology (4).
2 Classroom hours; 4 Lab hours. Developmental processes in animals emphasizing vertebrates. Centered on the cell interactions controlling differentiation and morphogenesis. Students earning graduate credit complete additional assignments chosen in consultation with the instructor. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212. BIOL 420 recommended. Corequisite(s): BIOL 540L.

BIOL 560. Plant Ecology (2).
2 Classroom hours. Examines the relationship of plants to their environment at the organismal, population, community and ecosystem levels. For graduate credit, a student must prepare and present a 30-minute lecture over one of the topics covered in this course. Prerequisite(s): BIOL 418 and CHEM 212 or instructor's consent.

BIOL 561. Plant Ecology Lab (2).
Laboratory component of BIOL 560. Field trips are an integral part of the course. Emphasizes an experimental approach to plant ecology. For graduate credit, a student must present the results of the library/ laboratory project orally, as well as in writing. Pre- or corequisite(s): BIOL 560.

BIOL 570. Conservation Biology (3).
Examines the application of fundamental concepts in ecology, evolutionary biology and genetics to the preservation of biological diversity at the levels of genotypes, species and ecosystems. Topics covered include (1) how biologists quantify biological diversity, (2) threats to biological diversity, (3) tools used to evaluate the level of threat to individual species and to design species management plans, and (4) concepts and considerations for preserve design. Decisions related to biodiversity conservation often have social and economic consequences, students explore these complexities through case studies. Skills developed in this course include critical reading of primary scientific literature, scientific writing and oral presentation. Prerequisite(s): BIOL 418.

BIOL 575. Field Ecology (3).
9 Lab hours. Techniques for analysis of systems consisting of living organisms and their environments. Field trips are required. Students earning graduate credit perform an individual project on comparative community structure and report the results as a technical paper. Prerequisite(s): BIOL 418 or instructor's consent.

BIOL 590. Immunobiology (3).
The nature of antigens and antibodies and their interactions. Includes cellular and humoral aspects of immunologic phenomena. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite(s): BIOL 204 (no longer offered) or 211, CHEM 531.

BIOL 610. Topics in Botany (1-5).
Selected offerings in botany. Consult the Schedule of Courses for current offering(s). Students wishing to enroll in courses not listed in the current schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Repeatable for credit. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212 and instructor's consent.

BIOL 610A. Cell and Molecular Biology Lab (1).
Acquire current techniques and experimental approaches for studying cells. Prerequisite(s): departmental approval.

BIOL 610M. Topics in Genetics Lab (1).
Students acquire knowledge in current genetics techniques, and know how to apply that knowledge to analyze genetic data, which helps to improve their trouble shooting and problem solving skills. Prerequisite(s): departmental approval.

BIOL 610N. Plant Ecology Lecture and Lab (4).
Focuses on identifying and explaining key ecological patterns found in plant populations and communities.

BIOL 626. Reproductive Biology (3).
Covers the basic organization and function of vertebrate reproductive systems. Includes current concepts and contemporary research from the molecular to the population level. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. BIOL 526 is strongly recommended. Prerequisite(s): BIOL 420.

BIOL 640. Topics in Zoology (1-4).
Selected offerings in zoology. Consult the Schedule of Courses for the current offering(s). Students wishing to enroll in courses not listed in the current schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Repeatable for credit. Prerequisite(s): BIOL 204 (no longer offered) or BIOL 211, CHEM 212 and instructor's consent.

BIOL 640AA. Ecology Lab (1).
Laboratory explores the principles underlying the interrelationships of living organisms and their environments from the biosphere to the population level of organization. Prerequisite(s): departmental approval.

BIOL 640AB. Human Anatomy (3).
Gives students an understanding of the anatomy of the human body at the 600 level. Emphasis is on the detailed structural anatomy and classification of each of the human body’s organ systems. Students are challenged to begin thinking clinically so as to prepare for a future in the health professions. Includes weekly lectures and laboratories that the student is expected to attend. Corequisite(s): BIOL 640AL.

BIOL 640AC. Endocrinology (3).
Regulation of physiological processes in vertebrates by chemical messengers; hormones and growth factors. Prerequisite(s): BIOL 211, CHEM 212 and instructor's consent.

BIOL 640AL. Human Anatomy Lab (2).
The gross and microscopic anatomy of each human body system is examined in lab through the use of models, diagrams, lab activities and dissections. Dissections include fetal pig full dissection and organ dissections of the following sheep organs: brain, eyeball, heart and kidney. Corequisite(s): BIOL 640AB.

BIOL 640G. Topics in Neurobiology (3).
The course covers fundamental neuroanatomy, cellular and molecular neuroscience, development, sensory systems, motor systems, and regulatory systems.

BIOL 640OL. ST: General Biology I - Lab (1).
Biology is a laboratory science and the laboratory portion of General Biology I introduces students to experimental methods and scientific communication. Prerequisite(s): departmental approval.

BIOL 640P. Evolution (3).
Students in this course will learn basic aspects of evolutionary pattern and process with a focus on changes within populations. Topics include: 1) an overview of natural selection and its effects; 2) the micro evolutionary process in natural populations (drift, selection, mutation, etc.); 3) quantitative genetics; 3) testing hypotheses of adaptation; 4) the evolution of genomes; and 5) lineage divergence (speciation).

BIOL 640QL. ST: General Biology II - Lab (1).
The laboratory includes a survey of organismal diversity including prokaryotes, protists, fungi, plants and animals. Prerequisite(s): departmental approval.

BIOL 660. Topics in Microbiology (1-4).
Selected offerings in botany. Consult the Schedule of Courses for current offering(s). Students wishing to enroll in courses not listed in the current schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Repeatable for credit. Prerequisite(s): BIOL 330 and instructor's consent.

BIOL 660J. General Microbiology Lab (2).
Hands on general microbiology laboratory skills will be performed, including; microscopy, staining, aseptic and culturing techniques, isolation and identification of bacterial species, and other standard techniques used in microbiology. Prerequisite(s): departmental approval.

BIOL 660K. Astrobiology (3).
Examines primary literature in astrobiology. Students present and discuss reviews of these reports from both a scientific and editorial standpoint. Successful students acquire in-depth knowledge of concepts and methods in astrobiology. Focuses on microbial aspects of astrobiology, including planetary protection, life in extreme environments, habitability and life detection. Topics may vary and extend to long-duration peopled missions, bioregenerative life support systems and microgravity research. Prerequisite(s): BIOL 210, BIOL 211, CHEM 211 and CHEM 212.

BIOL 661. Pathogenic Microbiology (3).
Focuses on those microbes that produce disease. Most coverage is given to those microbes that cause disease in humans, but zoonotic diseases are also covered. In addition to describing the features of each microbe that enable its pathogenesis, attention is given to the distinctive aspects of its epidemiology, its means of spread and effective countermeasures. Prerequisite(s): BIOL 330 or instructor’s consent.

BIOL 662. Virology (3).
Focuses on the following aspects of viruses: structure, function, replication strategy, host cell interactions and mechanism of variability. Additional topics include the coevolution of viruses and their host cells, the unique ecological niche occupied by viruses, and the challenge that viruses present when attempting to draw clear distinctions between living and nonliving entities. Prerequisite(s): BIOL 330 or instructor’s consent.

BIOL 666. Special Topics in Biochemistry (3).
Primarily for students who choose the biochemistry field major. Discusses a small number of current problems in biochemistry in depth. Requires reading published research papers in the field. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite(s): BIOL 211, CHEM 662 and 663.

BIOL 666B. Cancer Biology (3).
The basic mechanisms of carcinogenesis are covered by discussing the control of normal and abnormal cell growth in several model systems. Students earning graduate credit also submit a term paper dealing with a specific topic to be determined by discussion with the instructor. Prerequisite(s): BIOL 420.

BIOL 669. Research In Biochemistry (2).
Cross-listed as CHEM 669. Students in the biochemistry field major participate in a biochemistry research project under the direction of a faculty member. Requires a written report summarizing the results. For undergraduate credit only. Repeatable once for credit. Prerequisite(s): BIOL 420, and CHEM 662 or 663, and CHEM 664 and instructor's consent.

BIOL 710. Glycobiology (3).
Introduces glycoprotein biosynthesis, structure and function. Covers the various roles of carbohydrates in modifying protein structure and function. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite(s): BIOL 420.

BIOL 725. Biodiversity Analyses (3).
Surveys the theory, principles, metrics and applications of biodiversity sciences including systematics, biogeography and phylogeny. The pervasive role of phylogenetic data in evolutionary biology (e.g., biogeography, coevolution, speciation, conservation) and other fields (e.g., epidemiology, anthropology, agriculture) are highlighted. Species diversity, species radiations, structure of the tree of life, the wealth of comparative data (from genes to proteins and morphology) and the role of systematics in conservation biology are discussed. Offered fall, even years.

BIOL 730. Cancer Biology (3).
The basic mechanisms of carcinogenesis are covered by discussing the control of normal and abnormal cell growth in several model systems. Students earning graduate credit also submit a term paper dealing with a specific topic to be determined by discussion with the instructor. Prerequisite(s): BIOL 420.

BIOL 738. Plant and Animal Interactions (3).
Develops and expands basic ecological and evolutionary concepts presented in earlier biology courses including natural selection, coevolution, population growth and factors structuring ecological communities. Applies these concepts to the study of herbivory, pollination by animals and seed dispersal by animals. Designed to improve students' abilities to read current primary scientific literature critically with particular emphasis on identifying and evaluating evidence for hypotheses in ecology and evolutionary biology. Introduces the peer review process and hones students' scientific writing skills. Students write a mini-review article of a current hypothesis in the field of plant-animal interaction. An oral presentation based on the findings of the mini-review is also required. Prerequisite(s): BIOL 418 or equivalent general ecology course.

BIOL 740. Topics in Graduate Biology (2-4).
Lecture, laboratory, field techniques, selected readings or discussion course pertaining to a specific biological topic not available in the regular curriculum. May include oral presentations(s) and/or written paper(s). Topics are developed by individual faculty members and reflect current topics, in-depth analysis and biological specialties. Repeatable for credit up to 6 credit hours. Prerequisite(s): any two of the following three courses - BIOL 418, 419, 420; and instructor's consent.

BIOL 740D. Computing for Biologists (3).
Almost anything an organismal biologist does with data can be greatly aided by a few basic bioinformatic tools. This course will introduce a number of these, including regular expressions, interacting with computers via the shell, accessing high-performance computing, basic Python scripting, and the R data analysis environment. Prerequisite(s): at least two of the following - BIOL 418, 419, 420 or instructor approval.

BIOL 740I. Experimental Design (3).
A general overview of critical components of sound experimental design, common mistakes and philosophical differences in approaches. All students lead 1-2 class discussions on assigned papers. Students earning graduate credit present their own experimental design and lead a class discussion on the approach being used, assumptions and potential weaknesses. Prerequisite(s): any two of the following three courses - BIOL 418, BIOL 419, BIOL 420; or instructor's consent.

BIOL 760. Experimental Molecular Biology (4).
2 Classroom hours; 4 Lab hours. Introduces upper-level undergraduate and graduate students to molecular biology techniques. The methodology primarily involves the manipulation of DNA and the expression of genetic material in prokaryotic and eukaryotic systems. Prerequisite(s): BIOL 419 or 420.

BIOL 767. Mechanisms of Hormone Action (3).
The mechanism of action of several hormones is described and used to illustrate the major intracellular signal transduction pathways. Includes gonadotropin-releasing hormone, the glycoprotein hormones, luteinizing hormone, follicle-stimulating hormone, chorionic gonadotropin, thyroid-stimulating hormone, steroid hormones, thyroid hormone, activing/inhibin, prostaglandins, insulin and growth hormone. Mostly lectures covering signal transduction pathways. Students write brief summaries of recent research papers related to the current week's lecture topics. Each student makes an oral presentation of a research paper in journal club format. Students earning graduate credit write a term paper describing in detail a hormone not described in class and its mechanism of action. Prerequisite(s): BIOL 420 and CHEM 662 or their equivalents, plus either BIOL 526 or 534 or their equivalents, and instructor's consent.

BIOL 773. Statistical Applications in Biology (3).
Introduces experimental designs and statistical analyses that are commonly used in biological research. Focuses on univariate statistical analyses including t-tests, analysis of variance, nonparametric equivalents of ANOVA, linear regression, goodness-of-fit tests and categorical data analysis. Applications to research questions that arise in biological research, including the students' own research, are emphasized. Students also receive training in the use of statistical analysis computer software. Previous enrollment in STAT 370 is recommended.

BIOL 780. Molecular Genetics (3).
Studies the physiochemical nature of genetic material and the mechanisms of genetic regulation of metabolism. Students earning graduate credit produce a term paper and deliver a class seminar based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite(s): BIOL 419.

BIOL 781. Cooperative Education (1-4).
Students pursuing the no thesis MS degree may gain practical professional experience, under academic supervision, that complements the student's academic program. BIOL 781N is for internships that last no more than one semester or summer and may be unpaid. The intern experience to be used for credit must be approved by the student's graduate capstone project committee. An academic product from the experience, such as a written summary and/or oral presentation is assigned by the graduate capstone committee. Prerequisite(s): acceptance into MS program.

BIOL 781N. Internship in Biology (1-4).
Students pursuing the no thesis MS degree may gain practical professional experience, under academic supervision, that complements the student's academic program. BIOL 781N is for internships that last no more than one semester or summer and may be unpaid. The intern experience to be used for credit must be approved by the student's graduate capstone project committee. An academic product from the experience, such as a written summary and/or oral presentation is assigned by the graduate capstone committee. Prerequisite(s): acceptance into MS program.

BIOL 797. Departmental Seminar (1).
Forum for the weekly presentation and discussion of research projects performed by invited scientists from outside departments and institutions, departmental faculty and graduate students. All MS degree-bound graduate students are required to attend the seminar each semester and must enroll in the course for credit during two semesters. Students enrolled in the course must attend all seminars presented in the course, fill out an evaluation of each seminar and make one 15 minute professional-meeting style presentation of their research. Repeatable for credit up to 5 credit hours. Prerequisite(s): acceptance into MS program.

BLAW - Business Law

Department of Finance, Real Estate & Decision Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

BLAW 190. Selected Topics (1-3).
Repeatable for credit with departmental consent.

BLAW 390. Special Group Studies in Business Law (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): junior standing, advanced standing.

BLAW 401BA. Credit Management Badge: Business Forms and Legal Environment (1).
Introduces the law of commercial credit management by examining the general framework of business organizations. Examines different types of business associations, determines liability for debts and obligations of those associations as well as taxing implications. Focuses specifically on the law of business associations with fundamental analysis on the law of agency as foundational to more higher-level and technical areas of law in specific business entities such as partnerships, limited liability companies and corporations. Provides an overview of federal and state statutes as well as how to research important judicial cases. This badge course can be taken as a stand-alone course to familiarize enrollees with how business organizations and agency relationships impact credit worthiness and credit liability. However, it can also be used as the introduction to a series of badge courses on the law of credit management. Graded Bg/NBg.

BLAW 431. Legal Environment of Business (3).
Introduces the legal environment in which businesses operate. Considers the institutions and processes related to business law, and the major frameworks of private and public law, including contracts and commercial transactions, business organizations, business torts and crimes, and regulatory law. Addresses ethical and social responsibility considerations as an integral aspect of legal regulation. Prerequisite(s): junior standing, advanced standing.

BLAW 635. Business Law for Accountants I (3).
Law of contracts, bailments, sales, commercial paper and secured transactions. Centers on the Uniform Commercial Code. Prerequisite(s): junior standing, advanced standing.

BLAW 636. Business Law for Accountants II (3).
Law of agency, partnerships and corporations. Considers the organizational and relational aspects of both small, closely held businesses and large corporate enterprises. Prerequisite(s): junior standing, advanced standing.

BLAW 690. Seminar in Selected Topics (1-5).
Repeatable for credit with departmental consent. Prerequisite(s): junior standing, advanced standing.

BME - Biomedical Engineering

Note: For a course to be used as a prerequisite to BME courses, it must have been passed with a grade of C or better (generating 2.000 grade points or better).

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

BME 115. Biomedical Engineering Seminar (0).
A zero-credit-hour course designed to introduce new, transfer and interested engineering students to the program and discipline of biomedical engineering. Includes activities such as research presentations from faculty and students, lab tours and activities, and presentations from alumni and industry representatives.

BME 281I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

BME 335. Biomedical Computer Applications (3).
Introduces students to software packages and applications applicable to the biomedical engineering curriculum and discipline. Course content includes three-dimensional graphical computer aided design software (e.g., SolidWorks), mathematical programming software and applications (e.g., MATLAB), and data acquisition and analysis software (e.g., LabVIEW). Pre- or corequisite(s): MATH 242.

BME 452. Biomechanics (3).
Foundation of mechanics in addressing bioengineering problems. Introduces the basic concepts and methods of mechanics as applied to biological tissues. Introduces statics, dynamics and mechanics applied to the human body including the following: (1) vectors, moments, equilibrium, (2) kinetics and kinematics including displacement, rotation, acceleration and deformation, (3) stress and strain, (4) equations of motion, (5) impulse and momentum, and (6) mechanical properties of biological tissues. Prerequisite(s): MATH 243, AE 223.

BME 462. Introduction to Biofluids (3).
Provides a background and introduction to the conservation laws which form the foundation of fluid mechanics and their application to bioengineering related problems including blood flow in the vascular system and other biological flows within the human body. Topics include dimensional analysis, definition of system, conservation of mass and energy, and conservation of momentum. Elaborates on the application of fluid mechanics principles to major human organ systems. Prerequisite(s): AE 223, MATH 555. Pre- or corequisite(s): BIOL 223, ME 398. Corequisite(s): BME 462L.

BME 462L. Introduction to Biofluids Lab (0).
Zero-credit hour lab that complements the BME 462 Introduction to Biofluids lectures. Corequisite: BME 462.

BME 477. Introduction to Biomaterials (3).
Major classes of materials used in medical devices including polymers, metals, ceramics, composites and natural materials are discussed. Biocompatibility, host reactions to biomaterials, immune response, wound healing, biomaterial implantation and acute inflammation, thrombosis, infection, tumorigenesis and calcification of biomaterials, testing and degradation of biomaterials in vivo are covered. Specific biomaterials applications such as cardiovascular devices, drug delivery and tissue engineering are covered. Additionally, biomedical device design and regulatory issues are also discussed. Prerequisite(s): CHEM 211, PHYS 213 or 313.

BME 480. Bioinstrumentation (3).
Introduces engineering aspects of the detection, acquisition, processing, interpretation and display of signals from living systems; biomedical sensors for measurements of bio potentials, force, displacement, blood pressure, blood flow, heart sounds, respiration and temperature; biomedical devices; medical imaging instrumentation. Prerequisite(s): BME 335, EE 282, IME 254.

BME 481A. Cooperative Education (1).
Introduces engineering practice by working in industry in an engineering-related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignments and need not be enrolled in any other course. Repeatable for credit. Prerequisite(s): 30 credit hours toward Bachelor of Science in biomedical engineering and approval by the appropriate faculty sponsor.

BME 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

BME 481N. Internship (1).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

BME 481P. Cooperative Education (1).
Introduces engineering practice by working in industry in an engineering-related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 credit hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Repeatable for credit. Prerequisite(s): 30 credit hours toward Bachelor of Science in biomedical engineering and approval by the appropriate faculty sponsor.

BME 482. Design of Biodevices (3).
Discusses the overview of device definitions, selection and use of materials in in-vitro medical devices and implantable medical devices, product development and documentation, regulation and testing of medical devices, reliability and liability, licensing and patents, manufacturing and quality control, biocompatibility, FDA and ISO 10993 biological evaluations. Provides an overview of the multiple issues in designing a marketable medical device, including the design process from clinical problem definition through prototype and clinical testing to market readiness. Design case studies are discussed. Students

must be within three semesters of graduation in order to take this course. Prerequisite(s): BME 335 and program consent.

BME 497. Special Topics (3).
New or special topics presented on sufficient demand at the undergraduate level. Prerequisite(s): instructor's consent.

BME 585. Capstone Design I (3).
First course in a two-semester capstone design sequence. Focuses on the process of strategic clinical problem solving and innovation through evaluation of real-world diagnostic processes, current therapeutic approaches and clinical outcomes. Students work in teams to identify and critically evaluate unmet medical or clinical needs through the use of a bio design and innovation process, including clinical needs finding through on-site observations, stakeholder assessments, needs statement development and concept generation. Students and their results from this course transition to the next course in this sequence, BME 595, Capstone Design II. For undergraduate credit only. Students must be within three semesters of graduation in order to take this course. Prerequisite(s): BME 335 and program consent.

BME 590. Independent Study and Research (1-3).
Independent study or research directed by a faculty member affiliated with the biomedical engineering program. Repeated for credit. A maximum of 3 credit hours may be applied toward graduation. Prerequisite(s): consent of supervising faculty member.

BME 595. Capstone Design II (3).
Second course in a two-semester capstone design sequence. Uses design and engineering practice involving a team-based biomedical engineering analysis and design project, including discovering customer requirements, design requirements, biocompatibility, regulatory, ethical, societal, environmental and economic considerations, creativity, alternative approaches for solution, specific system analysis, project management, prototype construction and testing, and final report and presentation. For undergraduate credit only. Prerequisite(s): BME 482, 585.

BME 722. Introduction to Biorobotics (3).
Biorobotics combines human anatomy and physiology, electronics, mechanics and robotics technology using computer programming. It is being investigated for use in prosthetics, surgical and therapeutic devices. Course includes robotic principles, theories and control strategies used to manipulate various robotics devices through human physiological signals in real time. Covers topics on robotics in BME, prosthetics, biosignal processing, microcontroller programming, human sense of touch and virtual world communication. Fundamental knowledge of bioinstrumentation, rehabilitation, robotics and signal processing is demonstrated in the laboratory to create a human-machine-computer interface. Students gain hands-on experience with sensors, microcontrollers, actuators, haptic controllers, robotic arm, prosthetic hand and various MATLAB/Simulink toolboxes in order to implement biorobotics algorithms into 3D simulation and stationary/automobile robotic devices. Prerequisite(s): BME 480 or instructor's consent.

BME 735. Biocomputational Modeling (3).
Prepares students for engineering practice by introducing 3D multiphasic modeling software. Students use COMSOL multiphasic simulation software linked with SolidWorks and MATLAB to solve engineering problems in complex 3D geometries such as the human body. Within the simulation software environment, students define the geometry, set boundary conditions, specify the physics, set material properties, mesh, simulate, and visualize their results. Topics include modeling of biofluid mechanics (e.g., stress and strain on arteries), heat and mass transfer (i.e., bioheat and drug delivery), and structural mechanics (i.e., stress and strain on bone). Computer simulation has become an essential part of science, medicine and engineering. Course gives students hands-on experience to meet those demands. Prerequisite(s): either BME 462 or ME 521, and BME 335 or its equivalent; or instructor's consent.

BME 738. Biomedical Imaging (3).
Prepares students with knowledge of medical imaging and gives hands-on experience with ultrasound imaging, dual-energy x-ray absorptiometry (DEXA), spectral imaging, and medical image processing labs. Covers medical imaging modalities such as planar x-ray, x-ray computed tomography (CT), DEXA, magnetic resonance imaging (MRI), nuclear medicine imaging-positron emission tomography and single-photon emission computed tomography, ultrasound imaging, and spectral imaging. Students gain hands-on experience with medical image processing software to import CT or MRI scans and construct 3D models of human anatomy. Introduces fundamental physical and engineering principles used in medical imaging and image processing, with a primary focus on physical principles, instrumentation methods, and image processing methods. Strengths, limitations, sensitivity and appropriate applications for each modality of imaging are also examined. Prerequisite(s): PHYS 314 and BME 335 or its equivalent; or instructor's consent.

BME 742. Biosensor Development (3).
Comprehensive introduction to the basic features and components of biosensors. Discusses different ways to evaluate the physiological state of cells in culture or a whole organism using various methods such as: optical detection, impedance measurements, aerometric measurements, potentiometric measurements and physical measurements using a scanning probe microscope. Primary focus is given to optical measurements and techniques used to explore surface chemistry such as: bioconjugation of biomolecules such as proteins, biomolecule attachment to transducer surfaces, DNA microarrays and bead-based assays. Case studies and analysis of commercially available biosensors are covered. Students perform a project for the design, fabrication and testing of a microfluidic-based biosensor. Students leave the course with a fundamental knowledge of biosensor design and development. Prerequisite(s): MATH 242 and either CHEM 532 or 533 or 536; or instructor's consent.

BME 743. Mechanobiology of Cells and Tissue (3).
Focuses on how the mechanical environment influences cell behavior and integrates principles from engineering, cell biology, physiology and biomedicine. Topics include, but are not limited to: (1) global/health importance of mechanobiology; (2) the role mechanical forces play in normal cell function and disease; (3) the role of the mechanical environment in regenerative medicine and tissue engineering applications; (4) how the extracellular matrix and biomimetic matrices alter cellular function; (5) how cells sense and respond to mechanical forces; (6) the mechanobiological feedback loop; (7) cell and tissue mechanics; (8) microscopy of cells and tissues; and (9) experimental methods to study cellular mechanobiology. Emphasizes experimental design, data analysis, interpretation of data and results, and hands-on laboratories. Students gain firsthand experience with cell culture techniques, microscopy, and experimental and computational techniques in cell mechanobiology. Prerequisite(s): BIOL 210, BME 452 or equivalent, or instructor’s consent. Corequisite(s): BME 743L.

BME 743L. Mechanobiology of Cells and Tissue Lab (0).
Lab component to BME 743. Corequisite: BME 743.

BME 747. Biochemical Engineering (3).
Prepares students for careers in the pharmaceutical industry as research scientists or process engineers. Students learn about designing scaffolds for tissues, molecular design for new drugs, in vitro testing of cells and in vivo testing of whole organisms. Students

are guided through the process of transgenic organism production, production of pharmaceutical agents using bioreactors and downstream processing. Topics covered include the thermodynamics and kinetics for the biosynthesis or enzymatic degradation of various biological macromolecules. Students learn the application of engineering principles to analyze, design and develop processes using biocatalysts to enhance these processes. Processes covered include those that are involved in the formation of desirable compounds and products and in the transformation, or destruction of unwanted substances. Several in-class demonstrations are performed, and students design a micro-bioreactor. Prerequisite(s): MATH 242 and either CHEM 532 or 533 or 536; or instructor's consent.

BME 748. Biomolecular and Cellular Engineering (3).
Focuses on the molecules and mechanisms underlying cellular function from an engineering point of view. Emphasizes experimental methods, mathematical analysis and computational modeling. Hands-on laboratories complement lectures. Topics include, but are not limited to: (1) enzymes and biochemical kinetics; (2) cell signaling and modeling signaling pathways; (3) biophysical-based models of biological/biochemical systems; (4) gene expression and regulation; (5) 'omic' approaches to cell signaling including data analysis of high-throughput data; (6) system biology approaches – analysis of complex biological systems across multiple temporal and spatial scales; (7) bioinformatics; and (8) quantitative experimental methods related to biomolecular and cellular engineering. Applications to tissue engineering, regenerative medicine, biotechnology, bionanotechnology, drug and gene delivery, molecular medicine and personalized medicine are discussed. Prerequisite(s): BIOL 210, BME 335 or equivalent, MATH 555; or instructor's consent.

BME 752. Applied Human Biomechanics (3).
Examines the biology, physiology, and structure of skeletal muscle, the mechanisms of skeletal muscle force generation, and the adaptations to muscle that arise from changes in muscle usage. Students learn to create biomechanical models and generate simulations of human movement based on data collected in a human biomechanics lab. Experimental design and data analysis and interpretation are emphasized. Prerequisite(s): BIOL 223 and BME 452 or its equivalent; or instructor's consent.

BME 757. Clinical Biomechanics Instrumentation (3).
2 Classroom hours; 2 Lab hours.Students learn to collect, process, analyze and interpret motion of the human body (e.g., running, walking, jumping, lifting, etc.), muscle force, muscle activity and acceleration data using various equipment in a human biomechanics lab. The equipment and techniques used are common to multiple fields and disciplines, including physical medicine and rehabilitation, orthopedics, physical therapy, prosthetics and orthotics, wearable biosensors, sports performance and medical/sport/safety equipment design. Prerequisite(s): BME 452 or instructor's consent. Corequisite(s): BME 757L.

BME 760. Special Topics in Biomedical Engineering (3).
Focuses on a contemporary biomedical engineering topic through traditional lecture, research and/or experiential learning activities. Content changes as new problems and research advances related to biomedical engineering attain prominence nationally and internationally. Repeatable for credit. Prerequisite(s): instructor's consent.

BME 760A. Brain-Computer Interfaces (3).
Covers theoretical and experimental knowledge on neuroengineering, neuroscience and neurorobotics systems currently being utilized for brain-computer interface (BCI) technology. Provides hands on learning experience using innovative hardware and software tools to acquire, process and analyze human brain signals and integrate robotics technology with current BCI models for real-time control of virtual environment and assistive/robotic devices. Students gain knowledge to perform BCI experiments in offline and online modes, understand signal processing and machine learning techniques to extract features, and design BCI-based human-machine interaction models for various assistive and/or rehabilitative technology. Prerequisite(s): BME 722 or instructor's consent.

BME 760B. Biomedical MEMS (3).
Biomedical microelectro mechanical systems (MEMS) is the application of MEMS technology in the fields of biomedical and health sciences which has seen tremendous growth in the past decade. Covers theoretical and experimental knowledge on biomedical MEMS technology, various microfabrication techniques that are commonly used in biomedical MEMS device fabrication (e.g. epidermal electronics, microfluidic devices, lab-on-a-chip and biosensors) and the underlying physical principles. Includes discussion of recent and future trends in biomedical MEMS. Students gain a broad perspective in the area of micro/nano systems for biomedical and chemical applications. Prerequisite(s): PHYS 314, MATH 555 and BME 477; or instructor's consent.

BME 771. Polymer Processing and Technology (3).
Introduces the design and manufacture of polymer products emphasizing polymer processing and technology. Discusses fundamental polymeric concepts as they relate to polymer processing. Reviews topics related to solid-state properties, polymer viscoelasticity and polymer melt rheology. Industrial processing operations such as extrusion, injection molding, additive manufacturing, compression molding, polymer blending and mixing, and thermoforming foaming are discussed in detail, highlighting appropriate materials and processing methods for several engineering applications. Prerequisite(s): CHEM 211, and PHYS 213 or PHYS 313; or graduate standing.

BME 777. Biodegradable Materials (3).
Comprehensive overview of biodegradable materials as it relates to their applications in the biomedical and health care fields. Covers in detail different classes of biodegradable materials including biodegradable polymers, ceramics and metals. Synthesis, characterization and degradation of these materials in the biological environment are covered. Biodegradation/biocorrosion mechanisms of these materials, the complexity of the response of the biological environment, and the experimental methods for monitoring the degradation process are discussed, as well as strategies for surface modification to control the degradation. Finally, specific applications are covered. Prerequisite(s): either BME 477 or ME 651; or instructor's consent.

BME 779. Tissue Engineering (3).
Introduces the strategies and fundamental bioengineering design criteria behind the development of tissue substitutes. Principles of engineering and the life sciences toward the development of biological substitutes that restore, maintain or improve tissue function are covered. Topics include stem cells, cell growth and differentiation, cell signaling, materials for scaffolding, scaffold degradation and modification, cell culture environment, cell nutrition, cryopreservation, bioreactor design, clinical applications, regulatory and ethics. Prerequisite(s): BME 477 or instructor's consent.

BME 791BA. Badge: Muscle: Practical Blood Flow Restriction Applications (0.75).
Explores the growing body of research around skeletal muscle as an endocrine organ that releases metabolites that affect other organs. Included in this study are the metabolic effects of various exercise approaches including practical Blood Flow Restriction (pBFR) as this approach can serve as an integral complement to a comprehensive

strengthening program across the age and disability spectrum. Graded Bg/NBg. Prerequisite(s): instructor's consent.

CAS - Applied Studies

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CAS 750A. Effective Instructional Practices I (0.5-7).
Participants learn about various instructional strategies to enhance learning experiences in education. Instructional methods include such collaborative educational models as small and large group teaching, team-based, interactive and experiential case-based learning. Focuses on educator behaviors that stimulate achievement in learners. With an appreciation of the diversity of the student body, participants effectively integrate and apply technology into instruction, when appropriate, to develop and deliver curricula to enhance student learning. Repeatable for credit.

CAS 750B. Effective Instructional Practices II (0.5-7).
Participants continue to learn about various instructional strategies to enhance learning experiences in education. Instructional methods include such collaborative educational models as small and large group teaching, team-based, interactive and experiential case-based learning. Focuses on educator behaviors that stimulate achievement in learners. With an appreciation of the diversity of the student body, participants effectively integrate and apply technology into instruction, when appropriate, to develop and deliver curricula including web-based teaching environments, content management systems, collaborative project development and interactive media with an emphasis on instructional design advancements which affect the learning environment. Repeatable for credit.

CAS 750C. Adaptive Schools Seminar (1-4).
The Adaptive Schools Foundation and Advanced Seminars present a productive, practical set of ideas and tools for developing collaborative groups in becoming effective and better equipped to resolve complex issues around student learning. The work of the Adaptive Schools Seminars is to develop the resources and capacities of the organization and of individuals to cohesively respond to the changing needs of students and society.

CAS 750D. Effective Instructional Practices III (0.5-7).
Examines various instructional strategies to enhance learning experiences in education. Instructional methods include such collaborative educational models as small and large group teaching, team-based, interactive and experiential case-based learning. Focuses on educator behaviors that stimulate achievement in learners. With an appreciation of the diversity of the student body, participants effectively integrate and apply technology into instruction, when appropriate, to develop and deliver curricula to enhance student learning. Repeatable for credit.

CAS 750E. Effective Instructional Practices IV (0.5-7).
Expands on previous examinations of various instructional strategies to enhance learning experiences in education. Instructional methods include such collaborative educational models as small and large group teaching, team-based, interactive and experiential case-based learning. Focuses on educator behaviors that stimulate achievement in learners. With an appreciation of the diversity of the student body, participants effectively integrate and apply technology into instruction, when appropriate, to develop and deliver curricula including web-based teaching environments, content management systems, collaborative project development and interactive media with an emphasis on instructional design advancements which affect the learning environment. Repeatable for credit.

CAS 750F. Effective Instructional Practices V (0.5-7).
Continues to examine various instructional strategies to enhance learning experiences in education. Instructional methods include such collaborative educational models as small and large group teaching, team-based, interactive and experiential case-based learning. Focuses on educator behaviors that stimulate achievement of learners. With an appreciation of the diversity of the student body, participants effectively integrate and apply technology into instruction, when appropriate, to develop and deliver curricula to enhance student learning. Repeatable for credit.

CAS 750G. Effective Instructional Practices VI (0.5-7).
Expanded examination of various instructional strategies to enhance learning experiences in education. Instructional methods include such collaborative educational models as small and large group teaching, team-based, interactive and experiential case-based learning. Focuses on educator behaviors that stimulate achievement of learners. With an appreciation of the diversity of the student body, participants effectively integrate and apply technology into instruction, when appropriate, to develop and deliver curricula including web-based teaching environments, content management systems, collaborative project development and interactive media emphasizing instructional design advancements which affect the learning environment. Repeatable for credit.

CAS 750I. Effective Instructional Practices VII (0.5-10).
Designed for educators who are continuing to learn about various instructional strategies to enhance learning experiences within their classroom. Focuses on educator behaviors that stimulate learner's achievement. With an appreciation of the diversity of the student body, participants effectively integrate problem solving, critical thinking and creativity into instruction, when appropriate, to develop and deliver curricula in a safe, inclusive environment. Repeatable for credit.

CAS 750K. Effective Instructional Practices VIII (0.5-7).
Designed for educators who are continuing to learn about various instructional strategies to enhance learning experiences within their classroom. Focuses on educator behaviors that stimulate learner's achievement with an appreciation of the diversity of the student body. Repeatable for credit.

CESP - Counseling, Educational and School Psychology

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CESP 334. Introduction to Diversity: Human Growth and Development (3).
General education social and behavioral sciences course. Targeted toward individuals seeking to gain a deeper understanding of child development. Includes an in-depth study of the interrelatedness of physical, cognitive, social and emotional aspects of development, as well as a comprehensive overview of the theories, methods and content of human development. Learning should come from multiple sources: required and nonrequired reading, group discussions, class projects, individual student development, etc. Course framework has three major dimensions: (1) basic theoretical and research issues, (2) development from an interdisciplinary perspective, (3) applying this understanding to the real world. In examining these topics, child development is viewed as a phenomenon that occurs within a cultural context influenced by family, gender, culture, language, ability, socioeconomics, diversity and society. *Course includes diversity content*.

CESP 433. Learning Assessment and Evaluation Theory: Evidence-Based Instruction (3).
Prepares students to develop and modify instruction using student performance data and theories of learning. Examines the psychology of learning including such concepts as the nature of learning and memory, learning strategies, individual differences and social factors influencing learning. Examines principles of measurement and evaluation including measurement instruments, observations, questioning strategies and grading plans. Emphasizes the reciprocal relationship between student performance data and instructional decisions. Prerequisite(s): CESP 334.

CESP 701. Introduction to Educational Research (3).
Includes (1) the nature of research methodologies, (2) the preparation of research reports, (3) critical reading of research, and (4) ethics and integrity in conducting and reporting research. Fulfills the university's professional and scholarly integrity training requirement covering research misconduct, publication practices and responsible authorship, conflict of interest and commitment, ethical issues in data acquisition, management, sharing and ownership. Prerequisite(s): graduate standing.

CESP 704. Introduction to Educational Statistics (3).
Introduces statistics, including measures of central tendency, measures of variability, correlation, chi square, t-test, correlated t-test, one-way, two-way analysis of variance and simple regression.

CESP 728. Theories of Human Development (3).
Describes what developmental theories are, what they do, where they come from, how they work and how they are used to explain human nature. Uses theoretical assumptions and related research to systematically evaluate developmental theories in terms of their scientific worthiness and their ability to address characteristics of human development. Focuses on those theories which helped shape the current view of human development as well as significant new perspectives which may shape the way it is viewed in the future. Pre- or corequisite(s): CESP 858 or CLES 801 or CLES 810.

CESP 729. Theories of Early Childhood Development (3).
Describes what developmental theories are, what they do, where they come from, how they work and how they are used to explain human nature. Uses theoretical assumptions and related research to systematically evaluate developmental theories in terms of their scientific worthiness and their ability to address characteristics of early childhood development. Focuses on those theories which helped shape the way we currently view early childhood development as well as significant new perspectives which may shape the way we view it in the future. Covers birth through elementary school years of development. Prerequisite(s): CESP 701 or CLES 801, or equivalent, or instructor's consent.

CESP 750. Workshops in Education (1-6).
Intensive study of topics related to education. Differing topics are denoted by a letter following the course number (i.e., 750C, 750P, etc.).

CESP 750AA. How Boys and Girls Learn Differently (1).
Provides participants with the latest research-based information identifying the basic differences, learning styles, and abilities of each gender. Special attention is devoted to the debate of Nature vs. Nurture and its impact on the learning styles of males and females.

CESP 750AC. Interpersonal Skills for Teachers (1).
Focuses on nonverbal communication, using "I" messages, conversation starters, active listening, giving and accepting forgiveness, and developing trust.

CESP 750AD. Parenting Techniques (1).
Students learn basic parenting techniques to help develop their children's self-concept, responsibility and self-control. Discusses different parenting theories.

CESP 750D. Engineering Research Writing (1).
Teaches students how to create, research and write a simple graduate-level paper, using strict document formatting based on the most recent edition of the APA Style Guide.

CESP 750E. Tutoring Techniques (1).
Workshop goal is to ensure all tutors have the skills necessary to provide effective tutorial assistance to students enrolled in the TRIO Student Support Services Program at Wichita State University. Tutors are expected to set an example of excellence in ethics and in academics for their students. By successfully completing this workshop, the tutors will have reached objectives that are directly related to the measurable objectives set by the Student Support Services Program, which is funded by the U.S. Department of Education. These objectives guide the peer-tutors toward fulfilling their main responsibility to assist each of their students to understand the content of their coursework and improve their grades.

CESP 750G. How Families Function (1).
Designed for school and agency employees to understand how families function by learning about different family theories and family therapies so they can become better teachers, counselors, and administrators.

CESP 750X. Brain Retraining (1).
Teachers and counselors learn how the brain can be retrained for optimizing learning through the introduction of educational kinesiology, brain gym, Bal-a-vis-x, cup stacking and others. Resources are shared on how to obtain training and certification in these programs.

CESP 750Z. Stress Management Technique (1).
Teachers and counselors learn different stress management techniques such as: relaxation, assertive behavior, financial management, anxiety reduction, appropriate diet and exercise. Students learn how to assess stress and make a stress reduction behavior management plan for themselves or students.

CESP 751A. Anger Management Techniques (1).
Teachers and counselors learn different anger management techniques such as: rational self-instruction, relational aggression, anger management classes, videotherapy, and bibliotherapy.

CESP 751D. Working Effectively With Parents (1).
Explores the topic of effective communication with parents in educational and agency settings. Provides strategies to work effectively with all types of parents. Helps students understand how to build a relationship with the student and parent and gives practical and realistic strategies in working with parents dealing with ADD, stress, depression and attention seeking students. Shows how to work with a culturally diverse population and help integrate the community into the school setting.

CESP 751E. Dealing with Boys in School (1).
Provides participants with the latest research-based information identifying the challenges that male students face in achieving success in schools today including societal, academic and behavioral issues.

CESP 751R. Gender Communication (1-4).
Provides participants with the latest research-based information identifying the basic differences in the communication styles of men and women.

CESP 752. Special Studies in Education (1-3).
For students with personnel and guidance interests. May emphasize different preselected areas during a semester. Repeatable for credit with advisor's consent. Prerequisite(s): instructor's consent.

CESP 752K. Effectiveness at School and Work (1).
Focuses on concepts underlying the well-known and widely used Myers-Briggs Type Indicator®. The personal interaction information from the MBTI® is used to enhance students ability to interact positively with others in the workplace and in their personal life. Practical approaches to conflict resolution and effective communication strategies are discussed. Individuals take the MBTI® during the first class and receive interpretive material ($20 test fee required the first class period). Instructor holds a leadership position in the Association for Psychological Type International.

CESP 753L. Filial Play Therapy (1).
Filial Play Therapy, also known as Child-Parent Relationship Training, is an evidence-based training program to improve the relationship between parents and children. No play therapy model has been more researched nor found to be as effective as filial therapy. The method uses the basic tenets of child-centered play therapy to teach parents to improve their relationship with their child, be more aware and sensitive to their child's needs, and to promote healthy development. Filial play therapy has been successfully employed with parents, teachers and paraprofessionals to support the emotional growth and development of children for over 40 years.

CESP 781. Cooperative Education (1-3).
Work-related placement that integrates theory with a planned and supervised professional experience. Repeatable for credit with advisor approval for a total of 4 credit hours.

CHEM - Chemistry

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CHEM 101. Science of Chemistry (3).
General education math and natural sciences course. Teaches the basic concepts of chemistry that aid in understanding the physical world. No attempt to teach basic computational or laboratory skills; instead emphasizes such concepts as atomic and molecular theory, energy, structures and theories regarding why reactions occur.

CHEM 103. Introductory General, Organic and Biochemistry (5).
3 Classroom hours; 4 Lab hours. Lab fee. *General education math and natural sciences course*. Surveys inorganic, organic, nuclear and biological chemistry. Recommended for the student who plans to take only one course in chemistry. Course does not meet the requirements for students who are planning to apply to medical school. Students who expect to major in the natural sciences should take the CHEM 211, CHEM 212 sequence. Credit is allowed in only one of the following: CHEM 103 or 110. Prerequisite(s): one year of high school algebra or MATH 011. Corequisite(s): CHEM 103L.

CHEM 110. Preparatory Chemistry (3).
General chemistry course for students who have not had adequate preparation in chemistry or physics. Enables students to improve their problem-solving skills and to briefly review mathematics relevant to general chemistry. Introduces the basic chemical concepts of atoms, molecules, chemical reactions, chemical equations, gas laws and solutions. Students with credit in CHEM 103 or 211 cannot also receive credit for CHEM 110. Prerequisite(s): one year of high school algebra or MATH 011.

CHEM 211. General Chemistry I (5).
3 Classroom hours; 4 Lab hours. Lab fee. *General education math and natural sciences course*. Introduces general concepts of chemistry. Includes chemical stoichiometry, atomic and molecular structure, bonding, gas laws, states of matter and chemical periodicity. CHEM 211-212 meets the needs of students who may wish to take more than one course in chemistry. Credit is allowed in only one of the following: CHEM 211 or 110. Prerequisite(s): a college-level chemistry course such as CHEM 110, 101 or 103, or high school chemistry or physics. Corequisite(s): CHEM 211L, MATH 111 or two units of high school algebra or MATH 011.

CHEM 212. General Chemistry II (5).
3 Classroom hours; 4 Lab hours. Lab fee. *General education math and natural sciences course*. Continuation of CHEM 211. Includes thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative analysis and an introduction to theories of bonding. Prerequisite(s): CHEM 211 with a grade higher than C-. Corequisite(s): CHEM 212L.

CHEM 309. Special Topics in Chemistry (1-3).
Detailed study of topics in chemistry with particular emphasis established according to the expertise of the various instructors. Repeatable for credit. Prerequisite(s): CHEM 212.

CHEM 481. Cooperative Education (1-6).
Permits chemistry students to participate in the cooperative education program.

CHEM 481N. Internship (1).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

CHEM 514. Inorganic Chemistry (3).
General education math and natural sciences course. Basic inorganic chemistry emphasizing molecular symmetry and structure, fundamental bonding concepts, ionic interactions, periodicity of the elements, systematics of the chemistry of the elements, acid-base chemistry and nonaqueous solvents, classical coordination chemistry and introductory bioinorganic chemistry. Prerequisite(s): CHEM 212 with a grade higher than C-. CHEM 531 strongly suggested but not required.

CHEM 523. Analytical Chemistry (4).
2 Classroom hours; 6 Lab hours. Lab fee. *General education math and natural sciences course*. Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization and oxidation-reduction volumetric analysis. Prerequisite(s): CHEM 212 with a grade higher than C-. Corequisite(s): CHEM 523L.

CHEM 524. Instrumental Methods of Chemical Analysis (4).
2 Classroom hours; 6 Lab hours. Lab fee. Introduces spectroscopic techniques (UV-Visible atomic absorption, molecular absorption, infrared, mass spectrometry and NMR), electrochemical techniques (potentiometry, voltammetry and coulometry) and separation techniques (gas chromatography and HPLC). Applications of computer and automated methods of analysis also covered. Prerequisite(s): CHEM 531; CHEM 532 strongly recommended but not required. Corequisite(s): CHEM 524L.

CHEM 531. Organic Chemistry I (5).
3 Classroom hours; 6 Lab hours. Lab fee. *General education math and natural sciences course*. Introduces the study of carbon compounds emphasizing reaction mechanisms, stereochemistry and spectrographic analysis. Credit is not allowed for both CHEM 531 and 535. Prerequisite(s): CHEM 212 with a grade higher than C-. Corequisite(s): CHEM 531L.

CHEM 532. Organic Chemistry II (5).
3 Classroom hours; 6 Lab hours. Lab fee. Continuation of CHEM 531 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Credit is not allowed for both CHEM 532 and 536. Prerequisite(s): CHEM 531 with a grade higher than C-. Corequisite(s): CHEM 532L.

CHEM 533. Elementary Organic Chemistry (3).
One-semester survey of organic chemistry, examining various classes of organic compounds, organic reactions and reaction mechanisms. Establishes an understanding of the relationship between structure and reactivity, with particular emphasis on the importance of organic chemistry to the health sciences and biomedical engineering. Credit is not allowed for both CHEM 533 and 531. Course does not meet the needs of chemistry majors or premed students. Prerequisite(s): CHEM 212 with a grade higher than C-.

CHEM 535. Organic Chemistry I (3).
Introduces the study of carbon compounds emphasizing reaction mechanisms, stereochemistry and spectrographic analysis. This course does not include a lab, is open only to biomedical engineering majors and does not meet the needs of chemistry majors or premed students. Credit is not allowed for both CHEM 535 and 531. Prerequisite(s): must be a biomedical engineering major and have completed CHEM 212 with a grade higher than C-.

CHEM 536. Organic Chemistry II (3).
Continuation of CHEM 535 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Course does not include a lab, is open only to biomedical engineering majors and does not meet the needs of chemistry majors or premed students. Credit is not allowed for both CHEM 536 and 532. Prerequisite(s): must be a biomedical engineering major and have completed CHEM 531 or 535 with a grade higher than C-.

CHEM 545. Physical Chemistry I (3).
General education math and natural sciences course. Introduces fundamentals of thermodynamics with the goal of understanding the driving forces behind chemical and physical changes and equilibria. Covers the laws of thermodynamics and explores concepts involving work, heat and simple mechanical processes. Introduces Helmholtz and Gibbs energy as thermodynamic indicators of spontaneity/equilibria. Applies these concepts to the study of phase changes, chemical equilibria, ideal and non-ideal solutions, electrolytes and chemical kinetics. Prerequisite(s): CHEM 212 with a grade higher than C-, one year of college physics, MATH 344 or its equivalent.

CHEM 546. Physical Chemistry II (3).
Covers elementary quantum mechanics and its applications to chemistry. Begins with a historical comparison between classical and quantum mechanics, then builds from the postulates of quantum mechanics to explore the Schrödinger equation and its use in solving problems involving particles, rotating bodies and vibrations. Special emphasis on spectroscopy and approximation methods relevant to chemistry. Prerequisite(s): CHEM 212 with a grade higher than C-, one year of college physics, and MATH 344 or its equivalent.

CHEM 547. Physical Chemistry Lab (2).
6 Lab hours. Lab fee. Laboratory experiments and exercises that reinforce physical chemistry concepts of thermodynamics, equilibrium, spectroscopy and error analysis. Students gain practical, hands-on experience with computerized data acquisition and learn computational techniques for data reduction and analysis. For undergraduate credit only. Pre- or corequisite(s): CHEM 545, 546.

CHEM 605. Medicinal Chemistry (3).
For students interested in chemistry related to the design, development and mode of action of drugs. Describes those organic substances used as medicinal agents and explains the mode of action and chemical reactions of drugs in the body; illustrates the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenicity, etc.; and brings about a better understanding of drugs. Includes transport, basic receptor theory, metabolic transformation of drugs, discussion of physical and chemical properties in relation to biological activity, drug design, structure-activity relationships and discussion of a select number of organic medicinal agents. Prerequisite(s): CHEM 532 or equivalent; a semester of biochemistry (CHEM 661 or 662) and a year of biology are strongly recommended.

CHEM 615. Advanced Inorganic Chemistry (3).
Includes modern bonding theories, structure and spectra of inorganic compounds, coordination and organometallic chemistry, boranes, inorganic ring systems and polymers, inorganic environmental chemistry, mechanisms of inorganic reactions and solid state chemistry. Prerequisite(s): CHEM 514. Pre- or corequisite(s): CHEM 546.

CHEM 616. Inorganic Chemistry Lab (2).
6 Lab hours. Lab fee. Experimental methods of inorganic chemistry. An introduction to the synthetic and analytical techniques that are employed in modern inorganic chemistry. For undergraduate credit only. Pre- or corequisite(s): CHEM 615.

CHEM 661. Principles of Biochemistry (3).
General education math and natural sciences course. Survey course for chemistry majors including chemistry/business majors and students in life sciences. Not recommended for the BS in chemistry-premedicine or biochemistry field majors for whom CHEM 662 and 663 are required. Introduces thermodynamics and biological oxidation-reduction reactions; structure, metabolism and synthesis of proteins, carbohydrates, lipids and nucleic acids; enzyme kinetics, photosynthesis and transfer of genetic information. Prerequisite(s): CHEM 532, 533, or 536. Credit is not granted for both CHEM 661 and 662.

CHEM 662. Biochemistry I (3).
Study of major constituents of the cell: protein, carbohydrate, glycoprotein, lipid, nucleic acid, nucleoprotein, enzyme catalysis, biological oxidations, photosynthesis and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Credit is not granted for both CHEM 661 and 662. Prerequisite(s): CHEM 532 or equivalent. Pre- or corequisite(s): CHEM 523 or equivalent.

CHEM 663. Biochemistry II (3).
Studies metabolism and control of carbohydrates, lipids, phosphoglycerides, spingolipids, sterols, amino acids and proteins; synthesis of porphyrins, amides and polyamines; synthesis and metabolism of purines, pyrimidines and nucleotides; synthesis and structure of DNAs, RNAs and proteins; organization and functioning of genes; evolution of proteins and nucleic acids, hereditary disorders of metabolism, biochemistry of endocrine glands, major nutrients and vitamins, body fluids and generalized tissues. A fundamental background of biology or microbiology is recommended but not essential. Prerequisite(s): CHEM 662 with a grade higher than C-.

CHEM 664. Biochemistry Laboratory (3).
6 Lab hours. Lab fee. Practical training in biochemical procedures and literature searching; experiments include isolation, characterization and assay of biomolecules and use of centrifugation, chromatography, electrophoresis, spectrophotometry, enzyme kinetics and molecular cloning techniques. For undergraduate credit only. Prerequisite(s): CHEM 532. Pre- or corequisite(s): CHEM 662 or 663.

CHEM 666. Special Topics in Biochemistry (3).
Discusses a small number of current problems in biochemistry in depth. Requires reading published research in the field. (Offered fall semester in even-numbered years.) Prerequisite(s): BIOL 211, CHEM 662, 663.

CHEM 669. Research In Biochemistry (2).
Cross-listed as BIOL 669. Students in the biochemistry field major participate in a biochemistry research project under the direction of a faculty member. Requires a written report summarizing the results. For undergraduate credit only. Repeatable once for credit. Prerequisite(s): BIOL 420, and CHEM 662 or 663, and CHEM 664 and instructor's consent.

CHEM 690. Independent Study and Research (1-3).
Studies performed must be directed by a faculty member in the department of chemistry. For undergraduate credit only. Repeatable for credit. A maximum of 3 credit hours may be counted toward graduation. Prerequisite(s): departmental consent.

CHEM 700. Chemistry Seminar (1).
Students give seminars on either papers recently published in the literature or on their own research. Repeatable for credit.

CHEM 701. Chemistry Colloquium (1).
Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit.

CHEM 709. Special Topics in Chemistry (2-3).
Discusses topics of a special significance and interest to faculty and students. Offerings announced in advance. Repeatable for credit.

CHEM 715. Advanced Spectroscopy (3).
Introduces 1H and 13C NMR spectroscopy including basic concepts such as integration, chemical shifts, diamagnetic shielding, magnetic anisotropy, spin-spin coupling (first and second-order), coupling constants, proton decoupled 13C NMR interpretation of 1H and 13C NMR spectra. More advanced topics include NOE and protein structural mapping, and multidimensional techniques such as COSY, DEPT, INEPT, molecular motion by NMR, coupling to I>0 metal centers, including those with <100 percent natural abundance, virtual coupling in metal complexes, NMR of paramagnetic systems and use of paramagnetic shift reagents. Introduces mass spectroscopy including instrumentation-magnetic sector, quadrupole, ion trap, MS-MS; sample preparation and interfaces-GC-MS, LC-MS, electrospray, MALDI; methods of ionization-electron impact, chemical ionization, electrospray, interpretation of mass spectra-basic concepts, fragmentation patterns. Introduces the interpretation of mid-infrared spectroscopy of complex molecules and ionic compounds followed by the synthesis of results from NMR, MS and mid IR spectra to determine structure. Emphasizes the interpretation of results for understanding electronic and molecular properties of chemical compounds related to their symmetry. Prerequisite(s): CHEM 532 or equivalent; or admission to a chemistry graduate program.

CHEM 717. Advanced Spectroscopy II (3).
Introduces electronic and vibrational spectroscopy, EPR and magnetic properties of compounds. Studies the electric field interaction of radiation, electronic and vibrational spectroscopy, and the magnetic field interaction of radiation, EPR and magnetism, with molecular systems examining the different changes in state that molecules can undergo. Emphasizes the interpretation of results for understanding electronic and molecular properties of chemical compounds related to their symmetry and structure. Prerequisite(s): CHEM 532, 546, 615, or their equivalents; or admission to a chemistry graduate program.

CHEM 719. Modern Synthetic Methods (3).
Introduces modern synthetic methods in chemistry. Detailed investigation of the synthetic chemistry of anions is followed by a detailed survey of functional group interconversions, then oxidation and reduction reactions. Introduces the topic of retrosynthetic analysis. Topics in inorganic synthesis include organometallic bond forming and breaking reactions, ligand synthesis and replacement, solid state synthesis and topics in bioinorganic synthesis. Prerequisite(s): CHEM 532 and 615, or their equivalents; or admission to a chemistry graduate program.

CHEM 721. Advanced Biochemistry (3).
Introduces advanced biochemical concepts, processes and techniques. A comprehensive survey of structure and functions of biomolecules including proteins, nucleic acids, lipids, DNA replication and translation. Covers biological membrane and membrane transport. Enzyme mechanisms and kinetics and protein structure/function are discussed in detail. Biochemical, molecular biological, biophysical and chemical techniques that are commonly used in the study of biochemical processes are introduced and discussed. Prerequisite(s): CHEM 661 or 663 or their equivalents; or admission to a chemistry graduate program.

CHEM 722. Advanced Physical Chemistry (3).
In-depth overview of the fundamentals of thermodynamics, kinetics, quantum mechanics and statistical mechanics as they apply to chemistry. Special emphasis is placed on solution thermodynamics, kinetics of coupled reactions, statistical mechanics of macromolecules and quantum mechanics as it applies to spectroscopy. Prerequisite(s): CHEM 545 and 546, or their equivalents; or admission to a chemistry graduate program.

CHEM 734. Instrumental Methods for Research (3).
Designed to prepare graduate students or other researchers to perform spectroscopy experiments relevant to their research. The identity of organic compounds can be determined by the information provided by several types of spectra: mass, infrared, nuclear magnetic resonance, fluorescence and ultraviolet. Students learn to operate such instruments as the Varian 2200 GC/MS mass spectrometer, the ThermoNicolet Avatar FTIR spectrophotometer, the Varian Mercury 300 and Inova 400 NMR spectrometers, the Fluorolog fluorescence spectrophotometer and the Hitachi U-2010 and Varian Cary 100 UV-Vis spectrophotometers in the department's NMR and analytical facilities. Focuses on technique and not the interpretation of spectra. On successful completion of this course, students are authorized to use departmental instruments. Prerequisite(s): CHEM 524 or equivalent, or departmental consent, or admission to a chemistry graduate program.

CHIN - Chinese

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CHIN 111. Elementary Chinese I (5).
Introduces the Chinese language with emphasis on the fundamentals of phonetics, listening, speaking, reading and writing, as well as gaining an understanding of Chinese culture.

CHIN 112. Elementary Chinese II (5).
Continues the introduction to the Chinese language with emphasis on improving the skills of listening, speaking, reading and writing, as well as gaining competence in Chinese culture. Prerequisite(s): CHIN 111 or one unit of high school Chinese or departmental consent.

CHIN 210. Intermediate Chinese (5).
Designed to be a seamless continuation of the elementary level by building on the skills of listening, speaking, reading and writing, as well as helping learners better understand contemporary Chinese society and be able to discuss and analyze cultural differences. Prerequisite(s): CHIN 112 or two units of high school Chinese or departmental consent.

CI - Curriculum and Instruction

School of Education

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CI 203. Self-Care for Today's Educator (1).
From safety concerns to troubled learners, teachers often face high-stress situations that can leave them feeling emotionally stressed and uninspired. Self-care is an essential practice for all teachers; this course targets strategies for self-care and wellness. Students learn techniques on addressing stressors, managing challenging situations and building long-term self-care strategies for all areas of life. For students admitted to the Teacher Education program, no grade below B- (2.750) will count toward the degree.

CI 204. Assistive Technology (1).
Introductory survey course for educators in the application of assistive technology (AT) in the general education, unified, and/or special education classroom setting. Teacher education candidates learn about the continuum of AT devices, universal design for learning, assessment and evaluation protocols, and techniques to help meet individual learner needs through assistive technology across the curriculum. Additional discussions include action plan development related to systemic implementation strategies for supporting the use and integration of assistive technologies in the school setting. Prerequisite(s): admission to teacher education program.

CI 270. Introduction to the Education Profession (3).
Examines the nature of teaching, the roles of collaboration, reflective practice, critical thinking, problem solving and inquiry. Students are engaged in activities using all of these tools. Includes electronic classroom observation component. Prerequisite(s): successful completion of foundation courses.

CI 305. Clinical Field Experience: Special Education I (1).
To support coursework in Core I, and specifically CI 320. Students learn how special education services are delivered in public schools, gain practical experience interacting with public school students with various abilities and in a variety of settings; become familiar with related terminology (IEP, ECU, high incidence, low incidence, ID, etc.), the steps used to evaluate and place students with exceptionalities, and approaches that work to maximize the success of all students. A grade of B- or better is required in this course. Prerequisite(s): acceptance into the teacher education program. Pre- or corequisite(s): CI 311, CI 320.

CI 311. Introduction to Diversity: Field Experience (1).
To support coursework in Core I, and specifically in CI 320, students learn how special education services are delivered in public schools, gain practical experience interacting with public school students with various abilities and in a variety of settings; become familiar with related terminology (IEC, ECU, high incidence, low incidence, ID, etc.), the steps used to evaluate and place students with exceptionalities, and approaches that work to maximize the success of all students. *Course includes diversity content*. A grade of B- or better is required in this course. Prerequisite(s): acceptance into teacher education program. Corequisite(s): CESP 334, 320, 321.

CI 313. Reading and Writing Exceptionalities (2).
Teacher education candidates explore and evaluate instructional theories, principles and research-based literacy instructional strategies for learners with exceptionalities. They become familiar with formal and informal diagnostic tools to assess students' literacy behaviors and gain skill implementing research-based intervention practices. Teacher education candidates explore the interface of technology and effective literacy instruction. Through assignments designed to provide practical application of content, they explore resources, technology, research and practices that facilitate specific skill development in students. They also learn about strategies to support enjoyment of reading and writing for students with diverse and challenging learning needs. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 314. Principles of Effective Mentoring/Mentee Relationships (1).
Overview of effective mentoring, recognizing the roles of both the mentor and mentee. Students examine the roles within a mentor relationship, the best way to communicate, and how to build and maintain a strong rapport with a mentor. Students also examine their preconceived ideas about mentor/mentee relationships, looking for ways to grow and improve as mentees. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 315. Core I Practicum (1).
Designed to allow candidates to spend time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): admission to teacher education. Pre- or corequisite(s): CI 320, 321, CESP 334. Corequisite(s): CI 325.

CI 317. Literacy Strategies in the Content Areas (2).
Covers principles and strategies used in effective instruction, including vocabulary development and comprehension skills needed to more fully read to learn in content areas. Students receive training to use the six-trait Analytical Rating Guide for assessing writing, which is the method used to score the Kansas State Writing Assessment. Prerequisite(s): admission to the teacher education program.

CI 320. Introduction to Diversity: Exceptionalities (2).
Surveys the strengths and needs of learners with exceptional needs, including those with physical, sensory and cognitive disabilities and those who exhibit gifts and talents. The effects of cultural differences and human developments on individuals with exceptional needs are explored. Current educational policy, practices and services are reviewed. *Course includes diversity content*. Prerequisite(s): admission to teacher education. Pre- or corequisite(s): CI 311 or CI 315; CI 321, CESP 334.

CI 321. Introduction to Diversity: Cultural Issues (2).
Examines issues that impact providing an equitable education to all students. Disciplined inquiry and critical experience encourage educators to be more responsive to cultural pluralism in society. Content emphasizes diversity issues in education and development of a knowledge base to support culturally responsible pedagogy. *Course includes diversity content*. Prerequisite(s): admission to teacher education. Pre- or corequisite(s): CI 311 or CI 315; CI 320, CESP 334.

CI 323. Technology Seminar in Elementary Education (1).
Intended to help elementary and early childhood unified education majors develop the technology skills required to be an effective elementary classroom teacher in today's schools. Focuses on word processing, presentation skills, data collection and analysis, interactive and collaborative hardware and software, and the appropriate use of technology in curriculum development and classroom instruction. Prerequisite(s): acceptance into the teacher education program. Corequisite(s): CI 311, 320, 321; CESP 334.

CI 324. Linguistics for Elementary Teachers (3).
In-depth study of the major theories of first and additional language acquisition/development/learning and their implications for K-6

classroom instruction. Prerequisite(s): acceptance into the teacher education program.

CI 325. ISAM: Middle/Secondary General Methods (1).
Addresses basic concepts and skills related to classroom instruction, assessment and management for middle and secondary level students. Introduces lesson planning and sequencing, establishing rules and procedures, and cultivating a positive classroom environment. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. *Course includes diversity content.* Prerequisite(s): admission to teacher education. Pre- or corequisite(s): CI 320, 321. Corequisite(s): CI 315.

CI 326. Engaging and Motivating the Learner (3).
Strategies for enhancing student engagement and active learning are explored and applied through this hands-on course. This engaging, interactive course prepares the new teacher candidate but also can strengthen the skills of the student with a background that includes working within the schools. Offers teacher candidates tips and strategies for fostering safe environments while using effective classroom management and instructional techniques to build an engaging and motivating classroom. *Course includes diversity content.* Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 327. Early Childhood Unified: Foundations (2).
An introduction to working with young children (including those developing normally, those at risk due to environmental and biological issues, and those with special needs), their families, and professionals in community schools, agencies and programs. Emphasizes professional development, positive dispositions, early childhood learning environments and early childhood professional standards. Examines the ECU professions, characteristics of good teaching, the nature of teacher education and basic historical and philosophical foundations of ECU education. Prerequisite(s): admission to teacher education.

CI 329. Universal Design for Learning (1).
Introduction to Universal Design for Learning (UDL). Emphasizes the three principles of UDL: multiple means of presentation, action and expression, and engagement for instructional planning and implementation. Candidates apply these principles within an educational setting including curriculum, behavior support systems, and environment. Candidates examine the Education Unified profession and how UDL is a proactive plan for creating an inclusive environment in which all students receive personalized learning experiences. Prerequisite(s): admission to the teacher education program.

CI 345. Integrating Learning through the Arts (2).
The teacher candidate understands and uses the central concepts, tools of inquiry and structures of the arts (music, visual arts, dance and/or theatre) to plan, implement and assess (with adaptations as needed) learning experiences that engage all learners (including those with special needs) in critical thinking, creativity and collaborative problem solving.

CI 402E. ISAM: Elementary Teaching Early Literacy K-2 (3).
Introduces the instructional and assessment decisions and processes necessary for meeting curriculum goals and objectives in the K-2 classroom. Students become familiar with various management strategies for building a positive classroom environment in which young children can achieve at their full potential. Students understand instruction, assessment and classroom management in the context of teaching emergent literacy to foster language development, create optimal learning environments, assess and evaluate literacy learning; provide for language development, create optimal learning environments, assess and evaluate literacy learning and provide for differentiation and intervention strategies related to young students. Comprehensive, evidence-based primary literacy programs include modeled, guided and direct instruction; management and organization frameworks, skill and strategy teaching, integration of reading/writing, listening/speaking and viewing/visual representation; and technologies that enhance K-2 literacy instruction and facilitate professional productivity. Prerequisite(s): CI 323. Corequisite(s): CI 402J, 411A.

CI 402I. ISAM: Teaching Intermediate Literacy 3–6 (2).
Intermediate literacy theory for instructional and assessment decisions and processes necessary for meeting curriculum goals and objectives for the reader to learn in the 3-6 grade classroom. Students become familiar with various classroom management strategies for building a positive classroom environment in which all children can achieve at their full potential. Students understand instruction, assessment and management in the context of teaching the specific subject integrated with all subject areas. Prerequisite(s): CI 402E. Corequisite(s): CI 402M, 402S, 411B.

CI 402J. ISAM: Elementary Social Studies (3).
Introduces K-6 elementary social studies content, instructional strategies, assessment decisions and classroom management strategies necessary for meeting curriculum goals and objectives in the K-6 classroom. Students understand how effective social studies instruction, assessment and classroom management support student learning in the context of teaching social studies. Prerequisite(s): CI 311, 320, 321, 323; CESP 334. Corequisite(s): CI 402E, 411A.

CI 402M. ISAM: Elementary Mathematics (3).
Introduces instructional strategies, assessment decisions and classroom management strategies necessary for meeting mathematics curriculum goals and objectives in the K-6 classroom. Students understand how effective instruction, assessment and classroom management support student learning in the context of teaching mathematics. Prerequisite(s): CI 519 with a grade of 2.000 or better; CESP 433; and MATH 501 with a grade of 2.000 or better. Corequisite(s): CI 402I, 402S, 411B.

CI 402S. ISAM: Elementary Science (3).
Introduces instructional strategies and processes, assessment decisions and classroom management strategies necessary for meeting science curriculum goals and objectives in the K-6 classroom. Students understand how effective science instruction, assessment and classroom management support student learning in the context of teaching science. Prerequisite(s): CI 411A. Pre- or corequisite: CI 402E. Corequisite(s): CI 402M, 411B.

CI 402U. Instructional Strategies, Assessment and Management: Literacy Instruction for Upper Elementary (3).
Introduces instructional strategies, assessment, decisions and classroom management strategies necessary for meeting language arts curriculum goals and objectives for all students in the 3rd-6th grade classroom. Students use the central concepts and structures of English/language arts (reading, writing, speaking, listening and language) by using individual performance data to plan, implement and assess language arts learning experiences that engage all students, taking into account individual differences, EL status, culture and community context to assure mastery of content. Emphasizes structured literacy, small group implementation and individualized tutoring. Prerequisite(s): CI 311. Pre- or corequisite(s): CI 402J, CI 411A.

CI 411A. Preteaching Internship: Elementary Core IIA (2).
Designed to allow teacher education candidates to spend an extended period of time in an appropriate elementary classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards in early literacy and social studies content. Prerequisite(s): successful completion of CI 311, 320, 321, 323 and CESP 334. Corequisite(s): CI 402E, 402J.

CI 411B. Preteaching Internship: Elementary Core IIB (2).
Designed to allow teacher education candidates to spend an extended period of time in an appropriate elementary classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards in intermediate literacy, math and science content. Prerequisite(s): successful completion of CI 317, 411A, 519; MATH 501. Corequisite(s): CI 402I, 402M, 402S.

CI 412E. Teaching Internship I: Middle Level English (2).
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 425E, CI 426E; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Pre- or corequisite(s): CI 417, CI 435E.

CI 412J. Teaching Internship I: Middle Level History/ Government (2).
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 425J, CI 426J; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Pre- or corequisite(s): CI 417, CI 435J.

CI 412M. Teaching Internship I: Middle Level Mathematics (2).
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 425M, CI 426M; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Pre- or corequisite(s): CI 417, CI 435M.

CI 412S. Teaching Internship I: Middle Level Sciences (2).
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 425S, CI 426S; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Pre- or corequisite(s): CI 417, CI 435S.

CI 413E. Teaching Internship I: Secondary Level English (2).
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 425E, CI 426E; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Pre- or corequisite(s): CI 417, CI 435E.

CI 413J. Teaching Internship I: Secondary Level History/ Government (2).
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 425J, CI 426J; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Pre- or corequisite(s): CI 417, CI 435J.

CI 413M. Teaching Internship I: Secondary Level Mathematics (2).
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 425M, CI 426M; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Pre- or corequisite(s): CI 417, CI 435M.

CI 413S. Teaching Internship I: Secondary Level Sciences (2).
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 425S, CI 426S; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Pre- or corequisite(s): CI 417, CI 435S.

CI 414. ISAM: Elementary Social Studies (3).
Introduces K-6 elementary social studies content, instructional strategies, assessment decisions, and classroom management strategies necessary for meeting curriculum goals and objectives in the K-6 classroom. Students understand how effective social studies instruction, assessment and classroom management support student learning in the context of teaching social studies. *Course includes diversity content*. Prerequisite(s): admission to ECU/Elementary Apprentice Program.

CI 415. Differentiated Instruction for Diverse Learners (3).
Surveys the strengths and needs of learners with exceptional needs, including those learners with physical, sensory and cognitive disabilities, and those learners who exhibit gifts and talents. Explores the effects of cultural differences and human development on individuals with exceptional learning needs. Reviews current educational policy, strategies, practices and services. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 416. Classroom Management and Pedagogy (2).
Presents best practices in classroom and behavior management and pedagogy — from organizing time, materials and classroom space to strategies for managing individual and large group student behaviors, transitions and other arrangements for classrooms in general and special education. Basic federal and state laws as they pertain to the legal procedures for all teachers, including teachers of students

with disabilities and ELL students, are presented. Prepares teaching candidates to feel confident, know and fulfill their professional and legal responsibilities, not only at the beginning of the year, but for the entire school year. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 417. ISAM: Literacy Strategies in the Content Areas (2).
Addresses principles and strategies used in effective literacy instruction, including vocabulary development and comprehension skills needed to more fully read to learn in content areas. Candidates receive training to use the six-trait Analytical Rating Guide for assessing writing, which is the method used to score the Kansas State Writing Assessment. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. *Course includes diversity content*. Prerequisite(s): grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): appropriate CI 435 course(s), appropriate teaching internship (CI 412 or 413).

CI 418. Creating a Production Centered Classroom (2).
Teacher education candidates strengthen the knowledge that impacts student achievement as they learn to empower students of all levels to explore their own STEM passions. Participants discover how to transform their classroom into a place where students want to engage in work on STEM projects. Teachers learn how to structure their class for students to research a topic and create a product that is shared with the class/school/world. Teachers also learn how to facilitate the student projects to ensure optimal student engagement. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 425E. ISAM: Middle/Secondary Level Content-Specific Methods I - English (2).
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): CI 426E.

CI 425J. ISAM: Middle/Secondary Level Content-Specific Methods I - History/Government (2).
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): CI 426J.

CI 425M. ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics (2).
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): CI 426M.

CI 425S. ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences (2).
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): CI 426S.

CI 426E. Core II Practicum - English/Language Arts (1).
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): CI 425E.

CI 426J. Core II Practicum - History/Government (1).
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): CI 425J.

CI 426M. Core II Practicum - Mathematics (1).
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): CI 425M.

CI 426S. Core II Practicum - Science (1).
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite(s): CI 426S.

CI 427. Philosophy, History and Ethics of Education (3).
Presents the major contemporary educational philosophies, the historical and social development of American education, and the ethical standards and legal issues influencing schools today. Some emphasis on the students' examination of their own educational philosophies and ethics. *Course includes diversity content*.

Prerequisite(s): admission to teacher education. Corequisite(s): a practicum or clinical experience.

CI 435E. ISAM: Middle/Secondary Level Content-Specific Methods II - English/Language Arts (3).
Addresses further content-specific concepts and advanced skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 435J. ISAM: Middle/Secondary Level Content Specific Methods II - History/Government (3).
Addresses further content-specific concepts and advanced skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 435M. ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics (3).
Addresses further content-specific concepts and advanced skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 435S. ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences (3).
Addresses further content-specific concepts and advanced skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436E. ISAM: Middle/Secondary Level Content-Specific Methods III - English (2).
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436J. ISAM: Middle/Secondary Level Content-Specific Methods III - History/Government (2).
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436M. ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics (2).
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436S. ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences (2).
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 437. Field Experience I (1).
Designed to allow teacher education candidates to spend an extended period of time in an appropriate classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards in elementary curriculum. Additionally, students communicate and reflect with the mentor, using feedback to enhance lesson delivery and classroom interactions. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 438. Field Experience II (1).
Designed to allow teacher education candidates to spend an extended period of time in an appropriate classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards in elementary curriculum. Additionally, students communicate and reflect with the mentor, using feedback to enhance lesson delivery and classroom interactions. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 439. Field Experience III (1).
Designed to allow teacher education candidates to spend an extended period of time in an appropriate classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards in elementary curriculum. Additionally, students communicate and reflect with the mentor, using feedback to enhance lesson delivery and classroom interactions. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 440. Field Experience IV (1).
Designed to allow teacher education candidates to spend an extended period of time in an appropriate classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards in elementary curriculum. Additionally, students communicate and reflect with the mentor, using feedback to enhance lesson delivery and classroom interactions. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 446. Student Teaching and Classroom Management Seminar: Elementary (2).
Students study and evaluate effective classroom management techniques. Students discuss experiences emerging from student teaching including the planning of school programs, organizing effective environments, assessing instructional strategies and assuming the responsibilities of a teacher. Prerequisite(s): CI 311, 320, 321, 323, 324, 427; CESP 334, 433; CI 402E, 402J, 402I, 402M, 402S, 411A, 411B all with grade of B- or better and acceptance into clinical practice. Pre- or corequisite(s): CI 447 or 647A.

CI 447. Elementary Teaching Internship (11).
Designed to allow students to spend a semester in an appropriate classroom setting working with a cooperating teacher. The student and cooperating teacher, with the approval of the university supervisor, devise a plan for the student teacher to assume full responsibility for the classroom(s) for a designated period of time during the semester. Prerequisite(s): CI 311, 320, 321, 323, 324, 427; CESP 334, 433; CI 402E, 402J, 402I, 402M, 402S, 411A, 411B all with grade of B- or better and acceptance into clinical practice. Pre- or corequisite(s): CI 446.

CI 452. Special Studies in Education (1-3).
Primarily for elementary and secondary education majors. Repeatable for credit with advisor's consent.

CI 458. Inquiry Based Learning (2).
Teacher education candidates strengthen the knowledge that impacts student achievement in science by focusing on the implementation of integrated STEM in the primary/intermediate classroom. Participants increase their (1) confidence in implementing STEM instruction and content knowledge, (2) instructional level of STEM pedagogical skills leading to effective lessons using the 5E process, (3) knowledge and factors in discourse, assessment and curriculum to apply Kansas College and Career Ready Standards for the Next Generation of Science Standards in their instructional practice, (4) focus on STEM instructional practices to increase student attitude toward science, technology, engineering and math learning, and (5) understand how effective science instruction, assessment and classroom management support student learning in the context of teaching science. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 461E. Teaching Internship II: Middle Level English/Language Arts (5-10).
Designed to allow middle-level candidates to spend a semester in appropriate classroom settings co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 461J. Teaching Internship II: Middle Level History/Government (5-10).
Designed to allow middle-level candidates to spend a semester in appropriate classroom settings co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 461M. Teaching Internship II: Middle Level Mathematics (5-10).
Designed to allow middle-level candidates to spend a semester in appropriate classroom settings co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 461S. Teaching Internship II: Middle Level Sciences (5-10).
Designed to allow middle-level candidates to spend a semester in appropriate classroom settings co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 471E. Teaching Internship II: Secondary Level English/Language Arts (10).
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 413 and 435 courses, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 471J. Teaching Internship II: Secondary Level History/ Government (10).
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 413 and 435 courses, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 471M. Teaching Internship II: Secondary Level Mathematics (10).
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 413 and 435 courses, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 471S. Teaching Internship II: Secondary Level Sciences (10).
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite(s): grades of B- or better in appropriate CI 413 and 435 courses, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 481. Cooperative Education (1-8).
Provides the student a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Repeatable for credit. Prerequisite(s): successful completion of 24 credit hours and a 2.500 GPA.

CI 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

CI 490. Individual Studies in Education (1-3).
Individual study of education topics.

CI 502. Math for Exceptionalities (3).
Teacher education candidates explore and evaluate instructional theories, principles and research-based instructional strategies appropriate for mathematics for learners with exceptionalities. They also become familiar with formal and informal diagnostic tools to identify students experiencing difficulties learning mathematical concepts and gain skill implementing research-based intervention practices for these students. In addition, teacher education candidates explore the interface of technology and effective mathematics instruction. Through assignments designed to provide practical application of content, they explore resources, technology, research and practices that facilitate specific skill development in students. They also learn about strategies to support enjoyment of mathematics for students with diverse and challenging learning needs. For undergraduate students only. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 503. Mathematics for High School Teachers (3).
Capstone course in secondary mathematics education designed to prepare secondary mathematics education majors for a career in high school teaching by examining secondary school mathematics from an advanced, mathematical point of view. Topics covered are rooted in core secondary curriculum including number and operations, algebra, geometry, functions and statistics. Students draw connections between ideas taught separately in different mathematics courses as they explore familiar high school level mathematics problems. Open to education majors only. *Course includes diversity content*. Prerequisite(s): MATH 321, 344, 415, 511, 513, 531, 615, 621, STAT 460 (with a grade point of 2.000 or better, or instructor's consent).

CI 504. Special Education Law (3).
Specific local, state, and federal laws governing special education programs and services are discussed in detail. The impact, application of the laws, and strategies for complying with them in the PreK-6 setting are major areas of focus. For undergraduate credit only. *Course includes diversity content*. Prerequisite(s): admission to ECU/ Elementary Apprentice Program.

CI 505. Science Technology and Society (1).
Investigates the relationships between science and technology, and the effects of both on our past and present society/culture.

CI 506. Introduction to the Education Profession for Special Educators (2).
Introduces the education profession and situates within it the roles and responsibilities of the special educator. Discusses the historical, philosophical, sociological, governance, organizational, legal and curricular foundations of education, including the integration of topics related to the evolution of the special education profession. Students learn how to carry out the important roles and responsibilities of the special educator, as well as gain a basic understanding of the various educational settings in which they may be employed. Prerequisite(s): graduate standing.

CI 519. Mathematical Investigations (3).
Based on the NCTM principles and standards for school mathematics focusing on process standards: problem solving, reasoning and proof, communication, connections and multiple representations. Students gain an active understanding of problem posing and problem solving in mathematics, as well as a familiarity with heuristics of problem solving. Integrates appropriate educational technology tools and instructional strategies for students with special needs including English Language Learners (ELL). Prerequisite(s): MATH 501 with a grade of 2.000 or better, or instructor's consent.

CI 520. Physical Science in the Elementary Classroom (3).
Students discover how the world around them works by doing a series of hands-on activities which allows them to apply the investigative nature of science to an elementary classroom setting. Intended only for elementary teacher candidates who are seeking to better understand the critical connections between the discovery and understanding of

science concepts and the inquiry approach used in elementary science instruction. For undergraduate credit only. Prerequisite(s): admitted to teacher education program.

CI 556. Instructional Planning and Classroom Management (2).
Provides students with an opportunity to demonstrate their understanding of foundational skills related to planning instruction and supporting student behavior prior to entering the field as special educators for students with mild to moderate disabilities. Students learn basic instructional planning techniques, accommodations and modifications, how to develop individualized educational programs, and strategies to effectively support classroom and individual student behavior. In addition, students learn how to access resources to further support the use of evidence-based and best practices within specific core content areas. Prerequisite(s): graduate standing.

CI 557. Integrated Seminar and Mentoring (1).
Provides students with a network of cohort and instructor support where they share, discuss and reflect upon their teaching practices to assist in assuming the responsibilities of their position, as well as their continued professional growth. Each course is individualized to focus on the developmental needs of candidates. Topics are chosen by students and the instructor focusing on the completion of an individualized portfolio of competencies that are aligned to state and national professional teaching standards. Repeatable up to 4 credit hours. Prerequisite(s): graduate standing.

CI 602. Social Emotional Learning in the School Community (2).
Teacher education candidates understand the purpose of the social, emotional and character development standards and how these standards provide classrooms and schools with a framework for integrating social-emotional learning (SEL) with character development so that students learn, practice and model essential personal life habits that contribute to academic, vocational and personal success. For undergraduate credit only. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 603. Foundations of Early Childhood Unified (2).
Introduction to working with young children (including those developing normally, those at risk due to environmental and biological issues, and those with special needs), their families, and professionals in community schools, agencies and programs. Emphasizes professional development, positive dispositions, early childhood learning environments and early childhood professional standards. Examines the ECU professions, characteristics of good teaching, the nature of teacher education and basic historical and philosophical foundations of ECU education. Prerequisite(s): CI 270.

CI 604. ECU Assessment and Methods: Infants, Toddlers and Preschool (B-PreK) (3).
Provides knowledge, skills and dispositions for candidates regarding developmental principles, evaluation/assessment, and the development of services, supports and accommodations for infants/toddlers (birth through age 2) and preschool (3-4 years old). Includes competencies within both the early childhood and early childhood special education fields. For undergraduate credit only. *Course includes diversity content*. Prerequisite(s): admission to ECU/Elementary Apprentice Program.

CI 605. Internship I (2).
In the licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the ECU/Elementary Apprentice Program complete at least 15 hours per week under the supervision of a classroom teacher. For undergraduate credit only. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 606. Internship II (2).
In the licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the ECU/Elementary Apprentice Program complete at least 15 hours per week under the supervision of a classroom teacher. For undergraduate credit only. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 607. Internship III (2).
In the licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the ECU/Elementary Apprentice Program complete at least 15 hours per week under the supervision of a classroom teacher. For undergraduate credit only. Repeatable for a total of 10 credit hours. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 608. Internship IV (2).
In the licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the ECU/Elementary Apprentice Program complete at least 15 hours per week under the supervision of a classroom teacher. For undergraduate credit only. *Course includes diversity content*. Prerequisite(s): admission to the ECU/Elementary Apprentice Program.

CI 614. ECU Assessment and Methods: Infants, Toddlers and Families (3).
Provides knowledge, skills and dispositions for candidates regarding developmental principles, evaluation/assessment, and the development of services, supports and accommodations for infants/toddlers (birth through age 2) and their families. Includes competencies within both the early childhood and early childhood special education fields. Prerequisite(s): CI 327 for undergraduates and CI 603 for graduates. Corequisite(s): CI 614I (for undergraduate students only).

CI 614I. ECU Preteaching Internship: Infant Toddler (2).
Candidates participate in a preteaching internship experience in natural settings (within homes and the community) that include young children from birth through age 2 and their families. Candidates work with a cooperating teacher, other professionals and a university supervisor to plan, implement and assess services and supports for young children and their families. Prerequisite(s): CI 327. Corequisite(s): CI 614 (for undergraduate students only).

CI 615. Learning and Reading Strategies (2-3).
Provides an understanding of the development of learning and reading strategies and explores instructional approaches for guiding secondary students in those strategies and their use in content areas.

CI 616. Literature for Adolescents (3).
Expands student knowledge of strategies for helping culturally, developmentally and linguistically diverse students comprehend and construct meaning from texts using appropriate education technology and face-to-face instructional techniques. Includes extensive reading of classic and contemporary young adult literature in all genres. Prerequisite(s): acceptance into teacher education. Currently and previously certified teachers meet prerequisites.

CI 617. ECU Assessment and Methods: Preschool (3).
Provides knowledge, skills and dispositions for teacher candidates regarding development and learning at the preschool level (ages 3-5). Candidates learn to link theory and evidence-based practices to the preparation of the learning environment, and to the curriculum and instructional methods that are appropriate for all children. Includes methods of screening and evaluation, adaptations and accommodations, and interventions to meet individual child needs, including those with

exceptionalities. Prerequisite(s): CI 327 for undergraduates and CI 603 for graduates. Corequisite(s): CI 617P (undergraduates).

CI 617P. ECU Preteaching Internship: Preschool (2).
Candidates participate in preteaching internship experiences in preschool settings that include young children from ages 3 through 5 (both with and without exceptionalities) and their families. Students work with a cooperating teacher(s) and university supervisor to screen, evaluate, assess, plan curriculum, deliver instruction, adapt for individual child needs, and implement special education services and support for the education of young children. Prerequisite(s): CI 327. Corequisite(s): CI 617 (for undergraduate students only).

CI 647A. Teaching Internship: ECU K–3 (6).
Candidates spend eight weeks in professional settings (K-3 level) working with a cooperating teacher and university supervisor. The candidate and cooperating teacher, with the approval of the university supervisor, devise a plan for the intern to assume full responsibility for the program/classroom for a designated period of time during the eight-week period. For undergraduate credit only. Prerequisite(s): grade of B- or better in the following courses: CI 402E, CI 402J, CI 402U, CI 402M, CI 402S, CI 411A, CI 411B, CI 614, CI 614I, CI 617, CI 617P, CI 703 and CI 796; successful completion of all core I, II and III courses and assessments; and acceptance into clinical practice. Corequisite(s): CI 446, CI 647B.

CI 647B. Teaching Internship: ECU Birth-PreK (6).
Candidates spend eight weeks in professional settings (infant/toddler level or preschool level) working with a cooperating teacher and university supervisor. The candidate and cooperating teacher, with the approval of the university supervisor, devise a plan for the intern to assume full responsibility for the program/classroom for a designated period of time during the semester. For undergraduate credit only. Prerequisite(s): CI 614*, CI 614I*, CI 703*, CI 796 and either CI 327 or CI 603; successful completion of all Core I (CESP 334, CI 311*, CI 320*, CI 321*, CI 323, CI 317 *, CI 519 (2.000 or better)) and Core II (CESP 433, CI 402E*, CI 402J*, CI 411A*, HPS 425*, CI 324, CI 402U*, CI 402M*, CI 402S*, CI 411B*, CI 617*, CI 617P*) courses and assessments and acceptance into clinical practice (*Course requires a grade of B- or better). Corequisite(s): CI 446, CI 647A.

CI 654J. Instructional Methods in Middle Level/Secondary Education - History (1-3).
Acquaints current or potential educators with the concepts and skills necessary to meet the needs of students in middle level and/or secondary education. Focuses on content specific pedagogy as it relates to classroom instruction, management and assessment or adaptations. Prerequisite(s): teaching license or admission to the Master of Arts in Teaching.

CI 654M. Instructional Methods in Middle Level/Secondary Education - Mathematics (1-3).
Acquaints current or potential educators with the concepts and skills necessary to meet the needs of students in middle level and/or secondary education. Focuses on content specific pedagogy as it relates to classroom instruction, management and assessment or adaptations. Prerequisite(s): teaching license or admission to the Master of Arts in Teaching.

CI 654S. Instructional Methods in Middle Level/Secondary Education - Science (1-3).
Acquaints current or potential educators with the concepts and skills necessary to meet the needs of students in middle level and/or secondary education. Focuses on content specific pedagogy as it relates to classroom instruction, management and assessment or adaptations. Prerequisite(s): teaching license or admission to the Master of Arts in Teaching.

CI 701. Foundations of Education (2).
Students survey the various foundations areas, including philosophical, historical, social and comparative. This course is prerequisite to subsequent foundations courses. Prerequisite(s): graduate standing.

CI 702. Introduction to Exceptional Children (2).
Surveys the characteristics of exceptional learners, including the handicapped and the gifted. Presents service delivery models and current practices. Fulfills certification requirements for teachers and serves as an introductory course in exceptionality for special education majors, administrators and school psychologists. Prerequisite(s): bachelor's degree or departmental consent.

CI 703. Assessments and Methods: K-3 (3).
Provides knowledge, skills and dispositions for candidates working with families and young children from kindergarten through grade 3. Covers theory, methodology, screening, evaluation, assessment and instructional practices, including adaptations/modifications/ assistive technology of general education curriculum/instruction for young children both with and without delays/diagnosed disabilities. Prerequisite(s): CI 327 for undergraduates and CI 603 for graduates, and at least one of the following - CI 402J, 402S, 402L or 402M; or hold an elementary teaching license.

CI 704. Assessment and Methods K-1 (3).
Provides knowledge, skills and dispositions for candidates working with families and young children from kindergarten through first grade. Covers theory, methodology, screening, evaluation, assessment and instructional practices, including adaptations and modifications for all young children, including English language learners and those with and without delays/diagnosed disabilities. Prerequisite(s): CI 603. Corequisite(s): CI 748.

CI 705. Knowledge and Beliefs About Reading (3).
Helps students understand the theories of reading development, individual student differences, the nature of reading difficulties and principles of assessment. Includes the standards developed by the International Reading Association concerning knowledge and beliefs about reading as the learning outcome. Prerequisite(s): graduate standing.

CI 707. Adolescent Development (2).
Examines adolescent development through various developmental lenses and applies that knowledge to practice and research. Provides a practical understanding of the developmental trajectories of adolescent thinking and reasoning and prepares educators working with adolescents for the unique aspects they bring to the educational setting. Beginning with contemporary and global conceptualizations of adolescence, the course builds toward a more complex understanding of the developing self and the synergy among the self, significant relationships (including family, peers) and context (i.e., school, work and media). Prerequisite(s): admission to the Transition to Teaching program.

CI 708. Current Topics in Curriculum (1-3).
Addresses a broad range of topical issues in curriculum development and implementation. A current issue is covered under this course number, an umbrella number for a variety of topics/innovations in curriculum. Repeatable for credit.

CI 709. Current Topics in Instruction (1-3).
Addresses a broad range of topical issues in current practices for effective instruction. A current issue is covered under this course number, an umbrella number for a variety of topics/innovations in instructional practices. Repeatable for credit.

CI 709AI. AP Institute Special Topics (3).
Only available to those registered for the WSU Advanced Placement Summer Institute as attendance at the APSI is a course requirement. For information on the APSI, contact Dr. Jim Granada, ASPI Director, at jim.granada@wichita.edu.

CI 710B. Differentiated Instruction for Active Engagement (2).
Intended as part of the core for a Master of Arts in Teaching. Focuses on the elements of differentiation, differentiated instruction based on student need, and lesson plan design that reflects planned differentiation. Students explore best practices, strategies and practical applications of differentiation in diverse classroom contexts.

CI 711. Multicultural Education (3).
Emphasizes students understanding multiple perspectives in a global society and developing multiple modality, culturally aware curriculum experiences. Provides disciplined inquiry and critical experience to become more responsive to the human condition, cultural integrity, and cultural pluralism in society (NCATE, 1982, p. 14). Emphasizes diversity issues in education and the development of a knowledge base to support culturally responsible pedagogy. Prerequisite(s): graduate standing or departmental consent.

CI 714. Reading Instruction and Assessment (3).
Helps students create instructional environments; teaches phonemic awareness, word identification (including phonics), vocabulary-building skills, strategies for comprehension and the construction of meaning, reading and writing fluency, and study strategies; and assesses student performance and progress. Prerequisite(s): CI 705 or departmental consent.

CI 715. Concepts and Principles of Behavior Analysis (3).
Cross-listed as CLES 715. Covers the fundamental concepts and principles of applied behavior analysis. Everyday behavior is examined as a part of the natural world, and behavior change is explained by behavioral principles derived from scientific research. Students have opportunities to demonstrate their understanding of the procedures that derive from behavioral principles and get some practice in implementing those procedures. School psychology students: no grade below B- (2.750) will count toward the degree.

CI 721. Fundamental Elements in Behavior Change and Specific Behavior Change Procedures (3).
Cross-listed as CLES 721. Introduces fundamental elements of behavior change and specific behavior change procedures. The objectives of this course are (1) to increase student understanding of behaviors change and (2) for students to demonstrate their ability to apply behavior change techniques. Prerequisite(s): CLES 715 or CI 715.

CI 723. Single Subject Design (3).
Cross-listed as CLES 723. Introductory level course concentrating on single subject data designs, visual inspection and inference of data, and statistical analysis for educational and behavioral interventions and data collection processes.

CI 724. Introduction to Teaching Strategies for Students With Mild/Moderate Disabilities (3).
Examines introductory assessments, curriculum and instruction related to students with mild and moderate learning needs. Includes competencies for (1) developing individual educational plans, (2) assessment for culturally responsive models of instructional planning, (3) planning and delivering research-validated individualized instruction, (4) monitoring and basing instructional decisions on performance data, (5) managing safe and conductive learning environments, and (6) strategies for working with students with adaptive learning needs in general and special education environments.

CI 733. Assessments and Methods: Grades 2–3 (3).
Provides knowledge, skills and dispositions for candidates working with families and young children in 2nd and 3rd grade. Covers theory, methodology, screening, evaluation, assessment and instructional practices, including adaptations and modifications for all young children, including English language learners and those with and without delays/diagnosed disabilities. Prerequisite(s): CI 603, 704. Corequisite(s): CI 749.

CI 734. Literature-Based Reading Programs (3).
Students examine specific methods for developing a literature program with children (preschool-elementary years) emphasizing extending literature and media through the reading environment, language arts, the arts and creative expression. Prerequisite(s): CI 705, graduate standing.

CI 736. Organizing a Reading Program (3).
Helps students communicate information about reading to various groups, develop literacy curricula, participate in or lead professional development programs, participate in or conduct research, collaborate or supervise other literacy practitioners, communicate assessment results, and engage in professional activities. Prerequisite(s): CI 705, 714.

CI 737. Methods/Assessment: Gifted (3).
Explores a variety of assessment instruments, both teacher-made and standardized, to determine a gifted student's cognitive functioning level and educational needs. Examines strategies and techniques for planning qualitatively differentiated curriculum to meet the academic needs of the gifted learner.

CI 738. Professional Education Badge (0.5-3).
For professionals interested in strengthening their expertise in an education-related area. Students enrolled in these courses develop knowledge that enhances their professional skills and leadership capacity for educational environment. Graduate credit only. Graded Bg/NBg.

CI 742. Introduction to Teaching Strategies for Students with Severe/Multiple Disabilities (3).
Examines introductory assessments, curriculum and instruction related to students with severe and multiple disabilities. Includes competencies for (1) developing individual educational plans, (2) assessment for culturally responsive models of instructional planning, (3) planning and delivering research-validated individualized instruction, (4) monitoring and basing instructional decisions on performance data, (5) managing safe and conductive learning environments, and (6) strategies for working with students with moderate to severe needs in general and special education environments.

CI 743. Transition to Teaching or Residency Internship I (1).
In the transition to teaching or residency licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the transition to teaching program teach half time or more with a restricted license. Students in the residency program teach at least 20 hours per week under the supervision of a classroom teacher. The prerequisites/corequisites differ for each program. Prerequisite(s): for the ECU Residency program: admission to the program; for the Transition to Teaching and Middle Level Secondary programs: CI 760A, employment by a school district or agency partnership and completion of program requirements for restricted teacher licensure or residency. Corequisite(s): for the Transition to Teaching and Middle Level Secondary programs: CI 761A.

CI 744. Transition to Teaching or Residency Internship II (1).
In the transition to teaching or residency licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the transition to teaching

program teach half time or more with a restricted license. Students in the residency program teach at least 20 hours per week under the supervision of a classroom teacher. The prerequisites/corequisites differ for each program. Prerequisite(s): for the Transition to Teaching and MLS Residency program: CI 743, 761A, employment by a school district or agency partnership and completion of coursework for restricted teacher licensure or MLS residency; for the ECU Residency program: CI 603, 743. Corequisite(s): for the Transition to Teaching and MLS Residency programs: CI 769; for the ECU Residency program: CI 614.

CI 747L. Practicum: ESL/Bilingual Education (2-3).
Provides full-time participation in an ESL class supervised by a master teacher and a university professor. Focuses on the application of teaching methods for ESL/bilingual learners, the appropriate use of formal and informal assessment procedures, the development of cross-cultural teaching strategies, and the integration of language with content-area instruction. Prerequisite(s): CI 321 or 711, CI 774, 775, 776, 777.

CI 748. Transition to Teaching or Residency Internship III (1-3).
In the transition to teaching or residency licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the transition to teaching program teach half time or more with a restricted license. Students in the residency program teach at least 20 hours per week under the supervision of a classroom teacher. The prerequisites/corequisites differ for each program. Prerequisite(s): for the Transition to Teaching program: CI 744, 769, employment by a school district or agency partnership and completion of coursework for restricted teacher licensure or residency; for the ECU Residency program: CI 617, 744. Corequisite(s): CI 704.

CI 749. Transition to Teaching or Residency Internship IV (1-3).
In the transition to teaching (T2T) or residency (ECU or middle level secondary) licensure programs, this internship fulfills the required student teaching assignment for the purposes of licensure. Students in the transition to teaching program teach half time or more with a restricted license. Students in the residency (ECU or middle level secondary) programs are full-time interns for the entire semester under the supervision of a classroom teacher. The prerequisites/corequisites differ for each program. Prerequisite(s): for the Transition to Teaching program: CI 748, employment by a school district and completion of coursework for provisional teacher certification; for the Middle Level Secondary Residency program: CI 748; for the ECU Residency program: CI 703, 748. Corequisite(s): for the Transition to Teaching program: CI 849; for the Middle Level Secondary Residency program: CI 849; for the ECU Residency program: CI 733.

CI 749A. Practicum: High-Incidence Learners (3).
Provides prospective special education teachers with participation in a class for children or adolescents with high incidence learning needs being served in special education programs. Supervision is provided by a fully-qualified special education teacher and a university faculty member. Emphasizes (1) research-validated teaching methods for students with high incidence learning needs, including planning individual education programs and standards-based education; (2) use of formal-informal psychoeducational assessment devices, curriculum strategies, positive behavior support, behavior management and evaluation of student performance; and (3) reflective analysis of personal performance and its impact on student learning. Prerequisite(s): practicum placement approval.

CI 749F. Practicum: Low-Incidence Learners (3).
Provides supervised practical experience in a program setting that serves students who have low incidence disabilities. Candidates work with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards for students with low incidence disabilities. Prerequisite(s): practicum placement approval.

CI 749G. Practicum: Gifted (3).
Provides prospective special education teachers with participation in an educational setting for children and adolescents needing the gifted curriculum served in special education programs. Supervision is provided by a fully-qualified gifted education teacher and a university faculty member. Emphasizes research-validated teaching methods for students with gifted curriculum needs. Prerequisite(s): practicum placement approval.

CI 750. Workshops in Education (1-4).
Workshops on a variety of education topics. Different topics are indicated by a letter following the course number.

CI 750AP. Introduction to Teaching Concurrent Enrollment Courses: College Algebra (3).
In this introduction to teaching concurrent enrollment course in high school, the following topics are covered: (1) needs of high school students as learners in a college algebra course, (2) principles of course development: college algebra, (3) college algebra content taught at the high school level: implications, (4) introduction to Blackboard, online learning formats, principles of online learning for college algebra, (5) meeting ADA compliance requirements in college algebra coursework, and (6) meeting state standards for high school mastery.

CI 750AQ. Introduction to Teaching Concurrent Enrollment Courses: College Chemistry (3).
In this introduction to teaching concurrent enrollment course in high school, the following topics are covered: (1) needs of high school students as learners in a college chemistry course, (2) principles of course development: college chemistry, (3) college chemistry content taught at the high school level: implications, (4) introduction to Blackboard, online learning formats, principles of online learning for college chemistry, (5) meeting ADA compliance requirements in college chemistry coursework, and (6) meeting state standards for high school mastery.

CI 750AR. Buck Institute for Education: Project Based Learning (3).
Workshop provides training for teachers who are involved in the KSDE redesign (Mercury schools) process and are moving to a more project-based approach in their classrooms. Along with project-based teaching (BIE) philosophy, examples, and collaboration time, teachers are expected to prepare a lesson using what they learn from the training.

CI 750AV. 21st Century Learning Design (1-2).
Helps current and future educators become fluent in using 21st Century Learning Design Rubrics developed with support of Microsoft. Helps teachers and administrators have a better understanding of what 21st century skills learners should be practicing in courses, provides rubrics to effectively measure teacher/administrator/environment success in providing opportunities for those skills to be practiced and to what degree, and coaching/facilitation of those rubrics into current practice.

CI 750AW. Google Certified Educator (1-2).
Helps current and future educators become fluent in using Google Education Suite, leading to a more effective use of time for teachers and a more dynamic and engaging environment for students. Repeatable up to three credit hours.

CI 750BA. Space Sciences Hands-On Activities and Practices (S2HAP): Implement (1).
Following the summer workshop featuring the NASA Education resources and NGSS science and engineering practices, middle school science teachers will implement various hands-on activities and projects to demonstrate their effectiveness and confidence in teaching space

sciences. The teachers will use this knowledge in their classrooms to increase student interest and achievement in the area of space-sciences. Online mentoring of the teachers will occur over the semester.

CI 750BB. Purposeful Literacy: Application (3).
Equips educators with the knowledge necessary to successfully teach students to read, write, and spell. Emphasis is on Universal Design for Learning, focusing on characteristics of struggling readers including those with dyslexia, while sharing a research-based, structured, systematic, and explicit reading methodology for all students. Participants will complete a 3-day session followed by 7 days of application, in which they will observe live lessons, plan lessons, practice teaching methods with students, and receive continuous mentoring as they prepare to implement new practices to their current curriculum.

CI 750BC. Purposeful Literacy: Information (1).
Equips educators with the knowledge necessary to successfully teach students to read, write, and spell. Emphasis is on Universal Design for Learning, focusing on characteristics of struggling readers including those with dyslexia, while sharing a research-based, structured, systematic, and explicit reading methodology for all students. Participants of the 3 days will engage in a simulation, student panel discussion, and multi-sensory teaching of reading concepts while learning about reading research.

CI 750BD. Space Sciences Hands-On Activities and Practices (S2HAP): Engage (2).
The S2HAP workshop and curriculum is designed to enhance the content knowledge, skills, and experience of teachers, to capture the interest of students, and to channel that interest into related career paths through the demonstration of integrated applications of space-sciences, mathematics, technology, and engineering recommended in the Next Generation Science Standards (NGSS).

CI 750BE. Teaching Exceptional K-12 Learners (1-2).
Designed for current K-12 certified staff in USD 259 who aspire to enhance their expertise in working with exceptional learners. Participants are further equipped and provided resources to address curriculum, instructional best practices and behavior management.

CI 750BF. Increasing Student Engagement through Esports (0.5-4).
Designed for educators from all subject areas who would like to know more about esports and how it leads to improved learning outcomes within cross-curricular educational settings. Using the Gaming Concepts Curriculum, educators can use the high-interest platform of esports while teaching college and career ready standards as well as social-emotional skills.

CI 750BM. Restorative Practice: A Healing and Empowering Approach to Education (1).
Provides opportunities to learn the underlying theories, premises and skills of restorative practices. Provides instruction on the effects of chronic stress and adverse experiences on the developing brain and on the connection between restorative practices, trauma sensitive care, resiliency and hope for healing. Participants have opportunities to engage in hands-on experiences with restorative practice techniques such as affective statements, nonviolent communication and facilitating circles in order to improve their effectiveness in teaching and reaching all age learners, regardless of the setting. Repeatable for credit.

CI 751. Special Studies in Education (1-3).
For elementary and secondary school teachers. Repeatable for credit with advisor's consent. Prerequisite(s): teacher certification or departmental consent.

CI 751AA. Student-Led Conferencing (0.5).
Parents and teachers become partners with their students when all parties play equal roles in conferencing. Traditional conferencing between only the teacher and parent can limit students from becoming self-advocates for their education. Student-led conferencing encourages students to take responsibility for their learning through analysis and reflection of their work and goal setting. Workshop guides teachers in the rationale and steps for successfully implementing student-led conferences with any age and setting.

CI 751AB. Enhancing Science Instruction Through STEM Education for the K-8 Classroom (3).
STEM education incorporates science, technology, engineering and mathematics into the science curriculum. Anticipating a significant increase in the percentage of STEM careers over the next four years, the National Science Foundation and the Federal Government have placed an emphasis on improving STEM education in the K-12 Classroom. Professional learning course participants use the NGSS standards to develop and present STEM activities appropriate for the elementary classroom. Course participants learn the foundations of STEM education as well as engage in hands-on STEM activities. Participants apply the foundations of STEM education and the NGSS standards to develop high quality engaging science lessons. Technology is used as a presentation tool as well as a method to collect and analyze science data and activities. Applications such as Ubersense are used to analyze motion-based activities. The ultimate goal is for each participant to leave with workable knowledge and resources to develop STEM activities for their elementary classroom.

CI 751AC. Inquiry Instruction as a Foundation of Science Education in the Elementary Classroom (0.5).
Inquiry-based education is a powerful instructional strategy that has shown increased intellectual engagement and has fostered deep understanding through the development of hands-on and minds-on science activities. The 5E learning model develops the natural curiosity of elementary students to stimulate an inquiry mentality of learning science. Using the NGSS standards as the foundation, participants learn to analyze or dissect the standards for critical content and develop engaging science lessons. Throughout the workshop, participants have the opportunity to observe elementary science activities that correlate to the NGSS standards and are presented in an "activity before concept" method. The workshop presents the instructional foundations of the 5E learning model. Additionally, participants have the opportunity to engage in science activities presented in the 5E learning model. Each participant develops and presents a science activity that uses the 5E learning model. Ultimately, participants learn to read the standards and use the information to develop lessons in the 5E learning model.

CI 751AD. Motivating the Writer in Every Student (0.5).
Participants engage in multisensory writing strategies that encourage all students to learn how to effectively write in various modes. The day is designed around an accumulation of research-based procedures used over 22 years' experience as a classroom teacher, writing coach, academic coach and blended virtual teacher. Teachers leave the workshop with various tools that they are able to use with their K-5 students. Time is also spent discovering author Jon Scieszka, children's author and creator of "Guys Read." If workshop participants teach male students that are discouraged by reading and writing, this author has a reputation of altering those mindsets. Finally, the day also includes how to prepare students for the Multidisciplinary Performance Task portion on the Kansas State Assessment.

CI 751AE. Fractions and Decimals Made Easier (0.5).
Discusses difficulties elementary school students face in learning fractions and decimals and ways teachers can help in handling these topics. Research-based workshop incorporates current theories of

cognitive science in the teaching and learning of fractions and decimals. It consists of several hands-on activities focusing on such key issues as what initial instruction should focus on, what aspects of fractions and decimals should be stressed, and how some common misconceptions involving these topics can be overcome.

CI 751AF. The Highly Engaged Classroom (0.5).
Participants learn how to use effective engagement techniques and strategies to facilitate the 'ultimate' level of student engagement. There are ample opportunities for making classroom connections, energizing attitudes, sharing ideas and best practices.

CI 751AG. Nonverbal Classroom Management (0.5).
Studies Michael Grinder's work in the area of nonverbal communication. As teacher behavior establishes classroom management, and classroom management is the language of relationship, we know that what a teacher DOES communicates. Students increase awareness of the messages in body language and consider together how to create a safe, supportive, productive classroom environment.

CI 751AI. Differentiations and Scaffolds in Instruction (0.5).
Examines, from principle to practice, differentiated instruction and scaffolds to meet the needs of individual students. Interactive, collaborative experience includes modeling and using several research-based strategies which lend themselves to classroom use as teachers work to make the best use of instructional opportunities.

CI 751AJ. Simple View of Reading: The Ingredients of Reading and Instructional Supports (0.5).
Reviews theoretical models of reading from research, such as the Simple View of Reading and Scarborough's Rope to help teachers understand the ingredients of reading comprehension. Areas addressed include word recognition, language comprehension and automaticity. Participants learn and experience strategies to address the different components within all content areas. These strategies help students access the content that they need to learn to become college and career ready.

CI 751AK. KMIC Summer Mentor Forum (0.5).
Mentors from KMIC member districts who have been trained by the New Teacher Center are invited to attend the Summer Mentor Forum. Participants collaborate and network with other mentors from across the state. Topics for the forum are: mentoring around social emotional learning, differentiating the use of tools, analyzing a case study, and investigating resources in the Learning Zone. Structures include coaching conversations, focused dialogue, World Café, and triad conversations.

CI 751AL. Integrating STEM in the Primary Classroom (0.5).
Professional learning opportunity aimed to increase student success in science by focusing on the implementation of integrated STEM in the primary classroom. Participants increase their (1) confidence in implementing iSTEM instruction and content knowledge, (2) instructional level of iSTEM pedagogical skills leading to effective lessons using the 5E process, (3) knowledge and factors in discourse, assessment and curriculum to apply Kansas College and Career Ready Standards for the Next Generation of Science Standards in their instructional practice, and (4) focus on STEM instructional practices to increase student attitude toward science, technology, engineering and math learning.

CI 751AM. Integrating STEM in the Intermediate Classroom (0.5).
Professional learning opportunity aimed to increase student success in science by focusing on the implementation of integrated STEM in the intermediate classroom. Participants increase their (1) confidence in implementing STEM instruction and content knowledge, (2) instructional level of iSTEM pedagogical skills leading to effective lessons using the 5E process, (3) knowledge and factors in discourse, assessment and curriculum to apply Kansas College and Career Ready Standards for the Next Generation of Science Standards in their instructional practice, and (4) focus on STEM instructional practices to increase student attitude toward science, technology, engineering and math learning.

CI 751AN. Creating Literacy Moments with the Current 6th-8th Grade William Allen White Books (1).
Looks at five of the preselected books from the 2016 WAW 6th-8th grade master list. Participants need to purchase/bring to class the five preselected books and have read two prior to class. Participants gain insight on how to incorporate the WAW books during teacher read-aloud time, small-group work, or literature circles with the use of specific comprehension strategies, vocabulary, writing prompts, close reading, and accompanying informational text. Each participant leaves the workshop with five unit guides.

CI 751AO. Designing the "WOW" Unit (1).
Participants research ways to make learning relevant, engaging and real. Participants either individually or collaboratively build a unit that can be used in the classroom using the research on connecting learning to real-life.

CI 751AP. Social Emotional Learning in the School Community (0.5-3).
Helps the attendee understand the purpose of the Social, Emotional and Character Development Standards and how these standards provide classrooms and schools with a framework for integrating social-emotional learning (SEL) with character development so that students learn, practice and model essential personal life habits that contribute to academic, vocational and personal success.

CI 751AQ. Mentoring for Effective Instruction (1).
Targeted professional development series designed to advance the skills, abilities and knowledge of mentors and coaches of early career teachers. Ensures that experienced teachers become even more effective in their skills in advancing the practice of new teachers, ultimately helping to improve student learning.

CI 751AR. Fostering Resiliency: Helping Children with Challenging Life Situations Using Children's Literature (0.5).
Teachers learn how to foster resiliency through instructional techniques such as: (1) increasing social bonding; (2) setting clear and consistent boundaries; (3) teaching life skills; (4) providing care and support; (5) setting and communicating high expectations; and (6) providing opportunities for meaningful participation, through the use of children's literature. Participants view, gather and develop resource plans using recent picture book publications.

CI 751AS. Creating a Makerspace/Genius Hour in the Classroom (1).
Discover how to transform the classroom into a place where students want to come in and learn; a classroom where teachers create a space to empower students of all levels to explore their own passions through passion projects.

CI 751AU. New Horizons - I Miss Pluto! (1).
New Horizons for Kansas K-12 seeks to connect educators to space science via the Cosmosphere and using NASA content, helping to excite the next generation about NASA missions and to encourage them to pursue STEM careers. Toward that goal, this class aligns well with the following NASA research priorities: understanding the universe and our origins through the study of deep space, new crew vehicles including deep space and Mars, living and working in space.

CI 751AV. Space Agriculture for Kansas K-12 (1).
Advances the three major education goals of the NASA Office of Education — to support U.S. innovation and competitiveness. Seeks to increase the STEM workforce pipeline through the use of NASA content. Focuses on bringing NASA content to educators who are currently educating the next generation of people with extraordinary knowledge in science and engineering. Focuses on the NASA Office of Education's mission of attracting and retaining students in STEM disciplines by connecting informal and formal education, communicating NASA content to the public, and ultimately using NASA as an engaging method to bring the students into aerospace.

CI 751AY. Technology Tool Belt: Stress-Free Student-Centered Applications (0.5).
In this professional learning course, elementary teachers learn about free innovative technologies they can incorporate in their lessons to improve their teaching practices today. Resources presented enable teachers to easily add student-centered technology to their daily classroom routine. Teachers formulate a standards-based weekly plan implementing the technologies presented into center rotations. This enables the teacher to monitor progress as a guide for students instead of the traditional classroom structure with a teacher-directed focus. Ideas for classroom preparations and set up are shared to make the use of technology painless. Resources covered include Web 2.0 tools and interactive whiteboard SMART Notebook software that engages students with learning activities. Technology used includes laptops, video recording devices, a document camera, and an interactive whiteboard. Participants who have these devices available to them and would like to learn easy ways to use them in the classroom, greatly benefit from this professional learning course. (All materials are provided for use during the course. Participants are welcome to bring their own laptops if they choose.)

CI 751AZ. Improving Classroom Management (1-2).
Teachers with strong classroom management skills have proven to be more successful than their peers. Course goal is to provide both aspiring and veteran teachers with a tool kit of classroom management structures and techniques to create a positive learning environment where learning can take place.

CI 751CA. Enhancing Literacy Learning through Movement (0.5).
Offers curriculum integrating movement, physical activity, and literacy in elementary education. Research of elementary teacher candidates' implementation of integrating movement and literacy content via lesson planning is shown. Participants not only engage in how to enhance literacy learning through movement activities, but also explore and implement practices in their own classrooms. Participants are asked to reflect on organized movement and management procedures in their own teaching experiences.

CI 751CB. Boost Classroom Learning with STEM Education (0.5).
Aims to increase student success in science by focusing on the implementation of STEM in the primary and intermediate classroom. Participants engage in a variety of STEM activities in small groups, explore the use of free STEM technology to support learning, and learn tips and tricks for facilitating STEM activities.

CI 751CC. Look What I Can Do! Tapping the Talents of Primary Students (0.5).
Provides teachers with the opportunity to design complex learning experiences based on discovery, inductive, deductive and inquiry approaches. Teachers learn why the approach works, see examples of primary students learning when a teacher uses the approach, then have the opportunity to collaborate in designing standards-based tasks and lessons to use in the classroom for each model. Teachers are guided in the design of tasks that also promote student use of individual talents, many of which may not be fostered when using direct instruction. Teachers also dialogue about pacing and assessments related to the complex tasks they design. Participants select one of the four lesson plans they complete and customize it to fit their classroom, teach the lesson, and then submit two reflections, one on the taught lesson and another on the remaining three models.

CI 751CD. Engaging K-8 Learners with Inquiry and Project-Based Strategies (0.5).
Inquiry and project-based learning are powerful instructional strategies that have shown increases in intellectual engagement and have fostered deep understanding through the development of hands-on and minds-on activities. The 5E learning model develops the natural curiosity of K-8 students to provide an inquiry mentality of learning science, social studies and math. Using the NGSS and Common Core Standards, participants learn to dissect the standards for critical content and develop engaging lessons. Through this professional learning course, participants have the opportunity to observe and participate in lessons that correlate to the standards and are presented in an "activity before concept" method. This professional learning course allows participants the opportunity to observe and develop lessons that can be used directly in their classroom and ultimately create an engaging environment.

CI 751CE. Teaching Historical Inquiry and Reasoning (1).
What and how educators teach in history classes are controversial matters. For some, history is a form of information (students mastering an agreed-upon narrative) rather than a form of knowledge. But students then lack any way of determining whether it, or any other narrative, is accurate. The word "history" derives from the Greek word historia meaning "inquiry, knowledge acquired by investigation." Course is based on the research findings of the Stanford History Education Group. Participants create assignments that engage millennial learners in history content and historical inquiry while meeting the History/Social Studies Common Core and Kansas HGSS Standards.

CI 751CF. A Novel Idea (3).
Participants need access to The Book Whisperer: Awakening the Inner Reader in Every Child, by Donalyn Miller — ISBN-13: 978-0470372272. Participants create an effective independent reading program that supports their content area; identify read-aloud books for individual content areas; evaluate and identify a personal reading style; learn to distinguish between different types of readers and how to create a classroom environment to support all readers; and learn to evaluate literature circle material and create a program that works for individual content areas.

CI 751CG. Getting Along in Education: Building Effective Relationships (1).
Workshop focuses on communication and conflict resolution skills to make the education setting a more active and positive learning environment with a focus on learning. Develops strategies to deal with classroom situations using effective work in a problem solving model with students. Communication with parents, and interactions with colleagues are discussed and implemented. Participants learn skills and tools that provide them with opportunities to make the educational setting a positive and rewarding environment for all of the students and adults involved.

CI 751CI. Inclusive Education Strategies in the Classroom (1).
Working in the regular education classroom with students who have special education needs in curriculum and social-emotional areas can be challenging and rewarding. Course reviews characteristics of, and strategies for, supporting students with special education needs. Participants learn and develop lessons and practices that assist them in

providing diverse and unique learning opportunities to the students in their classrooms.

CI 751CJ. Behavior Management in the Classroom (1).
Emotional and behavioral concerns in the classroom continue to increase in frequency and intensity, interfering with learning. Course looks at problematic behaviors and emotions exhibited by students and potential causes and triggers. Participants research behavior concerns and develop lessons and practices to assist in student learning. Course goal is to develop plans for working with students, parents and administration to provide a positive environment for students, and to develop individual and classroom behavior management plans.

CI 751CK. 8 to Great: Empowering Your Students (0.5-1).
By incorporating 8 to Great principles in their personal and professional lives, participants become more effective in dealing with student behaviors, understanding how to internally motivate students, and guiding students to success. Participants discover (1) a guaranteed positive attitude formula that is simple to live and teach, (2) a decision-making formula to help make the right decisions every time, (3) a one-minute process for using imagination to achieve goals and dreams, (4) a forgiveness formula for releasing past hurts and mistakes, (5) a communication skill that breaks through negative patterns such as defensiveness, (6) a process for dealing with strong emotions such as depression and rage, and (7) a one-minute gratitude exercise that helps every day start out right.

CI 751CL. Our Journey - A Year of Growth (1).
Learn about a student made portfolio using monthly writing prompts and projects to encompass the entire school year. This is a great opportunity to help build better relationships with students and parents through the writing process.

CI 751CM. Co-Teaching 101: A New Type of Classroom (1).
Presents lessons learned using co-teaching in first grade classrooms. Demonstrates a method of combining two classrooms into one learning community. Models methods for reaching all levels of students and obtaining their highest level of success. Demonstrates using a guided reading block and math block to provide for all levels of learning, and to provide enrichment and reinforcement. Provides examples of creating this type of combined classroom and learning environment during center time and what it looks like.

CI 751CN. Positive Behavior Supports (2).
Positive Behavior Supports is a behavior management system. Teachers gain strategies such as safe spots, behavior plans, and a reward system that supports positive student behaviors allowing for better relationships, communication, and integration for student success. A close analysis of the MTSS Behavior component also occurs, supporting a design for the expectations and behaviors of students. Learn how to create, modify, and execute behavior plans that are designed for the participant's own classroom.

CI 751CO. Classroom Contexts: Knowing Our Students (1).
Intended to heighten the holistic understanding of classroom teachers in terms of who their students are as learners and individuals. Course is directly aligned with Standard 1: Knowledge of Students, from the National Board for Professional Standards, Career and Technical Education Standards.

CI 751CQ. LFKS Professional Development (0.5-3).
Individuals in this session attend Learning Forward Kansas Professional Development sessions as provided by the organization and complete nondegree graduate credit course requirements.

CI 751CR. Mindset, Motivation and Engagement (0.5).
Explores the topics of mindset, motivation and engagement in the classroom. Several empirically-supported strategies that target mindset, motivation and engagement in the classroom are discussed.

CI 751CS. Intensive Reading Interventions (Elementary) (0.5).
Explores a variety of intensive reading interventions that can be used with struggling readers as well as English Language Learners in the elementary classroom.

CI 751CT. Electronics for Everyone (0.5).
Introductory course specifically targeted to educators and nonengineers who want to learn the basics of electronics with hands-on applications. Educators seeking professional development opportunities gain access to resources and the ability to integrate them into their own teaching practices. Students start with simple circuits, learn how to solder, create interactive projects, and eventually progress to programming with an Arduino microcontroller.

CI 751CU. Hands on STEM (0.5).
Professional development course that explores the constructivist theory of learning. Students learn to create hands-on activities based on their own academic interests. Participants research a STEM topic, prototype an activity or interaction, share, receive feedback, iterate and finally showcase their activities. Students also learn several tips and tricks on presenting scientific topics using interactions.

CI 751CV. Writing a Positive IEP (0.5).
While the basics of writing an IEP are important, instruction often neglects the tone of the IEP, especially in regard to the present levels of the student. Parents are often overwhelmed by the list of skills their child has to master, and in turn, experience an "us against them" mentality. In this seminar ways to write and present levels that help parents feel like the IEP meeting has a cooperative, rather than a combative atmosphere, and that their child's team sees the student in a positive light.

CI 751CW. Increasing Classroom Engagement (1).
Provides both aspiring and veteran teachers a tool kit of total participation and engagement techniques from which they can pull to create a positive learning environment in which learning can take place.

CI 751CX. Expanding Mentoring Skills for Cooperating Teachers (0.5).
Provides teacher leaders with expanded opportunities to practice and apply mentoring skills and techniques with beginning teachers to improve their effectiveness in the classroom. Repeatable for credit.

CI 751G. Creating Literacy Moments with the 3rd-5th Grade William Allen White Books of 2016 (0.5).
Looks at five of the preselected books from the 2016 WAW 3rd-5th grade master list. Participants need to purchase/bring to class the five preselected books and have read two prior to class. Participants gain insight on how to incorporate the WAW books during teacher read-aloud time, small-group work, or literature circles with the use of specific comprehension strategies, vocabulary, writing prompts, close reading, and accompanying informational text. Participants leave the workshop with five unit guides.

CI 752. Special Studies in Education (1-3).
For elementary and secondary school teachers. Repeatable for credit with advisor's consent. Prerequisite(s): teacher certification or departmental consent.

CI 753. Special Studies in Education (1-3).
For elementary and secondary school teachers. Repeatable for credit with advisor's consent. Prerequisite(s): teacher certification or departmental consent.

CI 754. Special Studies in Education (1-3).
For elementary and secondary school teachers. Repeatable for credit with advisor's consent. Prerequisite(s): teacher certification or departmental consent.

CI 755. Special Studies in Education (1-3).
For elementary and secondary school teachers. Repeatable for credit with advisor's consent. Prerequisite(s): teacher certification or departmental consent.

CI 758. Nature of Technology and Educational Implications (3).
Addresses issues regarding the nature of technology and how it impacts thinking and action related to learning and teaching. Includes examinations of historical and contemporary examples, with applications in classroom instruction, assessment and supervision. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse student populations. *Course includes diversity content*.

CI 760A. Creating an Effective Classroom (3).
Part of the core for a Master of Arts in Teaching. Participants conduct an initial examination of instructional methods, educational trends and effective practices for classroom management. Participants in the Transition to Teaching program will have secured (or have been cleared to secure) a teaching contract in an accredited school system. Participants in the Middle/Secondary Residency Program will have secured a position as a school district paraeducator or as a WSU/Work Study intern in an accredited school system. Prerequisite(s): admission to the Transition to Teaching program or Middle Level Secondary Residency program.

CI 761A. Instructional Planning and Technology (2).
Intended as part of the core for a Master of Arts in Teaching. Addresses issues in instructional planning including: identifying appropriate learner goals, aligning goals with accepted standards, models of instruction, integrating technology into instruction, adapting instruction to meet individual student needs, including English language learners, and differentiated instruction. Concurrent enrollment in CI 743, or Cooperative Education is required. Prerequisite(s): students in this course will have secured a teaching contract or paraeducator position in an accredited school system, will have met the prerequisites for admission to the Transition to Teaching or Middle Level Secondary Residency program at WSU and will have completed the summer induction course. Corequisite(s): CI 743.

CI 764. Interdisciplinary STEM Education: Entry Course (3).
Helps students learn methods of instruction in integrated STEM, using the lens of STEM content knowledge and modeling, inquiry and design practices. A set of methodologies that students can effectively adapt to a variety of situations beyond their specific disciplines are introduced. Students learn how to identify, develop, deliver and evaluate STEM instructional activities with models of project-based learning. Includes a comprehensive overview of the theories of, and instructional strategies for, integrated STEM education. Students have various opportunities to evaluate curricula developed for integrated STEM education, as well as procedures for developing a new STEM curriculum. Class comprises a combination of lecture, experiential exercises, discussion, in-class presentations, videos, individual assignments and team assignments.

CI 769. Instructional Strategies, Technology Integration and Assessment (2).
Intended as part of the core for a Master of Arts in Teaching (Transition to Teaching and/or Middle/Secondary Residency Programs). Allows the student to explore a variety of instructional strategies, technologies and assessment techniques while learning how to adapt these strategies and techniques to meet the individual needs of the students. Prerequisite(s): CI 743, 761A, 768, and continued employment by a school district. Corequisite(s): CI 744.

CI 774. Teaching English as a Second Language (1-3).
Examines current objectives for teaching English as a second language and a variety of methods and specialized techniques for obtaining these objectives. Students develop knowledge of criteria for evaluating curricula, teaching materials and professional literature related to teaching English as a second language and bilingual education. Students examine methods of selecting and adapting curricular ways to enhance the curriculum through developing activation plans for involving parent and community resources in the ESL/BE curriculum. Designed to meet the standards required for ESL/BE endorsement or certification in TESOL.

CI 775. Applied Linguistics: ESL/Bilingual Teacher(s) (3).
Examines a broad picture of human language: what it is, what it is used for and how it works. Enables students to recognize uninformed statements about language, to examine personal beliefs and attitudes about language, and to learn to use basic tools to analyze language in particular as it relates to teaching English as a second language. Provides an introduction to most of the sub-fields of linguistics (e.g., phonetics, morphology, semantics, syntax, etc.).

CI 776. Second Language Acquisition (3).
Surveys nativist, environmentalist and interactionist theories of second-language acquisition. Covers a broad introduction to the scope of second-language acquisition and bilingualism by reviewing substantive research findings as well as causes for differential success among second-language learners. Includes discussions over readings, collaborative activities and presentations involving application of theory to teaching practice.

CI 777. ESL Assessment (3).
Examines legal, theoretical and practical considerations in ESL/BE students. Explores a variety of established principles of language assessment, procedures for identifying language-minority students and applications for these procedures and techniques. Covers level placement, monitoring language development and exit criteria for language programs. Introduces the desirable qualities of tests: validity, reliability, practicality and beneficial backwash.

CI 778. TESOL Content Test Preparation (3).
Provides teacher candidates preparation for the licensure exam through summaries of ESOL topics in (1) linguist theories, (2) examination of student language production, (3) research-based teaching strategies, (4) assessment procedures and techniques, (5) cultural and professional matters, and (6) test-taking strategies. Prerequisite(s): senior standing for undergraduate students.

CI 780M. Technology in the Classroom: Mathematics (1-2).
Focuses on the integration of information and communication technology in mathematics. Explores mathematics-related software and online resources, instructional strategies and assessment techniques. Strongly focuses on the use of technology to meet the subject matter, technology and curriculum standards. Emphasizes building a community of reflective learners. Prerequisite(s): entrance into teacher education, valid teacher certificate/license, or instructor's consent.

CI 780S. Technology in the Classroom: Science (2).
Assists science teachers in integrating the use of technology appropriate for their classrooms. Explores software and online resources, instructional strategies and assessment techniques. Strongly focuses on the use of technology for communication and student assistance to meet the science and technology curriculum standards. Emphasizes building a community of reflective learners. Prerequisite(s): entrance

into teacher education, valid teacher certificate/license or instructor's consent.

CI 781. Cooperative Education (1-4).
Provides the candidate a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. CI graduate candidates are limited to any combination of 6 credit hours of pass/fail, S/U, and Cr/NCr credit toward the degree program.

CI 783. Special Projects in Internet (1-2).
Students explore and expand their knowledge of the internet. They complete a special project designed to use knowledge and experiences developed in CI 782. Students and instructor establish goals and activities appropriate for graduate-level study and applicable in an educational setting. Prerequisite(s): CI 782 or instructor's consent.

CI 784. Foundations of Education for Individuals with Exceptionalities (3).
Addresses the basic foundations of special education across exceptionality areas. A general history of special education and its relationship to general education trends (as well as the disability movement as a whole) is discussed. Students are familiarized with important special education legislation and regulations, learn the role litigation has played in the development of the discipline, and study ethical issues in the provision of special education services. Course explains the cognitive, communicative, social/emotional, sensory and physical characteristics of students with mild/moderate (high incidence), moderate/severe (low incidence), and gifted exceptionalities and how these characteristics influence planning and instruction. Issues related to the field of special education include: characteristics and learning needs, identification, theories of intelligence, diverse populations and curriculum differentiation. Course examines the roles of students, professionals, and families in meeting student needs. *Course includes diversity content*.

CI 785. Instructional Design and Learning Management Systems (LMS) (2).
Students analyze, apply and evaluate principles of instructional design as they develop an online instructional unit that can be delivered via Learning Management System (LMS: e.g., Blackboard). Students learn how to identify learning objectives, analyze tasks and learners, organize resources, specify instructional strategies, design instructional units, and assess outcomes within an LMS.

CI 787. Emerging Educational Technology (2).
Introduces emerging technologies which have been gaining attention and increased presence in educational settings. Students develop a deeper knowledge of the ways that emerging technologies can empower teaching and learning through research and experiential learning about augmented reality, virtual reality, learning analytics, web 3.0, 3D printing, Massive Open Online Courses (MOOCs), micro computing, and internet of things. In addition, students examine the expected challenges caused by emerging technologies and find strategies to overcome such issues.

CI 788. Multimedia Production (2).
Project-based learning course focuses on students' learning to develop or improve multimedia development skills so that they can use various multimedia teaching materials in their professional setting. Students learn to create instructional multimedia by using image editing software (e.g., Photoshop, GIMP), audio recording/editing software (e.g., Audacity), and movie editing software (e.g., WeVideo, iMovie, Windows Moviemaker). In addition to learning how to use this software, students have an opportunity to apply their critical thinking skills through evaluating others' work and reflecting on their own instructional multimedia products.

CI 789. Working with Diverse Student Populations (1).
Surveys the strengths and needs of learners with exceptional needs, including those learners with physical, sensory and cognitive disabilities, and those learners who exhibit gifts and talents. Explores the effects of cultural differences and human development on individuals with exceptional learning needs. Reviews current educational policy, practices and services. *Course includes diversity content*. Prerequisite(s): admission to the Transition to Teaching program.

CI 790. Special Problems in Education (1-4).
Directed reading, activity or research under supervision of a graduate instructor. Prerequisite(s): departmental consent.

CI 794. Diversity and Culture in a Global Society (3).
Equips students to become multi-instructional leaders who practice cultural and social justice. Provides students with the necessary concepts of diversity to scaffold a paradigm shift from cultural awareness to cultural diplomacy. Enables students to become successful global citizens in the globalized world. Prerequisite(s): graduate standing or departmental consent.

CI 795. Change, Creativity and Innovation (3).
Focuses on key theories and elements related to organizational change, the creative process and innovation. Students develop an understanding of creative thinking processes to explore how those processes can impact change and lead to innovation. Prerequisite(s): graduate standing or departmental consent.

CI 796. Family and Professional Collaboration (3).
Assists the special educator in developing the skills to collaborate and consult with parents/family members, general educators, support personnel, paraprofessionals/teaching assistants, and community agencies to facilitate the needs of children with exceptionalities.

CI 797. Ethics and Professional Conduct (3).
Cross-listed as CESP 853. Introduces ethical and professional responsibilities of school psychologists and behavior analysts. Covers topics related to informed consent, due process, confidentiality and selection of least intrusive, least restrictive behavior change procedures. School psychology students: no grade below B- (2.750) will count toward the degree. Prerequisite(s): instructor's consent.

CJ - Criminal Justice

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CJ 191. Introduction to Criminal Justice (3).
General education social and behavioral sciences course. Introduces crime and the criminal justice system by discussing the nature of crime and by identifying multiple facets of the justice system, including the police, the courts and correctional agencies. Studies the role of the criminal justice system as it relates to the individual and to society. Students become acquainted with criminal justice careers.

CJ 191BA. Introduction to Criminal Justice Badge: Law Enforcement (0.5).
Provides an introduction to criminal justice with an emphasis on law enforcement. Using OER (open educational resource) materials, students are introduced to the world of law enforcement in the United States; includes the history of different agencies, their functions, and the basic foundations of police work. Students also learn about current issues, trends and challenges relating to law enforcement and how they impact criminal justice and the United States. Taking all six badges in the Intro to CJ series will be the equivalent of CJ 191. Graded Bg/NBg.

CJ 191BB. Introduction to Criminal Justice Badge: Courts (0.5).
Provides an introduction to criminal justice with an emphasis on the courts. Using OER (open educational resource) materials, students are introduced to the federal and state courts systems in the United States; includes the history, functions structures, actors and trials processes. Students also learn about challenges facing the courts and how they impact criminal justice and the United States. Taking all six badges in the Intro to CJ series will be the equivalent of CJ 191. Graded Bg/NBg.

CJ 191BC. Introduction to Criminal Justice Badge: Corrections (0.5).
Introduces criminal justice emphasizing corrections. Using OER (open educational resource) materials, students are introduced to the corrections system in the United States; including the history of punishments and corrections, the purpose and function of corrections, and the different types of corrections used in the United States. Also discusses some basics about offender populations and corrections before moving on to explore the corrections field as it relates to criminal justice professions and their jobs. Taking all six badges in the Intro to CJ series will be the equivalent of CJ 191. Graded Bg/NBg.

CJ 191BD. Introduction to Criminal Justice Badge: Juvenile Justice (0.5).
Introduces criminal justice emphasizing juvenile justice. Using OER (open educational resource) materials, students are introduced to the juvenile justice system in the United States; including the history of juvenile justice, the development and growth of juvenile rights, and the establishment of the juvenile court system and process. Also discusses some basics about the juvenile correctional system before moving on to explore juvenile justice and criminal justice professionals in this field. Taking all six badges in the Intro to CJ series will be the equivalent of CJ 191. Graded Bg/NBg.

CJ 191BE. Introduction to Criminal Justice Badge: Crime, Policy and Issues of Law (0.5).
Introduces criminal justice emphasizing current issues. Using OER (open educational resources) materials, students are introduced to the very basics of criminal justice, defining crime and legal terminology present in the field, and exploring criminal justice policy in the United States. Discusses how crime is defined, tools used to gather information, and measurements of crime data. Also briefly explores the different jobs and opportunities available in the criminal justice field. Taking all six badges in the Intro to CJ series is the equivalent of CJ 191. Graded Bg/NBg.

CJ 191BF. Introduction to Criminal Justice Badge: Current Issues in CJ (0.5).
Introduces criminal justice emphasizing current issues. Using OER (open educational resources) materials, students are introduced to the current issues facing the criminal justice field in the United States, including challenges related to law, courts, law enforcement, social justice, corrections and crime trends. Explores these challenges as they specifically relate to criminal justice professionals and their jobs. Taking all six badges in the Intro to CJ series is the equivalent of CJ 191. Graded Bg/NBg.

CJ 310. Community-Based Corrections (3).
Focuses on the analysis and evaluation of programs in community settings such as diversion, probation, parole, halfway houses, furlough, study release, work release and restitution. Discusses programs in terms of definition, history, purpose, administration/process, problems, cost and effectiveness.

CJ 315. Criminal Law (3).
General education social and behavioral sciences course. History, scope and nature of law; parties to crime, classification of offenses, act and intent; capacity to commit crime; and defenses. Examines elements of major criminal statutes and an overview of criminal processes and rules of evidence.

CJ 320. Criminal Procedure (3).
Criminal procedure in the criminal justice system, including rights of accused, initiation of prosecution, rules of arrest, search and seizure, and the exclusionary rule.

CJ 324. Sports Criminology (3).
With the high-profile nature of modern sport, increased amounts of media attention have highlighted not only individual acts of criminality, but also crimes committed by groups, organizations and/or communities. Class purpose is to expose students to not only various explanations, but also to provide the tools necessary for better understanding athletes, spectators, sport managers, groups and organizations involved in criminal offenses.

CJ 341. Criminalistics and Scientific Crime Detection (3).
Studies the application of the natural sciences to assist law enforcement officers and the criminal justice system. Studies investigative procedures from the crime scene through laboratory analysis to the presentation of evidence in court.

CJ 343. Special Investigations (3).
Care, collection and preservation of evidence. Studies sources of information and locating subjects, crime scene recording and investigative techniques applicable to specific offenses.

CJ 351. The Victim in Criminal Justice (3).
General education social and behavioral sciences course. Examines the relationship of crime victims to the criminal justice system. Considers the role of the victim in crime occurrences, as well as theoretical developments in the field.

CJ 353. Organized and White Collar Crime (3).
Surveys the history, scope and impact of organized and white collar crime in America, areas of influence, remedial practices and methods of legal control. Reviews the societal conditions involved in the appearance, spread and expansion of organized and white collar crime in America and the overlap and interrelationship between corporate and business crime (white collar and organized crime). Emphasizes the processes of infiltration, fraud and corruption that are characteristic of these conspiratorial crimes.

CJ 355. Special Populations in the Criminal Justice System (3).
General education social and behavioral sciences course. Examines the role of women and minorities as employees of the criminal justice system. Also explores the role of women, minorities, juveniles and elder citizens as individuals who commit crime and are apprehended and sanctioned by the criminal justice system. Considers the unique challenges of each of the four identified populations, including their interactions with law enforcement, the judiciary and corrections. *Course includes diversity content*.

CJ 360. Multiculturalism in Criminal Justice (3).
Introduces students to the pervasive influence of culture, race/ethnicity, gender and socially misconstrued ideas about certain types of crime, offenders and victims viewed through societal and individual lenses. Examines the impact of prejudice, stereotypes, misconceptions and stigma on offenders and victims as they go through the criminal justice system. Additionally, the course focuses on the interface of the criminal justice system and marginalized populations. Throughout the course, the need for awareness of multicultural society, understanding cultural differences, and respect toward those of varied backgrounds is emphasized. Students engage in individual and team activities that foster an understanding of multicultural issues in criminal justice so that they are able to interact successfully with others with diverse

backgrounds both at the personal and professionals levels. *Course includes diversity content.*

CJ 381. Special Topics (3).
Detailed study of topics in criminal justice with particular emphasis established according to the expertise of the various instructors.

CJ 382. Workshop in Criminal Justice (1-3).
Prerequisite(s): CJ 191, instructor's consent.

CJ 391. Corrections (3).
A survey course. Presents an overview of the role, structure and function of the correctional system in American society. Emphasizes the principal aspects of both institutional and community-based corrections.

CJ 392. Law Enforcement (3).
Examines the interaction of police and citizens as regulated by constitutional provisions and other legal and social constraints.

CJ 393. Serial Killers (3).
Cross-listed as CJ 581F. Examines the history, dynamics, causation, investigation and control of the phenomenon of serial crimes, particularly homicide. Emphasizes investigative techniques including psychological and geographic profiling.

CJ 394. Courts & Judicial Systems (3).
General education social and behavioral sciences course. Consists of a case study approach of an individual defendant from the time the crime is committed through the defendant's parole (of an actual homicide case in California). Includes legal analysis of the procedures and rules involved throughout the criminal justice process. Students play the role of the decision maker for the law enforcement, court and correction agencies, resulting in an in-depth view of the adversary procedures which form the basis for the criminal justice system.

CJ 401. Management of Criminal Justice Agencies (3).
Intensive examination of a variety of emerging administrative and management concepts and the processes related to the determination and implementation of management philosophy. Prerequisite(s): CJ 191.

CJ 407. Introduction to Research Methods (3).
Introduces research methods emphasizing the methods most commonly used. Includes library and reference materials, government documents and legal materials. Prerequisite(s): CJ 191, ETHS 100, or AGE 100.

CJ 420. Criminal Evidence (3).
Concepts of criminal evidence rules as they pertain to kinds and degrees of evidence — procedure for admitting or excluding evidence; witnesses and privileged communications, the hearsay rule and its exceptions; and judicial notice, burdens of proof and presumptions. Emphasizes the rules of evidence that govern the criminal justice process. Prerequisite(s): CJ 191.

CJ 451. International Criminal Justice (3).
Acquaints students with the structural and functional aspects of law enforcement agencies, court systems, correctional facilities, juvenile treatment and crime prevention strategies employed by different societies throughout the world. Incorporates the role of the United Nations in the treatment of offenders and crime prevention. *Course includes diversity content.* Prerequisite(s): CJ 191.

CJ 453. Crime Prevention (3).
General education social and behavioral sciences course.
Studies theories of crime prevention efforts by governmental and nongovernmental agencies. Analyzes factors which contribute to the reduction of crime, crime analysis and prediction, the methodology of gathering crime data, and the relationship between the criminal justice system and the public.

CJ 481. Cooperative Education (1-6).
Provides a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, the cooperative education coordinator. Repeatable for credit. No more than 6 credit hours may be counted toward the CJ major. Enrollment limited to a maximum of 4 credit hours in one semester. Prerequisite(s): 24 total credit hours and consent of the criminal justice agency.

CJ 481N. Internship (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

CJ 483. Individual Directed Study (1-3).
Study in a specialized area of the criminal justice system emphasizing the student's research project. Repeatable for a total of 6 credit hours. Prerequisite(s): 15 credit hours in the criminal justice core and individual directed study coordinator's consent.

CJ 501. Integrity in Public Service (3).
Cross-listed as PADM 501. Exposes students to basic principles of personal and professional integrity and how those principles apply to daily life as a members of the community and as employees of a government or social service agency. Employs a case study method, using cases and examples from a wide range of government and nonprofit agency experiences. Students become aware of the moral and ethical issues which may arise in their professional and personal lives, begin to develop critical thinking and analytical skills regarding ethical behavior, and become more personally and professionally responsible. Prerequisite(s): junior or senior level or instructor's consent.

CJ 510. Crime and Transportation (3).
Explores the relationship between crime and a variety of forms of transportation, including public transport, paratransit and private vehicles. Looks at crimes against passengers, transit employees and the system itself, as well as some types of terrorism incidents involving transportation. Focuses primarily on transportation as the setting for these crime events, using an opportunity theory perspective, and on situational crime prevention strategies to address these crimes. The use of transportation to facilitate crime is also discussed. When looking at crime and fear of crime, the course examines the utility of adopting a “whole journey” approach.

CJ 513. Violent Crime (3).
General education social and behavioral sciences course. Examines the extent, causes and policy implications of violent crime. Begins with a review of the rates of violent crime in various parts of the U.S. Provides students with some direct experience of violence such as an emergency room observation period or a panel of victims of violence. Course also covers the theoretical approaches of violent crime as well as factors related to violence among strangers vs. families. Critical reviews of various policy responses to violence, including their likelihood to prevent or reduce violent crime are required.

CJ 515. Sex Crimes (3).
Examines and defines what are classified as criminal forms of sexual behavior and the unique challenges they present to the criminal justice system. Examines the extent and nature of sex crimes, sexual predator laws, sexual harassment and the victims of such crimes. Discusses the theoretical developments in the field.

CJ 516. Profiling (3).
Familiarizes students with the methods used to profile violent crimes, including homicide, rape, arson and burglary. Includes scope of the

problem in each of these crimes, typical investigation sequence and the role of profiling up to the trial preparation stage.

CJ 517. Homicide Investigation (3).
Introduces death investigations from an investigation-oriented perspective. Emphasizes crime scene investigations, mechanisms of injury and death and sex-related homicides.

CJ 518. Criminal Justice and Crime in Film (3).
General education social and behavioral sciences course. Presents films and associated popular cultural materials related to the criminal justice system and crime. The genre of the crime film has become an important component of contemporary culture. Begins with the basics of film criticism and provides students with instruction on elements of a film genre. American and European films are considered.

CJ 520. Drug and Alcohol Issues in Criminal Justice (3).
Overview of issues related to substance abuse in the criminal justice system. Covers the impact of drug and alcohol dependency in society, biological and psychological factors of drug and alcohol dependency, and various treatment modalities used in the criminal justice system for drug and alcohol dependent offenders.

CJ 521. Forensic Social Work (3).
Cross-listed as SCWK 521. Introduction to and overview of the field of forensic social work. Content focuses on the role of social workers in forensic arenas, and the issues related to recent practice trends, relevant theoretical frameworks, collaborative team roles, and multisystem interactions. Psychosocial and legal issues are explored, with particular focus on intersections with family and social services, education, child welfare, mental health, substance abuse, criminal justice, diversity and human rights. Prerequisite(s): 6 hours of social sciences.

CJ 522. Domestic Violence (3).
Cross-listed as WOMS 580J, SCWK 590 and CJ 381V. Deals with the roots of domestic violence embedded in family roles, legal systems, religious beliefs, and the psychology of women, children and men. Also covers the consequences and prevention of family abuse. Includes discussion of literature and films. *Course includes diversity content*.

CJ 530. Private Security (3).
Provides students with a fundamental understanding of the contemporary principles of security and crime prevention. Course materials and discussions explore fundamentals of physical security, security personnel and education, loss prevention, crime prevention and zones of protection.

CJ 540. Racial Profiling (3).
Cross-listed as ETHS 381O. Examines racial profiling, or as it is also referred to — biased-based policing. Emphasizes racial minority citizens who believe they were stopped by police authorities because of their race. Examines how racial minority citizens experience what they believe to be racial profiling, and how they interpret and give meaning to it. Examines police perspectives on racial profiling.

CJ 541. Medical and Legal Aspects of Death Investigation (3).
Emphasizes the manner, cause and mechanism of death; physiological effects of trauma, postmortem changes, identification techniques, investigation of child deaths, and the components of a complete death investigation. Considers and analyzes the history, function and responsibilities of the coroner/medical examiner. Prerequisite(s): CJ 191.

CJ 551. Workshop (1-6).
Specialized instruction using variable formats in relevant criminal justice subjects. Repeatable for credit up to 6 credit hours.

CJ 581. Advanced Special Topics in Criminal Justice (1-4).
Detailed study of topics in criminal justice with particular emphasis established according to the expertise of the various instructors. Special topics are listed in course schedule with a letter after the course number (i.e. CJ 581A, CJ 581B). Not all courses are offered each semester – see the course schedule for availability. Students enroll in the special topic lettered courses, not this parent course. Prerequisite(s): CJ 191, junior, senior or graduate standing.

CJ 581A. Women, Crime and Criminal Justice (3).
Provides an immersive understanding of women's involvement with the criminal justice system. Divided into three major sections: (1) women's victimization and pathways into criminality; (2) the incarceration of women and gender-responsive correctional programming; and (3) women as professionals working in the field of criminal justice. *Course includes diversity content*. Prerequisite(s): CJ 191, junior, senior or graduate standing.

CJ 581AA. Basics of Firearms, NIBIN and Toolmarks Examination (3).
Cross-listed as FS 381AA. Firearms and toolmark identification is an applied forensic science discipline established from validated theories in the physical sciences area of material and engineering sciences. Course introduces the identification of markings formed by the tooling processes—including firearms—most often found and used in the forensic and criminal justice field. Includes the operation of firearms, cartridges, gunshot residue analysis, powder pattern determination, bullet and fired cartridge case comparisons. Students learn the fundamentals of fired cartridge case determinations used by the National Integrated Ballistic Information Network (NIBIN) and the Integrated Ballistic Identification System (IBIS) as used by the Wichita Crime Gun Intelligence Center. Prerequisite(s): CJ 191. Pre- or corequisite(s): CJ 341 or CHEM 212.

CJ 581B. Correctional Administration (3).
Provides an immersive understanding of the various roles of a correctional administration. Divided into four major sections: (1) correctional leadership; (2) human resources and financial management; (3) critical incident management; and (4) recognizing/working with stakeholders. *Course includes diversity content*. Prerequisite(s): CJ 391.

CJ 581C. Crime Analysis (3).
Discusses a range of techniques used by crime analysts when seeking to understand recurring crime and disorder problems and patterns. These techniques are linked with underlying crime event and policing theories. Problem-oriented policing analytical techniques and techniques related to crime mapping are discussed.

CJ 581D. Crime Mapping and ArcGIS (3).
A hands-on course where students are introduced to geographic information systems (GIS), learning about geographic concepts and the spatial analysis of crime. ArcGIS desktop is used to develop technical skills needed for mapping, forecasting, analyzing and spatially presenting data associated with crime. The mapping of public data from the Census Bureau and municipalities is used for operationalizing criminological theory and developing class projects to explain real-world crime problems.

CJ 581E. Combating Human Trafficking (3).
Sex trafficking is a complex social problem with multiple contributing factors largely rooted in intersecting inequalities. Interrelated inequities in gender, sex, sexual orientation, gender identity, power, class, opportunity, education, culture, politics and race are among the social phenomena that contribute to sex trafficking/commercial sexual exploitation victimization. In this course, students examine the dynamics of sex trafficking from various feminist and political perspectives. This course covers the extent and nature of the problem; including demand, prevalence, experiences of survivors, types of sex trafficking, methods of traffickers, the role of weak social institutions, cultural dynamics, and global power dynamics. This

course also examines international, federal and state legislation as well as organizational and grassroots efforts to prevent and respond to sex trafficking victimization. The aim of this course is to provide students with a holistic understanding of sex trafficking, drawing from interdisciplinary sources and presenting a variety of perspectives.

CJ 581F. Serial Killers (3).
Cross-listed as CJ 393. Examines the history, dynamics, causation, investigation and control of the phenomenon of serial crimes, particularly homicide. Emphasizes investigative techniques including psychological and geographic profiling.

CJ 581I. Forensic Photography (3).
Cross-listed as FS 381AS. Photographic documentation plays a major role in recording crime scenes and physical evidence upon its discovery. Course provides photography theory and hands-on application as applied to criminal investigations and criminalistics. Provides an understanding of theory, methods and skills needed for proper exposure, lighting techniques and composition to produce sharp, well defined, properly exposed digital images used as part of the criminal investigative and judicial process. Students become familiar with the use of digital single-lens reflex camera equipment and develop the photographic methods to recognize, take and prepare images for investigative and/or courtroom use. Students are given the opportunity to apply learned skills while processing mock crime scenes and other photographic assignments.

CJ 581J. Militarization of the Police (3).
Explores the overall concept of militarization and how that relates to the police and the enforcement of the law. There is a controversial growing movement by the public that police are becoming more like military units as opposed to the traditional Norman Rockwell police officer. Addresses the public's concern about this and alternative viewpoints that suggest there are some in the study of the topic that have inflated or exaggerated this concern.

CJ 581K. Crime Scene Reconstruction (3).
Through text and case studies participants learn to analyze crime scene events using established principles and scientific method to define as accurately as possible what did and did not occur during the commission of major crimes. Participants develop the ability to take information from multiple investigative sources and forensic disciplines to effectively understand the events surrounding the commission of crime, as well as limitations in the investigative process. Through deductive and inductive reasoning students learn strategies for evaluating the context of scenes and items of physical evidence found within a scene in an effort to identify what occurred and in what order it occurred. Prerequisite(s): CJ 191 and CJ 341.

CJ 581M. Criminal Mind and Behavior (3).
Designed to provide a foundational understanding of criminal behavior from a psychological perspective. Specifically, discusses the role of psychology in explaining criminal behavior and the nature of the violent crime, as well as risk assessment with the help of case study and field practices. It also explores the potential impact of genetics, biology and developmental pathways on delinquency and criminality as these factors may offer new insight into the holistic examination of the etiology of violence. Prerequisite(s): CJ 191.

CJ 581N. Terrestrial 3D Laser Scanning/Mapping (3).
Cross-listed as FS 381AR. Hands-on course designed to teach the basics of High Definition 3-Dimensional Scanning (HDS) to capture millions of data points. Students use time-of-flight scan equipment to capture data and state-of-the-art software to register (stitch) the data into a 3D coordinated system of point clouds and other related products used in many professions to include geographic information systems (GIS), civil infrastructure, crime scene and accident reconstruction, building information modeling (BIM), the documentation of large industrial complexes, heritage preservation, and the detailing of archaeological excavations. Prerequisite(s): basic understanding of the Microsoft Window operating system.

CJ 581O. Forensic 3D Laser Scanning/Mapping (3).
Cross-listed as FS 381AV. Advanced course using high definition 3-dimensional scanning (HDS) in which students use time-of-flight scan equipment and related software to learn methods of 2D and 3D scene documentation. Examines data collection techniques and workflows particular to crime scenes including shooting incident reconstruction, anthropological and clandestine gravesite excavation documentation, as well as the types of visual deliverables which can be created to assist investigative and judicial proceedings. Prerequisite(s): CJ 581N or FS 381AR, and an understanding of the Microsoft Windows file system.

CJ 581P. Basic Bloodstain Pattern Analysis (3).
Cross-listed as FS 381CB. Designed for those interested in becoming investigators, crime scene technicians, forensic technicians and others involved in criminal and medical-legal investigations and crime scene analysis. Provides a fundamental knowledge of the discipline of bloodstain pattern analysis. Students learn the basic principles of bloodstain pattern analysis and the practical application of the discipline in criminal casework. Provides the foundation of bloodstain pattern analysis and is a prerequisite to other advanced bloodstain training taught in the criminal justice system; this course is not intended to create an "instant" expert. Prerequisite(s): CJ 191.

CJ 581Q. Forensic Victimology (3).
Introduces students to the scientific study of crime victims as it relates to the investigation and prosecution of (violent) crimes. Examines the intersection of crime victimization, forensic evidence and criminal procedure with particular attention to the physical and psychological consequences of violent victimization, victim-centered/trauma-informed investigation and DNA/medical evidence. As part of a thorough understanding of forensic victimology, the role of various professionals (e.g., forensic nurses, forensic scientists, medical examiners/coroners) and victim services are explored. Prerequisite(s): CJ 191.

CJ 581R. Aspects of Interview and Interrogation Techniques (3).
Provides an introduction and overview of common interview methods used within modern Western societies. Through guest speakers and article reviews, the course analyzes the strengths and weaknesses of the various interview strategies. By examination and review of conventional methods, it determines which approach is most likely to produce the most factual, truthful and detailed information within a legal and admissible format. Prerequisite(s): CJ 191.

CJ 581S. Victims and Victim Services (3).
Examines the nature of violent victimization as well as services and treatment options available for crime victims. Topics include stress and coping models for victims, crisis intervention, child abuse, intimate partner violence, sexual violence, homicide, elder abuse and mass violence. As part of understanding the interface between victims and the criminal justice system, victimization patterns, victim-offender relationships, victim interaction with law enforcement and the victim's role in court are discussed.

CJ 581U. Gangs: Trafficking in Violence (3).
Introduces the student to a basic understanding of the historical developments, origins, philosophy, activities and current trends of street/prison gangs across the United States, and specifically to the Wichita, Kansas area. Explores areas of violence, criminal activity, recruitment, identifiers, tattoos, clothing, graffiti, etc. associated with street/prison gangs. Additionally, the role of the police, prosecution,

prison system, and the community in preventing, intervening, and suppressing street/prison gangs is discussed, emphasizing the law enforcement perspective.

CJ 581V. Investigating Crimes Perpetrated Against Women (3).
Examines various forms of the criminal victimization of women such as domestic violence, stalking, sexual assault and homicide. Studies the role of law enforcement in investigating these crimes and the role other agencies play in the investigation and prosecution. Covers relevant statutory definitions, legal developments, theoretical definitions and criminal justice responses. Emphasizes law enforcement policy and procedures, techniques and resources used. Topics include victim-centered and trauma-informed approaches, lethality assessment protocol, investigative strategy including evidence collection and analysis and case prosecution, protection orders, prosecution preparation, and integration of victim service providers.

CJ 581W. Terrorism (3).
Cross-listed as HLS 420. Introduces students to the phenomena of contemporary terrorism and extremism. Emphasizes extremism as a foundation for terrorist behavior, types of terrorism, and how governments and law enforcement agencies respond to terrorism. Particular emphasis is on domestic and home-grown terrorism. Introduces theoretical approaches to the study of terrorism. Weaves a thread of extremist literature and perspectives throughout the semester. Highlights the role of law enforcement and other public administrative agencies.

CJ 581X. The Psychology of Homicide (3).
This course is an advanced review of trends, theories and different aspects of homicide and its roots in the criminal mind. Trends for U.S. homicides, as well as global trends, are a major tool in understanding this extreme form of violence. The course includes a brief review of etiology of violence within the mind. Major forms of homicide receive some attention.

CJ 581Z. Cold Case Investigations-BTK C (3).
Uses case studies to demonstrate techniques used to address the particular challenge of older unsolved homicide cases that are commonly referred to as “cold cases." Presents cases that have been solved through applying modern scientific capabilities to older cases.

CJ 593. Crime Causation and Criminal Justice Policy (3).
General education social and behavioral sciences course. Introduces theoretical issues in criminal justice. Primary emphasis is the etiology of criminal and delinquent activity and the response of the criminal justice system to such behavior. Discusses the significant contributions of outstanding criminologists, as well as elaborating on the application of these perspectives to criminal justice agencies. Prerequisite(s): CJ 191.

CJ 598. Contemporary Issues in Criminal Justice (3).
Capstone course for criminal justice majors nearing the completion of the baccalaureate degree. Explores current criminal justice issues and integrates material learned in the criminal justice curriculum. Covers theories of crime and delinquency, origins and development of criminal law and procedure, functions and operations of criminal justice agencies in America, including the response to juvenile offenders; prevention of crime and delinquency, privatization in corrections and policing; the nature, meaning and purpose of criminal punishment; the nature and impact of criminal justice policy, and the relationship between criminal justice and human diversity. For undergraduate criminal justice majors only. Prerequisite(s): CJ 191, 391, 392, 394, 407, 593, senior standing.

CJ 600. Forensic Anthropology (3).
Cross-listed as ANTH 600. Course focus is on recovery, analysis and identification of human and non-human remains in the area of criminal investigation. Includes lecture and case study presentations, hands-on lab analysis and investigation of human skeletal material, forensic profile estimation, and investigation of trauma and assessment of manner of death; forensic anthropology crime scene survey, mapping and documentation. Covers procedures of collection, recording, stabilization and documentation and anthropological identification. Prerequisite(s): ANTH 101 and ANTH 557 or equivalent is required for all Anthropology, Forensic Science and other non-criminal justice students. All criminal justice students must complete ANTH 101 and CJ 191 prior to taking CJ 600, and ANTH 557 is highly recommended.

CJ 601. Digital Investigations (3).
Discusses how computers play a role in both crime and criminal investigations. Although digital investigation is usually thought to be associated with cybercrimes, the class does not necessarily focus solely on cybercrimes. With today’s technologies, all crimes could involve digital evidence and hence require digital investigation. Students learn about the methods that criminals may adopt as well as the methods that investigators may use. Some coursework requires more-than-minimum computer knowledge and operation of computer software. Students need to have a functional computer and access to the internet.

CJ 610. Correctional Counseling (3).
Analyzes the role of a correctional counselor. Emphasizes current practices in community-based and institutional correctional counseling. Discusses application of theories of counseling which are widely used in correctional settings, rehabilitative programs and special needs of offenders.

CJ 641. Forensic Psychiatry (3).
Analyzes the role of psychiatry in the criminal justice process. Introduces the student to concepts and procedures of forensic psychiatry. Prerequisite(s): 15 credit hours of criminal justice courses including CJ 191, or junior, senior or graduate standing.

CJ 651. Dispute Resolution (3).
Examines a range of topics including causation, typologies, communications, mediation, arbitration and other dispute resolution techniques. Includes criminal and victim mediation and both intergroup and interorganization relations and dispute resolution techniques. Analyzes case studies. Prerequisite(s): 15 credit hours of criminal justice courses including CJ 191, or junior, senior or graduate standing.

CJ 652. Juvenile Justice and Social Policy (3).
General education social and behavioral sciences course. Analyzes decision-making processes in juvenile justice and the content of juvenile law and Supreme Court decisions affecting juvenile justice, and selected problems in juvenile justice. Reviews the juvenile justice reform movement. Covers delinquency prevention and control, and ethical issues associated with juvenile justice. Prerequisite(s): CJ 191.

CJ 692. Community Policing (3).
Reviews the various models and strategies of community policing. Examines key concepts such as problem-oriented policing, crime prevention, community relations, empowering the community and the integration of these concepts into community policing. Prerequisite(s): 15 credit hours of criminal justice courses including CJ 191, or junior, senior or graduate standing.

CJ 781. Cooperative Education (1-5).
Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Students work with a faculty member in the formulation and completion of an academic project related to the field experience. The cooperative education experience must be an integral part of the student's graduate program. Individualized programs must be formulated in consultation with, and approved by, the cooperative education coordinator. Open only to CJ graduate students. Repeatable for credit. No more than 6 credit hours

may be counted toward a plan of study. Enrollment limited to 4 credit hours per semester.

CJ 782. Workshop in Criminal Justice (3-6).
Prerequisite(s): CJ 191, instructor's consent.

CJ 783. Advanced Special Topics in Criminal Justice (1-4).
Detailed study of topics in criminal justice with particular emphasis established according to the expertise of the various instructors. Prerequisite(s): CJ 191, junior, senior or graduate standing.

CJ 796. Criminal Typologies (3).
Introduces an area of criminology that categorizes large amounts of information into mutually exclusive categories. Analyzes the various categories of crimes, the situations under which they are committed, the offenders who commit them and the victims of those offenses. Examines the offenses of homicide, rape/sexual assault, aggravated assault, robbery/armed robbery, burglary, auto theft/carjacking, prostitution, drugs, gambling, cybercrime, white collar crime/occupational crime, arson and hate crimes.

CJ 797. Policy Analysis and Program Evaluation (3).
Overview of approaches to public policy analysis and program evaluation. Examines the roles of participants in public policy development, implementation and evaluation. Explores policy and program functions and their intended and unintended impacts. Examines methodologies for collection of data and their use in the assessment of programs and program impacts. Prerequisite(s): 15 credit hours of criminal justice courses including CJ 191, or junior, senior or graduate standing.

CLES - Counseling, Educational Leadership, Educational and School Psychology

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CLES 511. Introduction to School Psychology (3).
Cross-listed as PSY 511. Introduces students to a career in school psychology. School psychologists work in schools to solve students' academic and behavioral problems through consultation, assessment and intervention. Course examines the roles and functions of school psychologists, the methods used to address students' psychoeducational needs, and the school and community systems within which they operate. *Course includes diversity content*.

CLES 512. Exploring Concepts and Careers in Educational Psychology (3).
Cross-listed as PSY 512. Explores the field of educational psychology and its application in different areas, such as teaching, learning, coaching, training, assessment and research. Introduces students to the wide variety of careers in educational psychology. Also introduces students to the practical application of educational psychology by considering topics such as cognition (problem solving, memory, decision making), behavioral learning principles, motivation, human development, curriculum development, assessment, basic research design, and the role of research. *Course includes diversity content*.

CLES 710BA. Badge: Mental Health Supervision (1).
Provides training in the supervision of mental health practitioners in the State of Kansas. Topics include: the roles and functions of the clinical supervisor; models of clinical supervision; mental health related professional development; methods and techniques in clinical supervision; supervisor relationship issues; cultural issues in clinical supervision; group supervision; legal and ethical issues in clinical supervision; and evaluation of supervisee competence and the supervision process. *Course includes diversity content*. For graduate credit only. Graded Bg/NBg.

CLES 715. Concepts and Principles of Behavior Analysis (3).
Cross-listed as CI 715. Covers the fundamental concepts and principles of applied behavior analysis. Everyday behavior is examined as a part of the natural world, and behavior change is explained by behavioral principles derived from scientific research. Students have opportunities to demonstrate their understanding of the procedures that derive from behavioral principles and get some practice in implementing those procedures. School psychology students: no grade below B- (2.750) will count toward the degree.

CLES 721. Fundamental Elements in Behavior Change and Specific Behavior Change Procedures (3).
Cross-listed as CI 721. Introduces fundamental elements of behavior change and specific behavior change procedures. The objectives of this course are (1) to increase student understanding of behaviors change and (2) for students to demonstrate their ability to apply behavior change techniques. Prerequisite(s): CLES 715 or CI 715.

CLES 723. Single Subject Design (3).
Cross-listed as CI 723. Introductory level course concentrating on single subject data designs, visual inspection and inference of data, and statistical analysis for educational and behavioral interventions and data collection processes.

CLES 750. Workshops in Education (1-6).
Intensive study of topics related to education. Differing topics are denoted by a letter following the course number (i.e., 750A, 750C, etc.).

CLES 750AB. Clinical Foundations in Gender and Sexual Diversity (3).
Supports the student-clinician in building foundational competencies relative to diversities of sexuality and gender. Students work interactively to connect critical exploration of relevant theory and research with their impact and utility across a range of LGBTQ-centering clinical contexts. In order to facilitate the development of readily applicable skills, self-reflection, group discussion, role play, and direct engagement with community stakeholders are core learning components.

CLES 750AC. Theories of Suicidology for Counselors (3).
Introduces theories of suicidology, including historical and modern theories. Uses theoretical foundations and related research to prepare future helpers in understanding, assessing, and working with clients presenting with suicidal ideation from an empirically informed perspective. Discusses complexity and intimacy of suicidality and focuses on integrating theories of suicidology within applied counseling practice.

CLES 750AD. Introduction to Treating Eating Disorders (3).
Provides an introduction to the characteristics and criteria associated with a variety of forms of disordered eating. Covers anorexia nervosa, bulimia, binge eating disorders, and overeating, among others, and overview key features of their causes, presentation and treatment. Special attention is dedicated to understanding eating disorders in women, men, athletes and multicultural populations. Attention is given to critical factors in the development and maintenance of eating disorders. These include personality features and family characteristics, as well as sexual orientation, sociocultural, genetic and family influences. Further, the medical and physiological consequences of eating disorders are covered. Treatment and prevention strategies for those with eating disorders are also explored.

CLES 750AE. Counseling Individuals with Disabilities (3).
Familiarizes counselors with issues relevant to working with individuals with disabilities. Presents counseling techniques and modalities. Uses

video, case studies, coached clients, and a variety of hands-on exercises to help students better understand the challenges and opportunities faced by individuals with disabilities.

CLES 750AF. Psychosocial Aspects of Sports Injury, Illness and Rehabilitation (3).
Cross-listed as HPS 716. Explores the psychosocial factors related to sport injury and illness and their effects on the rehabilitation process, mostly connected to sports and physical culture. Offers an opportunity to develop critical thinking and applicable skills as students consider the place of injury, illness and pain within the social and psychological worlds of sport. Explores the mechanisms through which psychosocial factors influence sports injury, illness, understanding, prevention, treatment and rehabilitation outcomes.

CLES 750AG. Counseling Children & Adolescents Through Grief and Loss (3).
Helps counselors and educators better understand children and adolescents who have experienced many types of loss. Children and adolescents tend to experience loss and express grief differently from adults. Developmentally sound approaches to assisting children and adolescents are presented.

CLES 750AI. Exploring The Emotional Effects of Music (1).
Have you ever heard music that transported you to another time and place and elicited an emotional response? This workshop will explore the foundations of music and its potential use in therapeutic contexts.

CLES 750AJ. Workshops in Education: IS NeuroFeedback and the Therapeutic Relationship (3).
Examines the clinical aspects of neurofeedback as pertaining to individual counseling. Goes through extensive examination of applied research studies for counseling members with ADHD, anxiety, depression and other DSM classified disorders. Examines practitioners guide to incorporating neurofeedback into their counseling practice.

CLES 750AK. Counseling Latina/o/x: A Cosmic Race (3).
Addresses the social, racial, political, oppression and diversity among different Latino groups; and demographic issues of Latinos in the United States. Mental health professionals must observe and understand the experiences, cognitions and behaviors of Latinos from a multicultural perspective as an alternative to the current one size fit-all approach to individual and group counseling and therapy. The principles of liberatory psychology are described and employed as a way of working in individual and group settings with Latina/o/x clients with an emphasis in problematization -> reflection -> critical consciousness -> action and/or change. *Course includes diversity content.*

CLES 750B. Neurobiology of Play Therapy: How to Improve Our Practice (1-6).
Reviews basic brain development principles, the impact of social and emotional trauma on the developing brain, and treatment options consistent with the child's current brain functioning through the use of developmental, symptom, and functional history interviews designed to assist the play therapist in appropriate intervention strategies.

CLES 750D. Using Art to Integrate Social Emotional Learning (0.5).
Based on practice and research within the mental health field of art therapy, learn how arts integration across academic subjects increases social emotional learning in the classroom with activities that school counselors and educators can adapt for a range of ages and a variety of academic, career and personal/social counseling goals. Introduces the field of art therapy, its history, approaches and applications in meeting Kansas Social, Emotional, and Character Development Model Standards and Common Core. Participants experience how an expressive arts project can facilitate student empowerment through self-expression, and how a shared art experience can promote community building. Obtain useful tools to build integrated lesson plans for the classroom.

CLES 750E. Art Therapy in Schools: An Introduction (0.5).
Introduces the field of art therapy, its history, approaches and applications in working with children and adolescents. The expressive arts — visual arts, movement, drama, music and writing — offer countless ways to promote the academic, career and personal/social development of students, which are goals of a comprehensive school counseling program. Customized for educators and counselors, as well as education and counseling students who are interested in strategies to incorporate art therapy into their practice or classroom but is open to anyone seeking an introduction to the field of art therapy. Participants experience hands-on how the creative process of art making can be used for self-care and with students. Participants are introduced to program models in school districts in which school counselors and art therapists work together to address the needs of students with social, emotional, academic and/or behavioral challenges. Please wear casual clothes for art making.

CLES 750F. Understanding Students Who Have Experienced Trauma and Neglect (0.5).
Introduction to trauma. Includes different types of trauma and some general impacts of trauma. In addition, students learn about the Adverse Childhood Experience (ACE) study; understand how developmental trauma can impact students socially, emotionally and academically; understand some basic Neurosequential Model in Education (NME) concepts, including how the therapy can be a lens through which to view children who are victims of trauma. Students apply NME concepts in order to develop interventions and supports in the classroom.

CLES 750M. Mindfulness and Acceptance in Therapy (1-3).
Teach clients how to reboot their brains by using mindfulness and acceptance techniques with individuals, couples and families.

CLES 750N. Introduction to Educational Psychology (3).
Introduces students to the field of educational psychology and its application in different areas, such as teaching, learning, coaching, training and assessment. Introduces students to the practical application of educational psychology by considering topics such as the following: cognition (problem solving, memory, decision making), behavioral learning principles, motivation, human development, curriculum development, assessment, basic research design, and the role of research in educational psychology. While these topics are considered, the course also introduces students to careers in educational psychology; many educational psychologists work in K-12 schools, but many also work in higher education, health professions, program evaluation, instructional design (including online instructional design), industry, human resources, military settings, research, counseling, and sports — in any field requiring training, teaching and learning, motivation, assessment or research.

CLES 750O. Introduction to School Psychology (3).
Introduces students to the opportunity of a career in school psychology. School psychologists work in schools to solve students' academic and behavioral problems through consultation, assessment and intervention. Examines the roles and functions of school psychologists, the methods they use to address students' psychoeducational needs, and the school and community systems within which they operate.

CLES 750P. Counseling Children and Adolescents (3).
Prepares counselors to address the specific needs of children and adolescents, with emphasis on developmental needs, specific therapeutic interventions, and common emotional issues. Counseling techniques and treatment planning are included.

CLES 750R. Advanced Issues in Psychopathology and the DSM (3).
Designed to assist students in further understanding the diagnoses in the DSM. Students distinguish among similar diagnoses and recognize how they manifest in clients in both community and inpatient settings. Students acquire skills in differential diagnosis and treatment planning, and recognize personality traits and learned behaviors which impact client outcomes. Designed to help students to understand mental health disorders through a variety of frameworks beyond the introductory level.

CLES 750S. Social Emotional Learning Across the K-12 Curriculum (3).
While moving towards becoming responsive schools staffed with responsive educators, educators must embrace and fully understand the Social and Emotional standards and look for opportunities to incorporate them into the curriculum in ways that are meaningful for students and seamless for educators. In this course, teachers and other educators explore and apply nonacademic standards to prepare students for success in the ever changing 21st century society.

CLES 750T. Understanding Students Living in Poverty (1).
Workshop explores key definitions surrounding the dynamics of poverty and ways to tailor programs to meet students and families where they are. Provides educators with a real-life simulation of poverty situations and gives them an opportunity to discuss their feelings as they navigate the academic life of a student living in poverty.

CLES 750U. KCA Mental Health Drive In (0.5).
Encompasses four content areas: (1) Enhancing emotion intelligence effective self care for mental health professionals includes definition of emotional intelligence (EI), increasing emotional intelligence and awareness, and providing operating instructions for optimal human psychological functioning. (2) Strategies for supporting compassionate classrooms and building staff resilience includes compassionate instruction and discipline in the classroom; building a framework for a compassionate curriculum, and fostering resilience to avoid burnout. (3) Making clinical diagnoses using the DSM 5 – assists counselors and other mental health workers to increase their knowledge of the diagnostic criteria in the DSM 5 and improve their skills in diagnosis and treatment planning. (4) Trauma based play therapy – introduces participants to trauma-informed play therapy TM, an evidence-based and neurodevelopmentally appropriate method for working with traumatized children. A final reflective paper is due one week following the course.

CLES 750V. Social Work in Sports (3).
Cross-listed as SCWK 611Q. Explores the role of social work practice in serving the holistic needs of an athlete while understanding their involvement in the culture of sport. Explores the vulnerabilities and resiliencies of individuals who participate in youth, secondary, collegiate and professional sports. Provides a foundation for professionals interested in social work practice in sporting environments and begins to prepare social workers to assist athletes at all levels and in various settings.

CLES 750W. Psychopharmacology (1-3).
Surveys basic neuropharmacology, the effects of various psychotropic drugs, and the actions of drugs used to treat mental disorders. Examines the actions of specific drugs and their effects on behavior and their uses in biological psychiatry. Basic principles of neuropharmacology are covered.

CLES 750X. KASB BOLD Program (1-6).
Individuals in this session attend Kansas Association of School Board professional sessions as provided by the organization and complete nondegree graduate credit course requirements.

CLES 750Y. USA Seminars (1-6).
Individuals in this session attend USA professional sessions as provided by the organization and complete nondegree graduate credit course requirements.

CLES 750Z. KSDE Annual Conference (1-3).
Individuals in this session attend KSDE Annual Conference professional sessions as provided by the organization and complete nondegree graduate credit course requirements.

COMM - Communication

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

COMM 111. Public Speaking (3).
General education foundation course. Studies basic concepts of speech communication as applied to public speaking and critical analysis. For students wishing to enhance leadership potential by improvement in traditional public speaking situations.

COMM 111H. Public Speaking Honors (3).
General education foundation course. Studies basic concepts of speech communication as applied to public speaking and critical analysis. For students wishing to enhance leadership potential by improvement in traditional public speaking situations.

COMM 130. Communication and Society (3).
General education social and behavioral sciences course. Introduces the functions, processes and effects of individual and mass communication in American society. Explores economic, social and governmental impacts of such communication. Includes a survey of the media and communication industry.

COMM 190. Introduction to Human Communication (3).
General education humanities course. Explores several alternative frameworks by which humans cope with and control the communication environment. Uses observational and experiential opportunities to discover the variety of patterns used by humans to symbolically interact with themselves, each other and entire cultures. Uses multimedia instructional procedures. *Course includes diversity content*.

COMM 202. Debate and Forensics (3).
Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition, and debate and forensics squad meetings. Repeatable for a total of 6 credit hourst. May not be counted toward a major. Prerequisite(s): departmental consent.

COMM 221. Oral Interpretation (3).
General education humanities course. Cross-listed as THEA 221. Designed to enhance speaking skills through the performance of original stories and excerpts from literature. Focuses on aiding the student to become a compelling storyteller. Class works on developing an expressive voice and also developing performance skills such as learning to gesture and express oneself through facial expression. These verbal skills aid the student in being a better communicator.

COMM 222. Improving Voice and Diction (3).
Cross-listed as THEA 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Course is performance oriented, however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are

studied for practical application in the improvement of voice and diction.

COMM 301. Writing for the Mass Audience (3).
Hands-on introduction to writing for the mass audience, including print and broadcast journalism, advertising and public relations. In this survey-style course, students become acquainted with various news and promotional writing techniques and formats, develop reporting and interviewing skills, and learn to apply media judgment and ethics. Course is a prerequisite to many specialized Elliott School courses. Prerequisite(s): grade of C or better in ENGL 101, 102, COMM 130 or 190; and pass the department's Grammar, Spelling and Punctuation (GSP) exam.

COMM 302. Interpersonal Communication (3).
General education humanities course. Develops an awareness of the elements of interpersonal communication and aids the student in establishing more meaningful and effective interpersonal relationships, both personally and professionally.

COMM 304. Studio Video Production (3).
2 Classroom hours; 2 Lab hours. Basic principles, procedures and techniques of video production, including operation of studio equipment and direction of television programs and other video productions. Prerequisite(s): COMM 306 or instructor's consent.

COMM 305. Visual Technologies (3).
Examines the importance and meaning of visual symbols in modern society. Explores the methods by which visual images inform, educate and persuade readers.

COMM 306. Introduction to Multimedia (3).
Examines appropriate multimedia formats for telling stories and presenting information. Focuses on understanding effective publication of communication via audio, video and web.

COMM 310. Introduction to Photojournalism (3).
Basic photographic theory and technique emphasizing telling stories about people and events. Students explore and use digital camera gear and learn shooting techniques; study masters of the genre, historical changes, photo editing, legal and ethical issues, and dealing with controversy.

COMM 312. Nonverbal Communication (3).
General education humanities course. Studies theory and research in nonverbal communication. Students explore different aspects of nonverbal communication and engage in original research and study in the field of nonverbal communication. Emphasizes the application of nonverbal communication to the total human communication process. Prerequisite(s): COMM 111.

COMM 313. Argumentation and Advocacy (3).
General education humanities course. Studies the principles of effective rational discourse, oral and written, dealing with controversial issues in public deliberative, forensic and educational areas. Includes valid and fallacious reasoning as well as tests of evidence.

COMM 321. Introduction to Film Studies (3).
General education humanities course. Emphasizes the nature and function of film as a mode of communication with attention to film theory and technical criticism. Selected films are shown in class.

COMM 324. Integrated Marketing Communication (3).
Introduces the theory and practice of the integrated fields of advertising and public relations viewed from the perspective of integrated marketing communication. Includes audience research, the creation of specialized messages and message delivery systems. Prerequisite(s): COMM 130 or 190, or departmental consent.

COMM 325. Speaking in Business and the Professions (3).
Studies the basic concepts of public speaking and discussions as they apply to the business and professional person. Emphasizes public presentations, group leadership and interpersonal communication as appropriate to business and professional oral communication. Prerequisite(s): COMM 111 with a grade of C or better.

COMM 328. Teamwork, Leadership and Group Communication (3).
Studies the nature and functions of groups and the development of skills for identifying and evaluating communication behavior in small group situations emphasizing the dynamics of teamwork and group leadership.

COMM 335. International and Intercultural Communication (3).
General education humanities course. Introduces basic concepts and principles regarding communication between people from different racial, ethnic and cultural backgrounds. Also includes the influence of the media in intercultural communication. *Course includes diversity content*.

COMM 401. Reporting the News (3).
Principles of reporting, interviewing and multimedia writing, emphasizing both print and broadcast storytelling techniques. Prerequisite(s): COMM 301 with a C- or better, COMM 305 or 306.

COMM 402. Debate and Forensics (3).
Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition, and debate and forensics squad meetings. Repeatable for a total of 6 credit hours. Three (3) credit hours may be counted toward the major. Prerequisite(s): departmental consent.

COMM 406. Audio Production (3).
Production and direction of audio programs. Hands-on use of all standard audio production equipment to learn techniques of sound blending and reproduction. Prerequisite(s): COMM 306.

COMM 422. Broadcast News (3).
Theory and techniques of preparing news for the electronic media, including preparation of news reports for radio and television. Prerequisite(s): COMM 301 with a C or better.

COMM 430. Communication Research and Inquiry (3).
General education humanities course. Introduces the process of research and inquiry across the discipline of communication. Helps students in communication become more intelligent consumers of research and investigative inquiry, and to become more adept at designing their own research projects. Includes information gathering, structuring inquiry with qualitative and quantitative research designs, and processing and reporting information. Prerequisite(s): junior standing and COMM 130 or 190, or instructor's consent.

COMM 450. Integrated Marketing Communication Strategy (3).
Builds on theories and practices of integrated marketing communication, including audience, market research, brand management and media selection. Uses case studies of local and national brands to explore strategic concepts unique to integrated marketing communication.

COMM 472. Senior Portfolio Seminar (1).
Students prepare a resume and portfolio of their best work to be evaluated by faculty members and communication professionals in their areas of emphasis. Ideally completed in a student's final semester before graduation. Prerequisite(s): senior standing, completion of 18 credit hours of communication coursework and departmental consent.

COMM 481. Cooperative Education (1-2).
Credit for cooperative field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program.

Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. Repeatable for credit, but limited to a total of 4 credit hours in COMM 481 and COMM 690. Prerequisite(s): departmental consent.

COMM 481N. Internship (1-2).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

COMM 500. Advanced News and Feature Writing (3).
1 Classroom hour; 4 Lab hours. Focuses on journalistic techniques for reporting and writing the more complex and important types of news and feature stories. Students work in various forms of traditional and emerging journalism. Emphasizes creating comprehensive content by integrating print, broadcast, web, social media and other delivery methods. Prerequisite(s): junior standing, COMM 301 with a C or better, and COMM 401.

COMM 502. Public Information Writing (3).
Uses basic journalistic skills of clear, precise writing to communicate effectively with various audiences. Students write press releases, speeches and popularizations of complex documents. Techniques learned are valuable in writing grant proposals, committee reports, pamphlets and journal articles. Prerequisite(s): COMM 301 with a C- or better, or departmental consent.

COMM 506. Sound for Picture (3).
Focuses on the use of sound as a part of the storytelling process of film and video production. Examines the concepts and technology necessary for production. Prerequisite(s): COMM 406.

COMM 510. Editing For Print (3).
Selection, evaluation and preparation of copy and pictures for publication. Covers copy editing, rewriting, headline and caption writing. Prerequisite(s): junior standing and COMM 301 with a C or better.

COMM 511. Strategic Communication in Organizations (3).
Emphasizes the importance of effective communication in building meaningful relationships, grooming civic leadership and producing marketable employees. Human communication skills taught include: how to give effective presentations, facilitate small group discussions, handle conflict, manage diverse constituencies at various levels: organizational, interpersonal, small group and public; and contemporary topics and issues. Prerequisite(s): COMM 130 or 190, or instructor's consent.

COMM 512. Principles of Video Production (3).
Examines the concepts and technology necessary for effective production of video communication. Topics include camera operation, video editing and the role of light, sound and sequencing in video production. Prerequisite(s): COMM 306.

COMM 525. Advertising Copywriting (3).
Detailed practice at writing various kinds of advertising copy, including print and broadcast forms. Emphasizes terse, precise writing that evokes response sought by advertiser. Prerequisite(s): COMM 301, 324 with a C or better or departmental consent.

COMM 535. Communication Analysis and Criticism (3).
General education humanities course. Introduces the methods used for the analysis and critique of various linguistic, pictorial and aural elements of communication to become more discerning consumers of the various forms of public and mass-mediated messages. Analysis includes print advertisements, radio and television messages, newspaper features and public speeches. Prerequisite(s): junior standing and COMM 301 with a C- or better or instructor's consent.

COMM 550. Opinion Writing (3).
Studies editorial judgment, including practice in writing print, broadcast and electronic opinion pieces, and examining traditional and new technology research materials available to opinion writers. Prerequisite(s): COMM 301 with a C or better, junior standing.

COMM 555. News and Information Design (3).
Examines contemporary theories of publication layout and the visual presentation of quantitative information. Students investigate methods for combining type, graphics and photographs to convey information and tell stories. Prerequisite(s): COMM 301, 305.

COMM 570. Magazine Production (3).
Magazine production, including the choosing of subjects, approaches and illustrations; the shooting and editing of photographic stories; layout; the handling of production and management concerns. Prerequisite(s): COMM 301 and 510, or departmental consent.

COMM 581. Communication Practicum (1-3).
Application of theory, principles and practices to professional settings where students work under instructor supervision to continue their professional preparation in various areas of media and communication. Prerequisite(s): COMM 301 and instructor's consent.

COMM 604. Video Storytelling (3).
Application of video equipment and techniques for field productions. Execution of visual and audio expression in relation to effective video productions in a field setting. Prerequisite(s): COMM 512.

COMM 609. Interactive Media Production (3).
Investigation and application of production techniques for educational and instructional broadcasting, emphasizing television. Prerequisite(s): COMM 304.

COMM 612. Scholastic Journalism Instructional Strategies (3).
Assists those who are preparing to advise and teachers who currently supervise a student newspaper or yearbook. Emphasizes techniques for teaching various forms of writing and design, duties relating to production and finance of school publications, and methods to help students become better communicators. Prerequisite(s): COMM 301 with a C or better, or instructor's consent.

COMM 622. Studio B: Live Television News (3).
Reporting and writing about events in the university and community. Story assignment and preparation under the instructor's guidance; story broadcast over WSU Cable Channel 13. Repeatable for credit with advisor's consent. Prerequisite(s): COMM 422 or instructor's consent.

COMM 626. Integrated Marketing Communications Campaigns (3).
Instruction and practice in planning and developing integrated advertising and public relations campaigns. Teaches students to perform a situation analysis, identify objectives, develop strategies and tactics, and write a plans book, as well as produce advertising and public relations campaign materials. Prerequisite(s): COMM 502 or 525, or instructor's consent.

COMM 630. Communication Law and Responsibility (3).
Emphasizes both oral and written aspects of communication law and responsibility. Addresses general functions of the law including the right to communicate, broadcast law and law of the press. Includes discussion of First Amendment rights, libel, privacy, copyright, advertising, obscenity, pornography and corporate communication concerns. Prerequisite(s): COMM 301 with a C- or better or instructor's consent.

COMM 631. Historical and Theoretical Issues in Communication (3).
General education humanities course. Examines the development of various issues in communication in historical context. Emphasizes

different humanistic and scientific theories of communication and the historical development of mediated communication. Uses selected theories to generate critiques of specific communication events. Prerequisite(s): junior standing and COMM 130 or 190, or instructor's consent.

COMM 633. Senior Honors Project (3).
For undergraduates seeking departmental honors in communication. An individual written and oral project, including a review of literature, methodology and critical analysis on a communication topic approved by the instructor. Prerequisite(s): senior standing; minimum GPA of 3.500; COMM 430, 535, 630, 631; departmental consent.

COMM 636. Advanced Public Speaking (3).
General education humanities course. Skills development in a variety of advanced presentational methods, including speaking from a TelePrompTer, using PowerPoint technology, spokesperson/press conference speaking, conducting a training session, formal manuscript speaking, after dinner speaking and writing a speech for another person. Prerequisite(s): COMM 325.

COMM 640. Issues in Corporate Communication (3).
Examines how corporations craft messages that are persuasive to their various publics. Special attention to how companies use communication strategies to cope with situations that threaten their reputations.

COMM 650. Communication Training and Development (3).
Examines communication concepts, processes, technologies and strategies related to training and development. Includes the application of these elements to formal instruction across disciplines and at various educational levels as well as in most professional training settings.

COMM 660. Seminar in Communication (1-3).
Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

COMM 660AI. Advertising Copy Writing for Professionals (3).
This advanced, online copy writing class is an exploration course designed for returning professionals, traditional graduate students and undergraduate seniors interested in copy writing. Focuses on developing creativity as a strategic approach to ad copy writing, as well as honing existing writing skills.

COMM 660AL. Real News, Fake News: Literacy for the Information Age (3).
Cross-listed as COMM 860AL. In today’s media-saturated world, in an era many refer to as “post-truth,” much of what we see, hear and read is FAKE news. This advanced-level course probes the background of this development and provides students with methods and tools to understand and critique this phenomenon.

COMM 660AM. Autoethnography (3).
Cross-listed as COMM 860AM. Comprehensive study and application of autoethnography as a qualitative research method. Autoethnography explores through various media the dynamic relationships among method, theory and personal narratives.

COMM 660AN. Race, Rhetoric and Media (3).
Cross-listed as COMM 860AN. Examines the role of rhetoric and media in the public life of race and racism. Explores how race is constituted through symbolic practices, how race is negotiated through the use of media technologies, and how rhetoric and media have been used to both perpetuate and challenge racism.

COMM 660AO. Communication Case Studies Methods (3).
Cross-listed as COMM 860AO. Examines the creation of communication strategies and application of communication techniques in industry and society through case studies. Students learn how to analyze and create case studies as a qualitative research method.

COMM 660AQ. Student Media Production (3).
Cross-listed as COMM 860AQ. Students learn the roles and responsibilities of producing independent student media.

COMM 660AR. Live Sports Production (3).
Cross-listed as COMM 860AR. Students learn the roles, responsibilities and techniques of producing live sporting events. Topics also include equipment, graphics, replay and technical direction.

COMM 660AS. Persuasion (3).
Cross-listed as COMM 860AS. Surveys advanced theory and experimental studies in persuasion.

COMM 660AU. Business of Media (3).
Cross-listed as COMM 860AU. Students gain a broader understanding of the business side of news media, from historical and contemporary perspectives. There is no news production without revenue. The major undertaking for the term is a proposed media entrepreneur project created by the student.

COMM 660AV. Multicultural Marketing Communication (3).
Cross-listed as COMM 860AV. Explores consumer behavior similarities and differences among Hispanic, Asian, African-American and Non-Hispanic White cultural market segments in the United States. Addresses the principles for international marketing communications planning.

COMM 660AX. Advanced Public Relations (3).
Cross-listed as COMM 860AX. Builds on basic public relations tactics such as press releases, pitches, fact sheets, communication plans and press conferences. Students learn and implement advanced public relations and strategic communications skills including targeted media pitches, audience research, measurement, issues management, reputation management, media training and change communication techniques. Prerequisite(s): COMM 301 with a grade of C-.

COMM 660AY. Film and Journalism (3).
Cross-listed as COMM 860AY. Critically analyzes films as teaching tools of best practices — or not — of journalism and journalists as depicted by Hollywood. Students analyze films from a Formalist perspective, a theory that focuses on “elements” of film, hopefully inspiring journalists to improve their powers of observation.

COMM 660BB. Media Analytics and Audience Behavior (3).
Cross-listed as COMM 860BB. Analysis of audience behaviors based on media analytics. Students explore psychological and methodological approaches to better understand audiences based on data derived from media analytics.

COMM 660BC. Communication and Persuasion in the Courtroom (3).
Cross-listed as COMM 860BC. Studies the theory and techniques of courtroom persuasion. Examines the role of communication in the practice of law. Topics include witness preparation, theme development, opening and closing statements, and the use of pretrial mock jury research.

COMM 660BD. Future of Journalism (3).
Cross-listed as COMM 860BD. Explores the future of journalism, from new business models and changing newsrooms to collaborative and solutions-based journalism. Examines current efforts to restructure news organizations, including interviews with practitioners of these efforts.

COMM 660CA. Photographing Contemporary Social Issues (3).
Overview of the history, theory, technology and practice of modern point-of-view photojournalism. Includes a personal documentary

photo essay project and other experiential assignments. Basic digital photography experience is recommended.

COMM 660CB. Applied Video Production (3).
Students learn to apply principles of video production to create projects for corporate clients, including feature stories, training videos, promotional videos and other multimedia content as needed. Students work closely with clients in Shocker Ad Lab and IMC Campaigns. COMM 512 is strongly encouraged. Prerequisite(s): COMM 306.

COMM 661. Directing Forensics Program (3).
Studies the methods and procedures in coaching and directing the high school and collegiate forensic programs (debate and individual events). The future teacher is made aware of the literature and professional organizations in the field.

COMM 662. Seminar in Communication (1-3).
Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

COMM 662T. Shocker Ad Lab (3).
Applied skills-based course that functions as a student-run advertising and public relations agency. Students design, write, edit, photograph, video record and produce client work across all platforms, giving them a solid working knowledge of the platforms and processes as well as pieces for their professional portfolios.

COMM 662V. Communication Entrepreneur (3).
Special seminar dealing with current problems, issues or interests in various areas of communication. Students read and discuss how to effectively communicate while starting a company. Students meet with entrepreneurs who have been both successful and unsuccessful communicators in their careers. Repeatable for credit in different topics only.

COMM 675. Directed Study (1-4).
Cross-listed as THEA 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite(s): departmental consent.

COMM 690. Communication Internship (1-2).
Credit for professional experience that integrates theory with a planned and supervised professional experience designed to complement and enhance an academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. Repeatable for credit, but limited to a total of 4 credit hours in COMM 481 and COMM 690. Prerequisite(s): departmental consent.

COMM 750. Workshops in Communication (1-4).
Workshops on a variety of communication topics. Different topics are indicated by a letter following the course number.

COMM 750C. Oral Communication Methods (1-3).
Introduces students to philosophies, strategies and practices pertaining to instructing undergraduates. Demonstrates how to teach public speaking in entry-level skills courses at the collegiate level. Designed as a practicum that covers lecture skills, speech preparation skills, grading/speech evaluation, student-instructor interaction, classroom exercises, university policies, etc.

COMM 760. Seminar in Communication (1-3).
Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

CS - Computer Science

For a computer science course to be used as a prerequisite, it must have been passed with a *C-* or better.

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CS 194. Introduction to Digital Design (4).
3 Classroom hours; 2 Lab hours. Introduces digital design concepts. Includes number systems, Boolean algebra, Karnaugh maps, combinational circuit design, adders, multiplexers, decoders, sequential circuit design, state diagram, flip flops, sequence detectors and test different combinational and sequential circuits. Uses CAD tools for circuit simulation. Prerequisite(s): MATH 111 or equivalent. Corequisite(s): CS 194L.

CS 210. Introduction to Computer Science (3).
General education math and natural sciences course. Broad introduction to the discipline of computer science. Covers algorithms, computer hardware, operating systems, introduces high-level language programming, databases, artificial intelligence and other applications, and social issues. Prerequisite(s): MATH 111.

CS 211. Introduction to Programming (4).
3 Classroom hours; 2 Lab hours. First course in computer programming in a high-level language. Emphasizes analyzing problems, designing solutions and expressing them in the form of a well-structured program using the procedural aspects of C++. Prerequisite(s): MATH 111. Corequisite(s): CS 211L.

CS 238. Assembly Language Programming (3).
Introduces basic concepts of computer organization and operation. Studies machine and assembly language programming concepts that illustrate basic principles and techniques. Laboratory exercises given for experience using personal computers. Prerequisite(s): CS 211.

CS 281I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

CS 311. Object-Oriented Programming (4).
3 Classroom hours. 2 Lab hours. Concepts of object-oriented programming. Covers data abstractions, classes and objects, methods, inheritance, polymorphism, dynamically-bound method calls and data encapsulation. Includes programming assignments in C++. Prerequisite(s): CS 211. Corequisite(s): CS 311L.

CS 321. Discrete Structures I (3).
Cross-listed as MATH 321. Provides a mathematical foundation essential to the entire computer science curriculum. Includes propositional and predicate logic, induction, recursion and counting techniques. Prerequisite(s): MATH 242 or equivalent with a grade of 2.000 or better.

CS 322. Discrete Structures II (3).
Cross-listed as MATH 322. Continuation of Discrete Structures I. Includes relations, graphs, trees, Boolean algebra and automata. Prerequisite(s): CS 321 or MATH 321.

CS 338. FPGA-Based System Design (4).
3 Classroom hours; 2 Lab hours. Introduces digital design concepts using field programmable gate arrays (FPGAs). Includes programmable logic devices, FPGA architecture, interconnect, digital design challenges, digital design process, and integrated circuit fabrication process. Presents digital design flow using FPGAs, and other technologies associated with field programmable gate arrays. Introduces the concept of Verilog programming. Uses CAD tool for circuit simulation. Prerequisite(s): CS 194 and CS 211. Corequisite(s): CS 338L.

CS 350. Computer Science Workshop (1-5).
Short-term courses with special computer science emphases. Repeatable for credit. No credit toward the major or minor in computer science. Prerequisite(s): departmental consent.

CS 394. Introduction to Computer Architecture (3).
Introduces multilevel approach to computer systems, with an emphasis on micro architecture and instruction set architecture levels. Also introduces techniques to improve performance such as cache memory and instruction level parallelism. Prerequisite(s): CS 194, 211.

CS 400. Data Structures (4).
3 Classroom hours; 2 Lab hours. Introduces basic data structures and covers their implementations using classes in C++. Includes lists, stacks, queues, binary trees and hash tables. Prerequisite(s): CS 311 with a C- grade or better.

CS 410. Programming Paradigms (3).
Overview of different programming paradigms, including their philosophies, uses and relative advantages/disadvantages. Covers the procedural/imperative, functional, logic and object-oriented paradigms. Includes programming assignments in the functional and logic paradigms. Prerequisite(s): CS 311.

CS 444. Linux Essentials (3).
Fundamentals of the Unix/Linux operating system. Topics include Linux file systems, essential commands, best security practices, and introduces shell programming. Prerequisite(s): CS 211.

CS 460. Algorithm Design Methodologies (3).
Advanced course on problem modeling and techniques for designing algorithms for real world problems. Projects emphasize program design and development. Prerequisite(s): CS 400.

CS 464. Computer Networks (3).
First course on computer networking. Introduces OSI layers, direct link networks, packet switching, routing, end-to-end protocols and network applications. Prerequisite(s): IME 254, CS 311.

CS 480. Introduction to Software Engineering (3).
Introduces the processes, methods and tools used in software development and maintenance. Topics include software development life cycle and processes, configuration management, requirements gathering, OOA/D with UML, cohesion and coupling, and unit testing. Prerequisite(s): CS 311.

CS 481. Cooperative Education (1-3).
Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. Repeatable for credit. Prerequisite(s): departmental consent.

CS 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

CS 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

CS 497. Special Topics (1-3).
1-3 Classroom hours; 0-2 Lab hours. Special topics of current interest in computer science. Prerequisite(s): departmental consent.

CS 498. Individual Projects (1-3).
Repeatable for a total of 6 credit hours. Prerequisite(s): departmental consent.

CS 510. Programming Language Concepts (3).
Theoretical concepts in the design and use of programming languages. Formal syntax, including Backus Normal Form (BNF), Extended Backus-Naur Form (EBNF), and syntax diagrams. Semantics, including declaration, allocation and evaluation, symbol table and runtime environment; data types and type checking, procedure activation and parameter passing, modules and abstract data types. Prerequisite(s): CS 311, MATH 322.

CS 540. Operating Systems (3).
Fundamental principles of modern operating systems. CPU management including processes, threads, scheduling, synchronization, resource allocation and deadlocks. Memory management including paging and virtual memory. Storage management and file systems. Prerequisite(s): CS 238, 311.

CS 560. Design and Analysis of Algorithms (3).
Design of various algorithms including several sorting algorithms. Analysis of their space and time complexities. Data structures include heaps, hash tables and binary search trees. Prerequisite(s): CS 322, 400; STAT 460 or IME 254.

CS 594. Microprocessor-Based System Design (4).
3 Classroom hours; 2 Lab hours. Presents knowledge and skills required to design and program microprocessor-based systems. Introduces vendor-supplied special-purpose chips such as interrupt controllers and programmable input/output devices. Laboratory activities give hands-on experience. Prerequisite(s): CS 238, 394. Corequisite(s): CS 594L.

CS 665. Introduction to Database Systems (3).
Fundamental aspects of relational database systems, conceptual database design and entity-relationship modeling; the relational data model and its foundations, relational languages and SQL, functional dependencies and logical database design; views, constraints and triggers. Course includes a group project involving the design and implementation of a relational database and embedded SQL programming. Prerequisite(s): CS 311, MATH 322.

CS 697. Selected Topics (1-3).
1-3 Classroom hours; 0-2 Lab hours. Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite(s): departmental consent.

CS 697AG. Introduction to Intelligent Robotics (3).
The study of intelligent robotics allows robots to gather information from surrounding environments and take actions autonomously. Course introduces the fundamental principles and methods of manipulation, navigation and perception for intelligent robotics. Topics covered include geometry transformations, kinematics, dynamics, localization, navigation, mapping, motion planning, intelligent processing, smart sensing, decision making, and robotic intelligence. Explores the robot concepts and algorithms, such as dexterous manipulation, simultaneous localization and mapping (SLAM), and autonomy, while working with Nao humanoid robots and Sawyer collaborative robots. Prerequisite(s): CS 300, MATH 511, IME 254.

CS 697AK. Introduction to Data Science (3).
Covers the fundamentals of data science. Various introductory concepts of data science including but not limited to Data Science Process, collection/preparation of the data, preprocessing of the data, transformation of the data, exploratory data analysis, visualization, as well as introductory concepts in data mining algorithms are covered. Python language is used for the class. The class also has a student

project component. Prerequisite(s): IME 254 and CS 211 or instructor's consent.

CS 697AN. Hardware-Based Computer Security (3).
Intended for seniors and graduate students who want to study and explore the role of hardware in improving computer security. Topics covered may include (1) elements of computer security, (2) secure coprocessor, (3) secure bootstrap loading, (4) secure memory management, (5) hardware-based authentication, (6) hardware-based virus detection, (7) hardware as a cybersecurity solution, (8) security engineering, (9) managing the development of secure systems, and (10) system evaluation and assurance. Prerequisite(s): CS 394 and a desire to learn more about both computer architecture and security.

CS 697AP. Applied Parallel Computing (3).
This course is to teach how to program parallel computers to efficiently analyze challenging problems with enormous datasets. Two distinct approaches will be introduced which can be used to solve problems in all manner of domains including data analytics and machine learning. The first approach to be studied will be embarrassingly parallel in nature while the second approach will leverage fine-grain parallelism. Prerequisite(s): CS 394 or Instructor's consent.

CS 697AQ. Web Programming (3).
Hands-on introduction to web programming. Prepares students to create webpages and develop web applications that integrate with a backend database. Topics covered include client-side technologies that run in the web browser (HTML, CSS and JavaScript), and server-side technologies that run on the web server (Node.js or PHP and SQL). A strong programming background is preferred for successful completion of several practical exercises contained in the course. Prerequisite(s): CS 311.

CS 715. Compiler Construction (3).
First compiler course for students with a good background in programming languages and sufficient programming experience. Covers compiler design, lexical analysis, parsing techniques, symbol tables, scope analysis, type checking and conversion; run-time organization, code generation and optimization. Project-oriented course involves implementation of a full compiler for a simplified but nontrivial procedural language. Prerequisite(s): CS 238, 510.

CS 720. Theoretical Foundations of Computer Science (3).
Provides an advanced level introduction to the theoretical bases of computer science. Computer science theory includes the various models of finite state machines, both deterministic and nondeterministic, and concepts of decidability, computability and formal language theory. Prerequisite(s): CS 322.

CS 721. Advanced Algorithms and Analysis (3).
Topics include height-balanced trees, graph algorithms, greedy algorithms, dynamic programming, hard problems and approximation algorithms. Prerequisite(s): CS 560.

CS 731. Mathematical Foundations for Computer Networking (3).
Introductory class on applying various mathematical tools to the field of computer networks and related areas. Divided into three phases: phase one covers the fundamentals of probability, statistics and linear algebra required for understanding the core topics to follow. Phase two covers the core topics of optimization and queuing theory. Phase three briefly covers the advanced topics of game theory and information theory. The depth of coverage is sufficient to allow students to read and understand research papers in computer networking and related areas that use these standard techniques. Ideas are taught through intuition, mathematically correct formalization and detailed numerical examples. Prerequisite(s): MATH 243. Corequisite(s): CS 464.

CS 736. Data Communication Networks (3).
Presents a quantitative performance evaluation of telecommunication networks and systems. Includes fundamental digital communications system review; packet communications, queuing theory, OSI, s.25 and SNA layered architectures, stop-and-wait protocol, go-back-N protocol, and high-level data link layer; network layer flow and congestion control, routing, polling and random access, local area networks (LAN); integrated services digital networks (ISDN), and broadband networks. Prerequisite(s): CS 464.

CS 737. Wireless Networking (3).
Covers topics ranging from physical layer to application layer in the wireless and mobile networking fields. Explores physical layer issues of wireless communications, wireless cellular telephony, ad-hoc networks, mobile IP and multicast, wireless LAN (IEEE 802.11), security, Bluetooth and WAP, etc. Imparts general knowledge about wireless communication technologies and ongoing research activities. Prerequisite(s): CS 736.

CS 738. Embedded Systems Programming (3).
Studies the requirements and design of embedded software systems. Application of the C programming language in implementing embedded systems emphasizing real-time operating systems, interfacing to assembly and high-level languages, control of external devices, task control and interrupt processing. Prerequisite(s): CS 594.

CS 750. Workshop in Computer Science (1-5).
Short-term courses with special focus on introducing computer science concepts. Repeatable for credit. Prerequisite(s): departmental consent.

CS 764. Routing and Switching I (4).
3 Classroom hours; 2 Lab hours.Introductory course which studies different hardware technologies, like Ethernet and token ring. Discusses VLSM. Introduces different routing protocols. Includes hands-on experience in the CS department's routing and switching lab. Prerequisite(s): CS 464 or 736.

CS 766. Information Assurance and Security (3).
Provides basic concepts in information assurance and security including encryption, digital certificates, security in networks, operating systems and databases. Topics in intrusion detection, legal and ethical issues in security administration are also discussed. Prerequisite(s): CS 464 or 736 or 764.

CS 767. Foundations of Network Security (3).
Presents fundamental concepts in cryptography and network security, and discusses applications and protocols for providing confidentiality, authentication, integrity, and availability in networking services and systems. Includes review of symmetric-key cryptographic schemes such as DES and AES, public-key cryptographic schemes such as RSA and Diffie-Hellman key exchange protocol, cryptographic hash functions such as SHA, message authentication codes such as HMAX digital signature schemes such as El-Gamal and DSS, kerberos and user authentication protocols, transport layer security and TLS, IP layer security and IPSec, and wireless security principles. CS 766 is highly preferred, but not required. Prerequisite(s): CS 464 or 736.

CS 771. Artificial Intelligence (3).
Introduces some of the fundamental concepts and techniques underlying artificial intelligence. Topics covered include state spaces, heuristic search, game playing, knowledge representation, and resolution in propositional and first-order predicate logic. Prerequisite(s): CS 560.

CS 780. Advanced Software Engineering (3).
Discusses advanced topics in software development, maintenance and evolution. Topics include software design patterns, architecture and architectural styles, frameworks, refactorings, and static and dynamic analyses. Includes a group project. Prerequisite(s): CS 480.

CS 781. Cooperative Education (1-3).
Practical experience in a professional environment to complement and enhance the student's academic program. For master's level CS students. Repeatable for credit, but may not be used to satisfy degree requirements. Prerequisite(s): departmental consent and graduate GPA of 3.000 or above.

CS 794. Multicore Architectures and Programming (3).
3 Classroom hours. Introduces state-of-the-art concepts and techniques to design and program modern computer systems. Particular attention is given to the following areas: multicore architecture, parallel programming and advanced research. Labs give hands-on experience. Prerequisite(s): CS 211, 394.

CS 797. Special Topics in Computer Science (1-4).
New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite(s): departmental consent.

CS 798. Individual Projects (1-3).
Allows beginning graduate students and mature undergraduate students to pursue individual projects of current interest in computer science. Repeatable for credit with advisor approval. Prerequisite(s): departmental consent.

CSD - Communication Sciences and Disorders

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

CSD 111. Disorders of Human Communication (2).
Orientation to the disorders of human communication, communicative and psychosocial problems commonly encountered, and general approaches to habilitation. *Course includes diversity content*.

CSD 251. Auditory Development and Disorders (2).
Introduces the etiology, nature and symptomology of auditory disorders and pathologies.

CSD 270. American Sign Language I (3).
Cross-listed as LING 270. Focuses on the use of American Sign Language as used by the American deaf community. Development of basic communication skills leads to basic conversational skills in ASL. *Course includes diversity content*.

CSD 301. Anatomy and Physiology of the Speech and Hearing Mechanisms (3).
Introduces anatomy and physiology of the speech and hearing mechanisms for a basic understanding of human communication. Covers anatomic structures for generating speech, emphasizing the respiratory, phonatory, articulatory and nervous system. Covers structures of the outer, middle and inner ears, and the auditory nervous systems, for the sense of hearing and auditory perception.

CSD 304. Early Language Development (3).
Cross-listed as LING 304. Development of language traced from birth to early school age. Evaluates various acquisition theories in light of current psychological and linguistic thought. Emphasizes the development of linguistic categories: phonology, morphology, syntax, semantics and pragmatics. Lab required for reflective observation and analysis of various linguistic categories of typically developing children.

CSD 306. Applied Phonetics (3).
Cross-listed as LING 306. Identification, production and categorization of phonemes. Practice in phonemic and phonetic transcriptions of words using the International Phonetic Alphabet (IPA). Introduction to typical phonological acquisition and variations in speech production related to connected speech, cultural/linguistic diversity, and children's speech sound disorders. Lab required for reflective observation and analysis of developmental phonetics and variance due to disorders and linguistic differences. Corequisite(s): CSD 306L.

CSD 306L. Applied Phonetics Lab (0).
Identification, production, and categorization of phonemes. Practice in phonemic and phonetic transcriptions of words using the International Phonetic Alphabet (IPA). Introduces typical phonological acquisition and variations in speech production related to connected speech, cultural/linguistic diversity, and children's speech sound disorders. Lab required for reflective observation and analysis of developmental phonetics and variance due to disorders and linguistic differences. Corequisite(s): CSD 306.

CSD 351. Introduction to Auditory Assessment (2).
History and scope of the field. Surveys audiology threshold testing procedures, immitance audiometric interpretation. For majors only. Prerequisite(s): CSD 251 or instructor's consent.

CSD 370. American Sign Language II (3).
Increases vocabulary and speed of the use of ASL. Focuses on a greater fluency in expressive and receptive skills. Develops intermediate conversational skills. *Course includes diversity content*. Prerequisite(s): CSD 270.

CSD 420BA. ASL in Health Care Settings Badge: Introduction to Health Care Interpreting (0.5).
Designed to promote an infusion of resources related to interpreting in health care. Introduces the benefits and challenges of interpreting in health care settings in an effort to prepare interpreters to make well-informed decisions about their readiness and qualifications for interpreting in these settings. Common questions asked during the health history and physical interview are covered while exploring how different cultural and linguistic abilities, perspectives, and life experiences may affect a patient's understanding and perception of the health care system. *Course includes diversity content*. Graded Bg/NBg. Prerequisite(s): fluent in ASL/English interpreting.

CSD 420BB. ASL in Health Care Settings Badge: Medical Terminology (0.5).
Focuses on increasing the interpreter’s vocabulary across a variety of medical terminology in order to accurately communicate appropriate information regarding a wide variety of medical conditions. Includes terminology related to cardiology, gastroenterology, OB/GYN, mental health and others. *Course includes diversity content*. Graded Bg/NBg. Prerequisite(s): fluent in ASL/English interpreting.

CSD 420BC. ASL in Health Care Settings Badge: Responses to Standard Medical Questions (0.5).
Focuses on increasing the interpreter’s ability to accurately interpret in a standard health care appointment. Covers the ASL community’s responses to common questions on a variety of ailments, from a variety of generations, during a medical appointment. Explores how different cultural and linguistic abilities, perspectives and life experiences may affect a patient’s understanding and response during the medical appointment. *Course includes diversity content*. Graded Bg/NBg. Prerequisite(s): fluent in ASL/English interpreting.

CSD 420BD. ASL in Health Care Settings Badge: Interpreting in the Emergency Room, Part I (0.5).
Focuses on covering the interpreter’s questions and responses to a request for interpreting services provided in the emergency room — including whether the interpreter is mentally and physically up to the challenge and whether they are qualified for and willing to provide the services needed. Addresses a complex number of issues regarding the person, the interpreter and medical needs. *Course includes diversity*

content. Graded Bg/NBg. Prerequisite(s): fluent in ASL/English interpreting.

CSD 420BE. ASL in Health Care Settings Badge: Interpreting in the Emergency Room, Part II (0.5).
Builds on topics covered in CSD 420BD (part one). Part two covers the demands on the interpreter in the emergency room. Includes interviews with admissions, staff, medical personnel and all persons related to emergency room care. Topics that help the interpreter know how to make informed judgments about his/her role and responsibility in an emergency situation in order to appropriately represent the deaf person are discussed. *Course includes diversity content*. Graded Bg/NBg. Prerequisite(s): fluent in ASL/English interpreting.

CSD 420BF. ASL in Health Care Settings Badge: Ethical Standards in Health Care Interpreting (0.5).
Focuses on the interpreter's knowledge of, and adherence to, ethical practices in medical settings. Includes, but is not limited to, maintaining confidentiality, interpreting English policies for the ASL consumer, and demonstrating the ability to hold a position of trust that serves both deaf and hearing consumers. *Course includes diversity content*. Graded Bg/NBg. Prerequisite(s): fluent in ASL/English interpreting.

CSD 420BG. Educational Accessibility Badge: Universal Design for Learning (0.5).
Introduces universal design for learning, especially from an equity perspective. Graded Bg/NBg.

CSD 420BI. Educational Accessibility Badge: Accessibility of Microsoft Products (0.5).
Covers Word and PowerPoint with mentions of other Microsoft products. Outlines important accessibility habits, tools and functions of these programs. Graded Bg/NBg.

CSD 420BJ. Educational Accessibility Badge: Accessibility in the Digital Classroom (0.5).
Covers the basic accessibility considerations in online and hybrid classrooms, including creating accessible content and designing for differences. Graded Bg/NBg.

CSD 420BK. Educational Accessibility Badge: Accessible Face-to-Face Presentations (0.5).
Covers Wichita State University's extensive and innovative face-to-face accessible presentation guidelines. Graded Bg/NBg.

CSD 420BL. Educational Accessibility Badge: Introduction to Assistive Technologies (0.5).
Introduces assistive technologies used in educational settings, as well as assistive technology (AT) functionalities in Mac and PC products. Graded Bg/NBg.

CSD 420BM. Educational Accessibility Badge: Legal Landscape (0.5).
Covers the Rehabilitation Act of 1973 Sections 504 and 508 and ADA Title 2 along with recent litigation and other agreements. Graded Bg/NBg.

CSD 425. Introduction to Clinical Processes (1).
The benchmark for applied learning in the Bachelor of Arts in communication sciences and disorders curriculum. Students have the opportunity to observe and assist in therapy with individuals experiencing communication challenges who are receiving clinical services in the WSU Evelyn Hendren Cassat Speech-Language-Hearing Clinic. Introduces the diagnostic and remediation processes required for individuals with various communication delays and/or disorders. Prerequisite(s): senior standing, instructor's consent, background check, established student health portal, current medical clearance, completion of CSD 304 with grade of B (3.000 points/credit hour) or better, and completion of in-class HIPAA training.

CSD 470. American Sign Language III (3).
Students demonstrate expressive and receptive mastery of targeted, context-specific commands, questions and statements in ASL, and are exposed to ASL as a foreign language. Exposes students to the life and experiences of deaf people. *Course includes diversity content*. Prerequisite(s): CSD 370.

CSD 480. American Sign Language IV (3).
Increases vocabulary and speed of the use of ASL. Focuses on a greater fluency in expressive and receptive skills. Develops intermediate conversational skills. *Course includes diversity content*. Prerequisite(s): CSD 470.

CSD 481. Cooperative Education (1-8).
Allows students to participate in the cooperative education program. For majors only. Repeatable for credit.

CSD 481N. Internship (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. For majors only. Prerequisite(s): departmental consent.

CSD 490. Directed Study in Speech and Language Pathology or Audiology (1-3).
Individual study or research on specific problems. For majors only. Repeatable for credit. Instructor's consent must be obtained prior to enrollment.

CSD 490D. Intro to Signed Language Interpreting (3).
Overview of the profession of interpreting. Includes the history of interpreting, terminology, the responsibilities, skills, aptitudes of interpreters, the process of becoming an interpreter, employment environment and options, and current issues. Prerequisite(s): CSD 370.

CSD 490H. Directed Study in Speech and Language Pathology or Audiology Honors (1-3).
Individual study or research on specific problems. For majors only. Repeatable for credit. Instructor's consent must be obtained prior to enrollment.

CSD 491. Honors Research Project (1-3).
Directed scholarly project culminating in a public presentation as determined by the student's faculty mentor. For majors only. Prerequisite(s): CSD honors track program approval.

CSD 504. Aural Rehabilitation (3).
Discussion and labs concerning the role of speech-language pathologists and audiologists in evaluation and treatment of hearing-impaired children, adolescents, adults and their families. Students focus on understanding psychological, social, educational and occupational impacts of hearing loss; on applying a rehabilitative model, technology, individual and group therapies, and collaboration with families and professionals to help hearing-impaired persons improve or cope better with their communication problems. For majors only. Prerequisite(s): CSD 351 or instructor's consent.

CSD 504H. Aural Rehabilitation Honors (3).
Discussion and labs concerning the role of speech-language pathologists and audiologists in evaluation and treatment of hearing-impaired children, adolescents, adults and their families. Students focus on understanding psychological, social, educational and occupational impacts of hearing loss; on applying a rehabilitative model, technology, individual and group therapies, and collaboration with families and professionals to help hearing-impaired persons improve or cope better with their communication problems. For majors only. Prerequisite(s): CSD 351 or instructor's consent.

CSD 506. Acoustic and Perceptual Phonetics (3).
Cross-listed as LING 506. Studies the physical patterns (acoustic) of speech sounds and the importance of these acoustic patterns to speech recognition (perception). Focuses on segmental phonemes (vowels and consonants) and on suprasegmental characteristics such as stress and intonation. Introduces different types of speech analysis techniques and discusses how they may be used to study the acoustic patterns of speech sounds. Studies how different aspects of the speech signal relate to listener perception. Note: The CSD 506 or 506H sections must be taken in order for this course to count toward the CSD undergraduate major. Prerequisite(s): CSD 301.

CSD 506H. Acoustic and Perceptual Phonetics Honors (3).
Cross-listed as LING 506. Studies the physical patterns (acoustic) of speech sounds and the importance of these acoustic patterns to speech recognition (perception). Focuses on segmental phonemes (vowels and consonants) and on suprasegmental characteristics such as stress and intonation. Introduces different types of speech analysis techniques and discusses how they may be used to study the acoustic patterns of speech sounds. Studies how different aspects of the speech signal relate to listener perception. Note: The CSD 506 or 506H sections must be taken in order for this course to count toward the CSD undergraduate major. Prerequisite(s): CSD 301.

CSD 512. Communication in Special Populations: Children (4).
Discusses communication differences, delays and disorders in children. Emphasizes the potential impact on quality of life and on academics resulting from communication disorders associated with special populations of children with speech-language impairments, intellectual disabilities, hearing impairment, acquired language disorders, and craniofacial anomalies. For CSD majors only. For undergraduate students only. Prerequisite(s): CSD 304 and CSD 306 with grade of B (3.000 points/credit hour) or better, and completion of in-class HIPAA training.

CSD 512H. Communication in Special Populations: Children Honors (4).
Discusses communication differences, delays and disorders in children. Emphasizes the potential impact on quality of life and on academics resulting from communication disorders associated with special populations of children with speech-language impairments, intellectual disabilities, hearing impairment, acquired language disorders, and craniofacial anomalies. For CSD majors only. For undergraduate students only. Prerequisite(s): CSD 304 and CSD 306 with grade of B (3.000 points/credit hour) or better, and completion of in-class HIPAA training.

CSD 517. Communication in Special Populations: Aging (3).
Focuses on how communication is affected by aging, what communication problems may be experienced by older persons, and what the implications are for speech-language pathologists and audiologists providing services to older persons. Explores prevention activities geared toward maintaining functional communication abilities in older adults as well as functional treatment approaches geared toward the specific communication needs of older persons. For CSD majors, but students from other fields may enroll with departmental consent. *Course includes diversity content*.

CSD 517H. Communication in Special Populations: Aging Honors (3).
Focuses on how communication is affected by aging, what communication problems may be experienced by older persons, and what the implications are for speech-language pathologists and audiologists providing services to older persons. Explores prevention activities geared toward maintaining functional communication abilities in older adults as well as functional treatment approaches geared toward the specific communication needs of older persons. For CSD majors, but students from other fields may enroll with departmental consent. *Course includes diversity content*.

CSD 518. Deaf Culture (3).
Examines various cultural aspects of the deaf community. Presents the interrelationship of language and culture along with a study of socialization, norms and values. *Course includes diversity content*.

CSD 519. Genetic and Organic Syndromes (3).
Introduces human genetics and the impact of chromosomal and structural anomalies of communication disorders. Assessment and remediation of cleft palate speech. For CSD majors only. Prerequisite(s): CSD 304 with a grade of B (3.000 points/credit hour) or better, and completion of in-class HIPAA training. Corequisite(s): CSD 521.

CSD 519H. Genetic and Organic Syndromes Honors (3).
Introduces human genetics and the impact of chromosomal and structural anomalies of communication disorders. Assessment and remediation of cleft palate speech. For CSD majors only. Prerequisite(s): CSD 304 with a grade of B (3.000 points/credit hour) or better, and completion of in-class HIPAA training. Corequisite(s): CSD 521.

CSD 520. ASL: Nonverbal Communication (3).
Cross-listed as LING 520. Nonverbal way of communication which forms an integral base for communication in American Sign Language. Emphasizes the use and understanding of facial expression, gestures, pantomime and body language. Role play and acting out are required as part of this class. Pre- or corequisite(s): CSD 370 or instructor's consent.

CSD 521. Genetic and Organic Syndromes Lab (1).
Laboratory experience which provides students the opportunity to observe and document assessment and treatment of individuals with various communication disorders caused by syndromic and/or gene-linked conditions. For majors only. Prerequisite(s): CSD 304 with grade of B (3.000 points/credit hour) or better, and completion of in-class HIPAA training. Corequisites: CSD 519 or 519H.

CSD 535. Speech-Language Pathology Assistant Training (2).
Provides students with training in areas such as ethics, universal safety precautions, patient confidentiality training, reimbursement issues and speech-language pathology scope of practice. In addition, various clinical practice knowledge and skills are covered, including behavioral management, data collection, following treatment plans and clinical reporting. Provides students with useful skills as they progress toward clinical professions in speech-language pathology. Fulfills the requirements for the educational component of the speech-language pathology assistant (SLPA) certification from the American Speech-Language-Hearing Association (ASHA). *Course includes diversity content*.Prerequisite(s): CSD 304.

CSD 635H. Senior CSD Honors Practicum (1).
Focuses on techniques and methods for developing clinical skills for a selected supervised practicum setting in speech-language pathology at the university’s Evelyn Hendren Cassat Speech-Language-Hearing Clinic. Clinical practice skills include knowledge related to universal precautions, procedures for assessment/intervention, and electronic record keeping. Restricted to senior CSD honors students who have applied and been accepted according to department guidelines.

CSD 705. Counseling in Communication Disorders (3).
Provides information on the structure and conduct of interviews, basic counseling strategies, and consideration of the "helping" role as practiced by communication disorders professionals. Focuses on information supportive of developing effectiveness in these roles. Considers multicultural concerns. *Course includes diversity content*.

CSD 710. Autism Spectrum Disorder (3).
Overview of the characteristics and etiology of autism spectrum disorder and the knowledge needed to conduct effective communication and language assessments and develop evidence-based treatment strategies for individuals with ASD. Covers guidelines for the assessment and intervention of communication skills, including decision making for the selection of functional communication systems, structured teaching and positive environmental supports for effective learning. *Course includes diversity content.*

CSD 740. Selected Topics in Communication Sciences and Disorders (1-3).
Individual or group study in specialized areas of communication sciences and disorders. Repeatable for a total of 6 credit hours. Prerequisite(s): instructor's consent.

CSD 740V. Aural Rehabilitation (3).
For graduate students who did not complete an aural rehabilitation course during the undergraduate degree. Discussion and labs concerning the role of speech-language pathologists and audiologists in evaluation and treatment of hearing-impaired children, adolescents, adults and their families. Students focus on understanding psychological, social, educational and occupational impacts of hearing loss; on applying a rehabilitative model, technology, individual and group therapies, and collaboration with families and professionals to help hearing-impaired persons improve or cope better with their communication problems.

CSD 750. Workshop in Communication Sciences and Disorders (1-4).
Individual or group study in specialized areas of communication sciences and disorders. Repeatable for a total of 8 credit hours.

CSD 750Q. Improving Communication Skills of Children (1).
Workshop designed for teachers and speech-language pathologists who work with individuals who have been diagnosed with various disabilities, including autism spectrum disorder (ASD) and are minimally verbal or nonverbal. Participants engage in activities focused on selecting appropriate assessment tools, using a guided decision making process for developing instructional supports, setting goals and objectives based on assessments and observations, and implementing collaborative evidence-based instructional strategies, including augmentative alternative communication, in the classroom and/or home.

CSD 781. Cooperative Education (1-4).
A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. May not be used toward degree requirements. Repeatable for credit.

DANC - Dance

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

DANC 130. Varieties of Dance (1-2).
No previous experience in dance required. A different form of dance may be offered each semester. Repeatable for credit.

DANC 130A. Ballroom/Swing (1-2).
Introduces students to the fundamentals of contemporary, social and competitive ballroom dancing. Students learn the basics and variations in the East Coast Swing, triple and single rhythms, cha cha, salsa, waltz or any of the other popular ballroom dances the students wish to accomplish and time permits. Attention is given to building confidence, rhythmic understanding, leading and following, and a basic understanding of the origins of the dances and their cultural roots. Repeatable for credit.

DANC 130V. Hip Hop I (1-3).
Introduces hip hop dance technique emphasizing work in body isolations, rhythmic patterns and directions/weight changes, basic steps, and combinations similar to those found in the dance industry today. Repeatable for credit.

DANC 140. Art of The Dance (3).
General education fine arts course. Exploratory overview of American dance between 1890 and 1990. Emphasizes lecture, discussion, reading materials, dance videos and films. Very little physical application in the dance studio. Open to everyone. Not counted toward a dance major.

DANC 150. Dance Workshop (1-4).
Repeatable for credit.

DANC 150A. Ballroom-Latin (1-2).
Introduces students to the fundamentals of contemporary, social and competitive ballroom dancing. Students learn the basics and variations in the tango, rumba, cha cha, salsa, waltz or any of the other popular ballroom dances the students wish to accomplish and time permits. Attention is given to building confidence, rhythmic understanding, leading and following, and a basic understanding of the origins of the dances and their cultural roots. Repeatable for credit.

DANC 150Q. Workshop in Dance (0).
Dance majors only. Repeatable for credit. Prerequisite(s): instructor's consent.

DANC 180E. Performing Arts Seminar (1).
Cross-listed as THEA 180E. Interdisciplinary introduction to the School of Performing Arts. Students study performance, design and production of theatre, music theatre and dance. First semester students in the School of Performing Arts interact and collaborate with each other for a greater understanding of performing arts. Students crew one show on the season calendar. Students also break out into individual program areas of department-specific modules when appropriate. Repeatable for credit.

DANC 201. Modern Technique 1 (2).
Introduces study of basic positions, body alignment, stretches and strengthening exercises; emphasizes simple movement phrases to develop understanding of direction, rhythm and dynamics. Repeatable for credit.

DANC 210. Ballet Technique 1 (2).
Introduces basic technique, positions, basic steps, proper body alignment, classroom structure, etiquette and ballet vocabulary. Repeatable for credit.

DANC 215. Dance Improvisation (1).
Introduces the process of spontaneous movement discovery involving solo and group movement experiences. Improvisational exercises work to heighten the personal intuitive processes, the kinesthetic sense, and spatial and temporal awareness, allowing for individual ongoing discovery of potential movement resources for performance and choreography.

DANC 225. Dance History: Ancient Civilization to Early 1900s (3).
General education fine arts course. Overview of dance history emphasizing the Western tradition in social, cultural and concert dance forms from ancient civilizations to early 1900s, dance in the Americas, and the origins and development of ballet.

DANC 227. Mime/Physical Theatre 1 (2).
Introductory course in crafting nonverbal theatre to create conceptual statements, short plays and abstract movement art. Student experiences gesture, isolations, flexibility, strength, emotional expression, genuine acting and fundamental mime theatre skills to see the range and

possibilities in communicating nonverbally. Enhances both acting and dancing skills.

DANC 235. Jazz Technique 1 (2).
Introduces jazz technique, emphasizing work in body isolations, rhythmic patterns and directions, basic steps, and history and development of jazz dance in America. Repeatable for credit.

DANC 240. Tap 1 (2).
Introduces the principles of tap dance including rhythm, clarity of sound, syncopation and weight shift. Repeatable once for credit.

DANC 301. Modern Technique 2 (2-3).
Continuation of DANC 201 emphasizing movement phrases. Intermediate level. Repeatable for credit. Prerequisite(s): instructor's consent or by audition.

DANC 305. Choreography 1 (2).
Introductory course in the craft and art of making dances using improvisation and small assignments as the means for investigating movement concepts. Space, time and force factors, sound and musical forms, drama and literature, emotions, shape and path, solo, small and large group, and other concepts are experienced to inform the student of the range of possibilities in making dances. Prerequisite(s): DANC 215 and level two (intermediate) proficiency in modern dance, ballet and jazz techniques.

DANC 310. Ballet Technique 2 (2-3).
Continuation of DANC 210. Intermediate level. Repeatable for credit. Prerequisite(s): instructor's consent or by audition.

DANC 315. Music For Dance (3).
Studies tempo, meter and quality of sound as applied to movement. Explores appropriate music repertoire for dance. Studies musical form and style periods and applications to performance and choreography.

DANC 320. Dance Repertoire (0.5).
For undergraduate students participating in the process of working with a choreographer. Students enrolled in performance must be cast in a work as a performer or understudy. Repeatable for credit.

DANC 325. Dance History: 20th and 21st Centuries (3).
General education fine arts course. Focuses on the development of modern and contemporary dance of the 20th and 21st centuries in the Western theatrical tradition. Topics include: early modern forerunners and pioneers, the evolution of contemporary ballet, postmodern dance, new dance, and the impact of technology and fusion dance forms.

DANC 332. Music Theatre Dance 1 (2).
Focuses on three major aspects: executing specific period dances used in musical theatre shows, introducing original Broadway choreography that is level appropriate, and dissecting how to successfully audition at a professional dance call. Emphasizes proper dance technique and physical fitness. Mock auditions occur on a regular basis to improve dance-auditioning skills. Videotaping students occurs on a regular basis. Prerequisite(s): DANC 235.

DANC 335. Jazz Technique 2 (2).
Continuation of DANC 235 at intermediate level. Repeatable for credit. Prerequisite(s): instructor's consent or by audition.

DANC 340. Tap 2 (2).
Continuation of DANC 240. Advanced intermediate-level course emphasizing appropriate technique of intermediate tap skills and the continued development of intricate rhythms, musicality, weight distribution and variation of style. Repeatable once for credit. Prerequisite(s): DANC 240 and/or instructor's consent.

DANC 350. Workshops in Dance (1-4).
Dance majors only. Repeatable for credit.

DANC 350R. Rehearsal Assistant - Dance (0).
Participation course for exceptional dance students to spend a semester in an appropriate dance rehearsal setting assisting a faculty or guest choreographer. Meets in conjunction with scheduled rehearsal times. *Course includes diversity content*. Dance majors only. Repeatable. Prerequisite(s): junior standing or departmental consent.

DANC 350T. Teaching Assistant - Dance (0).
Participation course for exceptional dance students to spend a semester in an appropriate dance course setting assisting a faculty instructor to hone their teaching skills. Meets in conjunction with assigned course. *Course includes diversity content*. Dance majors only. Repeatable. Prerequisite(s): junior standing or departmental consent.

DANC 370. Professional Practices for the Performing Artist (3).
Cross-listed as THEA 370. For all performing arts majors. Focuses on business practices in performing arts. Discussions and assignments focus on resumes, websites, reels, marketing, business plans, unions, contracts, portfolios, interviews, taxes, etc. Individual concentration areas are also covered in break-out sessions throughout the course.

DANC 380. Dance Conditioning (2).
Introduces and addresses the physical needs of dancers: increasing strength and endurance, improving balance, preventing and treating injuries, and providing a basic understanding of correct dance alignments. Repeatable for credit.

DANC 381. Dance Somatics (2).
Emphasizes the unity of mind and body, and an integrated experience from within, through conscious guided movement and opportunities for increased self-awareness. Introduces students to an understanding of general somatic principles and somatic modalities through studies in both Bartenieff and/or Irene Dowd practices. Repeatable for credit.

DANC 401. Modern Technique 3 (3).
Continuation of DANC 301. Upper-intermediate level. Repeatable for credit. Prerequisite(s): instructor's consent or by audition.

DANC 405. Choreography 2 (2).
Further work in improvisation and composition. Studies form in composition. Culminates in a performance of solo works, duets and small groups for an invited audience. Prerequisite(s): DANC 305. Corequisite(s): appropriate level modern dance or ballet technique class.

DANC 410. Ballet Technique 3 (3).
Continuation of DANC 310. Upper-intermediate level. Repeatable for credit. Prerequisite(s): instructor's consent or by audition.

DANC 415. Dance Kinesiology (3).
Introduces principles of kinesiology for dance. Includes anatomy, physiology, and beginning concepts in body therapies and movement analysis. Stresses structural and neuro-muscular analysis of the human body as it responds to the demands of dance.

DANC 432. Music Theatre Dance 2 (2).
Developing proper dance technique is reinforced and expanded upon. Focuses on learning advanced original Broadway choreography from world-renowned choreographers and current choreographers working on Broadway and in regional theatres across the country. Equal focus is also on further developing dance auditioning skills and performance quality. Videotaping occurs on a regular basis. Repeatable for credit. Prerequisite(s): DANC 332 and/or instructor’s consent.

DANC 435. Jazz Technique 3 (2).
Continuation of DANC 335 at a higher level of technical skill. Includes advanced kinetic memory, flexibility, isolation, sophisticated syncopation and reflex. Repeatable for credit. Prerequisite(s): DANC 235, 335 and/or instructor's consent.

DANC 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

DANC 490. Dance Audition Techniques (1).
Develops techniques and audition repertory dancers need to gain professional employment and/or successfully complete for placement in advanced training programs. Covers the research skills necessary to form a professional career, and brings students into contact with professional guest artists who can provide additional insight and contacts. Repeatable for credit. Prerequisite(s): BFA or BA major in performing arts with dance concentration.

DANC 501. Senior Modern Technique 4 (0.5-3).
Advanced level continuation of DANC 401. Emphasizes professional technique and performance quality. Repeatable for credit. Undergraduate senior standing dance major only. Prerequisite(s): instructor's consent or by audition.

DANC 505. Choreography 3 (2).
Focuses on the choreographic process. Students create choreographic studies for more than one dancer using elements studied in Choreography 1 and 2 and exploring different choreographic approaches. Further exploration may include environmental, chance and collaborative choreographies and multimedia approaches. For undergraduate credit only. Prerequisite(s): DANC 405. Corequisite(s): appropriate level modern dance or ballet technique class.

DANC 510. Senior Ballet Technique 4 (0.5-3).
Advanced level continuation of DANC 410. Emphasizes professional technique and performance quality. Repeatable for credit. Undergraduate senior standing dance major only. Prerequisite(s): instructor's consent or by audition.

DANC 535. Jazz Dance 4 (3).
Advanced level. Continuation of DANC 435. Emphasizes professional technique and performance quality. Repeatable for credit. Prerequisite(s): instructor's consent or by audition.

DANC 545. Methods of Teaching Dance (2).
Develops teaching skills for elementary schools, high schools, recreation centers, private and professional schools, and universities through lesson planning and in-class teaching practice. Prerequisite(s): DANC 301 or DANC 310.

DANC 580. Capstone Project (1-2).
Capstone of a dance major's educational experience. Focuses on the process of creating a final project for the completion of the dance major under the supervision of a dance faculty mentor. The course comprises a final project and research paper that demonstrates skill in self-evaluative writing, and knowledge of principles learned in the dance degree curriculum, culminating in a concert or presentation, and oral review with the dance faculty. May be taken concurrently with DANC 505 with instructor's consent. Repeatable for credit. For undergraduate credit only. Prerequisite(s): instructor's consent. Corequisite(s): appropriate level technique class, senior standing.

DANC 580A. Senior Project - BA (1).
Capstone of a dance major's educational experience. The project comprises a final project and research paper that demonstrates skill in self-evaluative writing, knowledge of principles learned in the dance emphasis and complimentary course of study culminating in a presentation to the dance faculty.

DANC 580F. Senior Project - BFA (1).
Focuses on the process of choreographing and producing a dance concert for the completion of the dance major, under the supervision of a dance faculty mentor. A written paper and an oral review with the dance faculty support the concert. Corequisite(s): appropriate level technique class, senior standing.

DANC 645. Practicum in Teaching Dance (1).
Applies and implements teaching skills for elementary schools, high schools, recreation centers, private and professional schools, and universities through WSU dance studio assistantship, lesson planning and syllabus development, guest teaching, and additional assigned in-practice tasks. Prerequisite(s): DANC 545.

DANC 675. Directed Study (1-3).
Individual study or projects. Repeatable for credit with departmental consent. Prerequisite(s): departmental consent.

DANC 690. Special Topics in Dance (1-6).
For individual or group instruction. Repeatable for credit with departmental consent.

DANC 750. Dance Workshop (1-4).
Variable credit dance course for WSU graduate students, alumni and the Wichita community. Credit hour enrollment determines the varying course requirements. Repeatable for credit. Technique courses can be taken with instructor's consent.

DH - Dental Hygiene

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

DH 311. Preclinical Dental Hygiene (5).
3 Classroom hours; 7 Lab hours. Presents the basic skills involved in the delivery of dental hygiene patient care, including infection control, disease prevention and instrumentation skills. Considers measures that can be employed to prevent oral disease and promote dental health. Laboratory instruction in instrumentation for removal of deposits from the teeth is included. Prerequisite(s): program consent.

DH 314. Introduction to Periodontics (3).
Covers the supporting structures of the teeth and an overview of both the biological and clinical aspects of periodontology. Enables dental hygiene students to recognize and differentiate periodontal health from disease, formulate appropriate treatment plans, select appropriate adjunctive therapies and recognize the role of the dental hygienist as a periodontal co-therapist in initial periodontal therapy and maintenance. Also includes periodontal surgery, antibiotics and antimicrobial agents, periodontal dressing, and sutures. Emphasizes the evaluation of a periodontal case study resulting in the development of a periodontal treatment plan. Prerequisite(s): program consent.

DH 317. Clinical Radiology (4).
3 Classroom hours; 3 Lab hours. Presents the theory of radiation production, usage and radiation safety. Develops skills in exposing, processing, mounting, evaluating and interpreting radiographs. Uses laboratory periods to gain proficiency in radiographic techniques.

DH 318. Oral Anatomy, Histology and Embryology (3).
Studies tooth morphology, arrangement, function and characteristics. Studies the development and microscopic anatomy of the oral cavity including hard and soft tissues. Emphasizes the role of morphology and embryology in the practice of dental hygiene.

DH 319. Dental Materials (3).
2 Classroom hours; 2 Lab hours. Covers the properties, uses, management and manipulation of dental materials. Includes laboratory experience with commonly used materials and procedures that are within the scope of dental hygiene practice. Prerequisite(s): program consent.

DH 331. Dental Hygiene Concepts I (3).
Prepares students to assess, plan, implement and evaluate the clinical care of patients. Emphasizes oral health promotion, dental hygiene diagnosis, emergency preparation, patient communication and motivation. Explores the development of professional behaviors and skills and further development of clinical skills. Prerequisite(s): program consent.

DH 332. Dental Hygiene Clinic I (3).
12 Lab hours. Providing patient care in a clinical setting. Stresses patient assessment, oral disease prevention and basic instrumentation techniques. Develops patient evaluation and treatment planning skills. Prerequisite(s): program consent.

DH 333. Dental Hygiene Clinic II (2).
Continues developing proficiency in clinical techniques emphasizing advanced periodontal instrumentation techniques. Class meets during summer pre-session. Prerequisite(s): program consent.

DH 334. Introduction to Evidence-Based Practice (2).
Cross-listed as NURS 325. Emphasizes the discovery, analysis and application of evidence to support clinical practice. Open to nonmajors. Prerequisite(s): departmental consent.

DH 335. General and Oral Pathology (3).
Surveys general pathology of tissues and organs of human anatomy. Discusses dental pathology of the teeth, dental pulp and oral tissues with emphasis on clinical and radiographic recognition of those pathologies. Prerequisite(s): program consent.

DH 348. Clinical Skills Update (1-3).
Provides clinical remediation to graduate dental hygienists who wish to review and enhance clinical skills. Students develop a self-study plan to enrich their knowledge and skill above that offered in the dental hygiene core curriculum. Emphasizes identification of clinical skill level, development of remediation schedule, and self-evaluation skills. Student negotiates with dental hygiene program as to the hours of lecture and clinical practice needed to reach student's goals. Prerequisite(s): must be a graduate of an accredited dental hygiene program.

DH 360. Fundamentals of Advanced Professional Roles (2).
Enhances the knowledge base of the degree completion student in fundamental competencies for advanced professional roles in dental hygiene. Topics include electronic and written communication, professional writing, interprofessional education, and evidence-based practice concepts. Prerequisite(s): admission to the degree completion Bachelor of Science.

DH 407. Ethics and Jurisprudence (3).
Studies laws governing the practice of dentistry and dental hygiene as well as the economics and the ethics of the profession. Includes application of ethical principles to real-life situations as well as practice management guidelines and practice philosophies.

DH 410. Community Oral Health Management I (3).
Covers dental public health and community dental hygiene, focusing on education and prevention. Covers the professional philosophy and foundations of dental health education in a community health context, as well as in-depth study of certain aspects of dental public health such as fluoridation, epidemiology and program development. Students develop dental health education materials. Prerequisite(s): program consent.

DH 416. Pain Management (2).
Provides the theoretical and practical knowledge necessary for management of dental pain. Focuses on mechanisms of pain, control of dental pain through the administration of topical anesthetics, infiltration and block anesthesia; use of nitrous oxide and recognition of local anesthesia-related complications and emergencies. Prerequisite(s): HS 301.

DH 420. Educational Methodology in Dental Hygiene (3).
Introduces learning theory and methodology related to clinical, laboratory and didactic instruction in dental hygiene. Students gain experience using best practices in course design to develop and evaluate teaching units and a course of instruction. Prerequisite(s): admission to the degree completion Bachelor of Science.

DH 430. Curriculum Design, Evaluation and Management in Dental Hygiene Education (3).
Explores the theoretical and practical aspects of curriculum development, design, implementation and evaluation. Role of accreditation, classroom management, and faculty development and support are examined. Students develop a curriculum plan for a hypothetical dental hygiene program. Prerequisite(s): admission to the degree completion Bachelor of Science.

DH 431. Dental Hygiene Concepts II (3).
Emphasizes developing problem solving abilities, managing patients with special needs and diverse backgrounds, and managing emergencies in the dental office. Seminar discussion of current and advanced clinical concepts as well as other topics related to the treatment of special needs patients. Prerequisite(s): program consent.

DH 432. Dental Hygiene Concepts III (3).
Includes integration of topics to explore dental specialties and rationale for treatment referrals, interprofessional communication, cultural competence, case analysis, leadership and advocacy. Also prepares for written board exam.

DH 434. Dental Hygiene Clinic III (4).
16 Lab hours. Students continue to develop competency in intermediate dental hygiene skills. Principles of periodontal techniques, such as root planning/debridement and supportive techniques are stressed. Comprehensive treatment planning and implementation of comprehensive care focuses on the special needs patient along with a diverse patient population. Continued development of professionalism, management and critical thinking skills are emphasized.

DH 435. Dental Hygiene Clinic IV (4).
16 Lab hours. Opportunity to reach competency in all clinical skills focusing on the periodontal patient and pain management. Emphasis is on decision making, problem solving, critical thinking, providing treatment for an increased number of patients, and appointment and time management. Focuses on comprehensive dental hygiene care to a diverse population. Prerequisite(s): admission to program.

DH 440. Community Oral Health Management II (3).
Includes examination of dental health delivery systems in community settings, with a focus on management of oral health care in alternative practice settings. Students evaluate dental health delivery in various community settings and identify oral health problems in a group or community. Students give presentations on dental health education. Prerequisite(s): program consent.

DH 452. Population Health Management in Dental Hygiene (3).
Addresses the dental hygienists role in management of oral health for populations with limited access to care. Students focus on oral health program development through evaluation and oral health promotion and communication strategies specific to the population. Prerequisite(s): admission to degree completion Bachelor of Science.

DH 456. Special Care Populations (3).
Integrates concepts associated with providing oral health care to special needs populations. Emphasis is on assessment, planning, implementation, and evaluation of care for individuals with developmental, physical, mental or medically compromised health

needs. Prerequisite(s): admission to the degree completion Bachelor of Science.

DH 462. Special Projects in Dental Hygiene (3).
Individual study of selected topics to enhance the student's knowledge base and competencies related to didactic, clinical or community dental hygiene, alternative practice settings, or advanced professional roles. Designed using a self-study, student-directed format. Students are expected to develop personal objectives, projects/activities in consultation with faculty. Prerequisite(s): admission to the degree completion Bachelor of Science.

DH 465. Research and Evidence-Based Practice in Dental Hygiene (3).
Practical approach to the application of evidence-based practice and foundational research concepts. Includes identification of types of research and research problems, literature analysis, and research methodology. Prerequisite(s): admission to the BSDH degree completion program and the completion of STAT 370 or equivalent.

DH 470. Issues in Dental Hygiene (3).
Analyzes various professional issues in clinical or community dental hygiene focusing on issues ranging from concerns within the local practice setting to national policy issues. Examines theories and applications uniquely suited to the oral health care delivery system. Prerequisite(s): admission to the degree completion Bachelor of Science.

DS - Decision Sciences

Department of Finance, Real Estate & Decision Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

DS 190. Selected Topics (1-3).
Repeatable for credit with departmental consent.

DS 350. Introduction to Production and Operations Management (3).
Overview of the concepts, tools and techniques used in making managerial decisions related to the production or operations function of an organization. Topics include facility location and layout, forecasting, operations scheduling, quality control, inventory planning, and control work design and measurement. Prerequisite(s): junior standing, advanced standing.

DS 390. Special Group Studies in Decision Sciences (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): advanced standing.

DS 400. Principles of Global Supply Chain Management and Logistics (3).
Cross-listed as IB 400. Designed to provide an overview of supply chains and logistics focusing on issues related to supply, operations, logistics and integration in a global context. Current and relevant topics to discuss include purchasing management, supplier relationships, ethical and sustainable sourcing, resource planning, process management, global logistics and location decisions, process integration, and performance measures. Area multi-national companies (Koch, Cargill, Spirit, Cessna and other aviation companies, etc.) are featured as live cases/guest lectures. Prerequisite(s): junior standing, advanced standing.

DS 481. Cooperative Education (1-3).
Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): junior standing and 2.250 GPA.

DS 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing and departmental consent.

DS 675. Analytics Decision Modeling With Spreadsheets (3).
Cross-listed as FIN 675. Introduces key principles of business analytics modeling: descriptive, predictive and prescriptive. Models covered in each area may differ from semester to semester. Students learn how to make decisions not based on intuition or “gut feel,” but on models and data. Course adopts a practical approach to the modeling of a wide variety of business problems in various functional areas. Models are built in Excel and add-ins to Excel, allowing students to gain advanced Excel skills, which will benefit them in their careers. Prerequisite(s): DS 350 and FIN 340 each with a grade of C+ (2.300) or better, junior standing, advanced standing or instructor's consent.

DS 690. Seminar in Selected Topics (1-5).
Repeatable for credit with departmental consent. Prerequisite(s): DS 350 with a grade of C+ (2.300) or better, junior standing, advanced standing.

DS 701. Introduction to Supply Chain Management (SCM) (0.5).
Enables students to understand the basics of integrated business logistics and supply chain management.

DS 702. Introduction to Spreadsheet Modeling (0.5).
Covers how to create spreadsheet models in Excel. Regardless of title (manager, supervisor, purchasing agent, etc.) and functional area (operations, supply chain, finance, etc.), students learn how to use Excel to summarize, report and analyze data — a critical set of skills in today’s data-driven business environment.

DS 703. Introduction to Forecasting (0.5).
Predictive analytics is one of the three key parts of analytics (descriptive, predictive and prescriptive), and deals with forecasting. Course introduces students to time series analysis, and the averaging techniques of forecasting, including moving average, and exponential smoothing. Also introduces the metrics for error analysis in forecasting.

DS 704. Introduction to Inventory Management (0.5).
Overview of the concepts, tools and techniques used in managing inventory in a system.

DS 705. Basics of Analytics (1).
Covers basic methods for the analysis of existing datasets. Commonly used techniques for the analysis of quantitative and qualitative data are introduced. Topics include: data preprocessing, linear regression, logistic regression, classification, and cluster analysis. Students are introduced to R, an open source data mining software. Lectures use R and Microsoft Excel to guide the analysis, but students are welcome to use their preferred software package in solving assignment problems and evaluations.

DS 706. Introduction to Demand Management (1).
Focuses on fundamentals of demand management and introduces collaboration, consensus and integration issues of demand management. Includes strategies for managing uncertainty and the role of technology.

DS 707. Introduction to Supply Management (0.5).
Exposes learners to the latest trends and issues dealing with supply management. Covered topics include sourcing management, purchasing management, financial and operational strategies for procurement, supplier base management, and risks and sustainability in procurement.

DS 708. Advanced Forecasting (1).
Predictive analytics is one of the three key parts of analytics (descriptive, predictive, and prescriptive), and deals with forecasting. Course goes beyond the averaging techniques for forecasting, and covers linear regression for forecasting time series with trend, and the decomposition method for forecasting time series with trend and seasonality.

DS 709. Introduction to Project Management (0.5-1).
Establishes fundamental guidelines for defining the process of project management and designing time-constrained projects. Covers core methodology for managing complex projects on time.

DS 710. Supply Chain Management Network Planning (1).
Enables students to understand the basics of network planning in distribution networks, network design, global network design, and transportation network design.

DS 711. Performance Management in Supply Chains (1).
Performance management — a standard practice in organizations — is presented and promoted through business processes, methodologies, metrics and technologies used by an organization to measure, monitor and manage business performance. Covers a broad category of processes, technologies, applications and metrics for managing the performance of supply chains. Emphasizes the criticality of creating and maintaining an enterprise-level culture of evidence/fact-based management and decision making. Covers concepts and frameworks related to performance management in supply chains and exposes students to supporting technologies used by contemporary organizations.

DS 712. Advanced Demand Management (1).
Case-based course focusing on implications of demand management and elements of supply chain management in an effort to optimize revenue, inventory costs and customer service levels via promotional activities and intelligence.

DS 713. Integrated Supply and Demand Management (1).
Enables students to understand how integrated supply and demand management impacts design of an optimized supply chain.

DS 714. Strategic Management in Supply Chain Management (0.5).
Presents innovative strategies and best practices for strategically managing and optimizing supply chains to improve supply chain performance.

DS 715. Supply Chain Management A (0.5).
Uses simulation games to introduce different concepts in strategic supply chain management.

DS 716. Supply Chain Management B: Simulation Game (0.5).
Uses simulation games to discuss different concepts in strategic supply chain management.

DS 725. Global Procurement and Outsourcing (3).
Designed to expose learners to the latest supply chain trends and issues dealing with global purchasing and sourcing. Covered topics include global sourcing management, purchasing management, financial and operational strategies for sourcing and procurement, diversity in sourcing and procurement, supplier base management, risks in sourcing and procurement, ethical and sustainable outsourcing. Real-life experience and practices by guest speakers from area multi-national companies (Koch, Cargill, Spirit, Cessna and other aviation companies, etc.) are featured.

DS 750. Workshop in Decision Sciences (1-4).
Prerequisite(s): junior standing.

DS 755. Project Management (3).
This hands-on and project-based technology course establishes fundamental guidelines for defining the process of project management and designing time-constrained projects. Covers core methodology for managing complex projects on time. Uses a software tool. Prerequisite(s): junior standing, advanced standing; students are strongly recommended to take DS 350 before taking DS 755.

DS 790. Global Logistics and Transportation Management (3).
Project-based course offers experimental decisions to challenging problems with global implications for an industry. Topics include intermodal transportation, route selection, transportation regulations, contingency planning, international business ethics and regulations on logistics and distribution.

ECON - Economics

Department of Economics

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ECON 201. Principles of Macroeconomics (3).
General education social and behavioral sciences course. Introduces the determinants of income, output and employment. Emphasizes various macroeconomic theories and related policies. Includes money, banking and the macroeconomic effects of the global economy.

ECON 201H. Principles of Macroeconomics Honors (3).
General education social and behavioral sciences course. Introduces the determinants of income, output and employment. Emphasizes various macroeconomic theories and related policies. Includes money, banking and the macroeconomic effects of the global economy.

ECON 202. Principles of Microeconomics (3).
General education social and behavioral sciences course. Introduces the study of markets and the behavior of household and business units. Special attention is paid to the role of competition in determining market performance. Other topics include contemporary public issues such as government regulation, international trade, and economics of the environment. Prerequisite(s): ECON 201.

ECON 231. Introductory Business Statistics (3).
Introduction to statistical inference, estimation and hypothesis testing. Includes summary measures, probability, random variables and their distributions, sampling distributions, elements of Bayesian decision theory, linear regression and correlation, and time series analysis. Uses commercial statistical packages to perform statistical data analysis. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisite(s): MATH 111.

ECON 232. Statistical Software Applications for Business (1).
Computer lab focusing on applying statistical software to business analysis and decision making. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisite(s): MATH 111, BADM 161, 162 and 163.

ECON 301. Intermediate Macroeconomics (3).
Introduces the concepts of economic growth, aggregate demand and aggregate supply. After developing theoretical foundations for these, policy applications are discussed, including such policy issues as

unemployment, inflation, government and international trade deficits, and interest rates. Prerequisite(s): ECON 201, 202, junior standing.

ECON 302. Intermediate Microeconomics (3).
Theory of resource allocation by means of prices and markets. Economic choice, production, cost, supply, demand and market structure are discussed, as well as efficiency conditions in consumption, production, distribution and exchange. Prerequisite(s): ECON 201, 202, junior standing.

ECON 340. Money and Banking (3).
Studies the financial sector of the U.S. economy, emphasizing the role of money in determining inflation, interest rates and the level of economic activity. Includes the commercial banking and Federal Reserve systems, credit markets, interest rate theory and monetary policy. Prerequisite(s): ECON 201, 202, junior standing.

ECON 400. Economics in the Classroom Part I (3).
Prepares social studies teacher candidates to teach the economic concepts contained in the Kansas social studies standards for middle schools. Open only to students in the College of Applied Studies. Prerequisite(s): admission to teacher education, or instructor's consent.

ECON 401. Economics in the Classroom Part II (3).
Prepares social studies teacher candidates to teach the economic concepts contained in the Kansas social studies standards for high schools. Open only to students in the College of Applied Studies. Prerequisite(s): admission to teacher education and ECON 400, or instructor's consent.

ECON 403. Business and Economics Forecasting (3).
Application of statistical method to business and economics forecasting using real world data. Includes collection of data, survey of business indicators, and application of forecasting techniques such as moving averages, smoothing, regression, time series decomposition, and ARIMA. Prerequisite(s): ECON 201, 202, 231, and junior standing.

ECON 481. Cooperative Education (1-3).
Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): ECON 201, 202, junior standing, 2.250 GPA.

ECON 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ECON 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

ECON 570. International Political Economy (3).
Cross-listed as POLS 570. Examines policy decisions regarding exchanges of trade, money and labor that span national boundaries. Studies the interaction of politics and economics at the international level, as well as the modern history of the global economy. Economics often studies the material benefits and costs of different policies. Political science asks why these policies exist in the first place with a focus on who gets the benefits, who pays the costs, and how decisions about allocating benefits and costs are made. *Course includes diversity content*.

ECON 611. Economics of Sports (3).
Inquiry into the economic aspects of professional and intercollegiate sports. Includes industrial organization of sports, public finance of sports, and the labor economics of sports, as well as the unique competitive nature of the sports enterprise. Not applicable toward the MA in economics. Prerequisite(s): junior standing.

ECON 627. Economic History of the United States (3).
Cross-listed as HIST 515. Analysis of the basic factors in economic growth. Explores agriculture, trade and commerce, industrial development and the changing role of the government in economic activity. Prerequisite(s): ECON 201 and junior standing.

ECON 660. Labor Economics (3).
Introduces labor economics surveying both theoretical and empirical research in this field. Includes labor markets, wage determination and human capital theory. *Course includes diversity content*. Prerequisite(s): for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 672. International Economics and Business (3).
Cross-listed as IB 561. Surveys the economic foundations of international trade, finance and investment. Includes foreign exchange markets, regional integration, trade theories and instruments, U.S. trade policies and treaties, multinational companies, immigration, as well as differences in cultural, political and economic systems. Includes current events. *Course includes diversity content*. Prerequisite(s): ECON 201, 202, junior standing.

ECON 674. International Financial Management (3).
Cross-listed as FIN 625 and IB 625. Studies the international financial and monetary system, emphasizing currency markets. Also examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing.

ECON 692. Group Studies in Economics (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 709. Urban Economics (3).
Cross-listed as RE 709 and PADM 709. Surveys the economic structure and problems of urban areas on both the microeconomic and macroeconomic levels. Stresses the application of regional economic analysis in the study of urban areas as economic regions. Prerequisite(s): ECON 201, 202, junior standing.

ECON 722. Topics in Microeconomics (3).
Further exploration of selected microeconomics topics. Includes a review of calculus with applications of unconstrained and constrained optimization in microeconomics. Topics include: consumer and producer behavior, game theory, auctions, interest rates, investment and capital, behavior under uncertainty, and aspects of contract theory (asymmetric information and moral hazard), and market failure associated with externalities and public goods. Prerequisite(s): ECON 302 and a calculus course like MATH 144 with a minimum grade of C+ or higher in each.

ECON 731. Applied Econometrics (3).
Studies regression techniques through business, finance and economics examples. Reviews the fundamentals of statistics and covers practical model building, data collection, use of statistical software packages,

interpretation of regression results and various diagnostic tests. Prerequisite(s): for undergraduate students, ECON 201, 202, 231 each with a grade of C+ (2.300) or better, junior standing; for graduate students, the equivalent of ECON 201, 202, 231 each with a grade of C + (2.300) or better.

ECON 740. Monetary Economics and Policy (3).
Studies monetary theory and policy. Analyzes historical and contemporary monetary issues using macroeconomic theories and empirical studies. Prerequisite(s): ECON 340, junior standing.

ECON 753AE. 2019 Financial Fitness Extravaganza (1).
Designed to help middle school and high school teachers responsible for teaching personal finance to update their skills, learn new pedagogies, and develop standards-based lessons in the areas of spending and saving, credit and debt, employment and income, investing, risk management and insurance, and financial decision making. Teachers receive the newly revised Financial Fitness for Life curriculum. This workshop is sponsored by the Fred C. and Mary R. Koch Foundation in partnership with the Kansas Council on Economic Education and the Council on Economic Education.

ECON 753AF. Real Life Applications for Social Sciences 2019 (1).
Free professional development event designed for U.S. history, U.S. government and economics teachers. Sessions address Kansas Social Studies Standards 1-4 and the standards in the C3 framework including: (1) U.S. government issues: economics sanctions, immigration, the U.S. Constitution, culture and trade. (2) U.S. history issues: immigration, fiscal policy, foreign policy, morality and markets, and civil rights. (3) Economics issues: six principles of economics, economic indicators, and economics of government policies.

ECON 753AG. K-8 Tools for Teaching Personal Finance 2019 (0.5).
Free professional development event designed for K-8 Kansas certified teachers. Teachers take home grade appropriate resources for teaching personal finance in K-8 classrooms while invigorating basic subjects such as language arts, math, science and social studies.

ECON 753AI. K-8 Tools for Teaching Economics 2019 (0.5).
Free professional development event designed for K-8 Kansas certified teachers. Teachers take home grade appropriate resources for teaching economics in K-8 classrooms while invigorating basic subjects such as language arts, math, science and social studies.

ECON 753AJ. Understanding Fiscal Responsibility (0.5).
This professional development workshop is designed for 9-12 Kansas certified teachers. Teachers take home resources to teach students how to think critically about public policy using these Understanding Fiscal Responsibility lessons focusing on government institutions, programs, the Federal Reserve, Social Security and events such as the Panic of 1893. These lessons enable students to become informed citizens as they consider the tradeoffs involved in setting public policy and learn to articulate their own views by evaluating primary and secondary sources, engaging in group activities and discussions, and writing brief essays.

ECON 765. Public Sector Economics (3).
Cross-listed as PADM 765. Examines theories of economic decision making and institutions, with a focus on how economic tools can be used to inform policy and management in the public and nonprofit sectors. Covers economic principles and discusses market failures and public policies intended to correct or alleviate market failure. Economic decision making tools for public and nonprofit management are also introduced.

ECON 781. Cooperative Education (1).
Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience. Programs must be formulated in consultation with appropriate graduate faculty. Repeatable for credit up to 3 hours. May not be used to fulfill degree requirements.

EDUC - Education

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

EDUC 300. Industry for Prior Learning I (6-12).
Students in the Bachelor of Applied Science (BAS) in workforce leadership and applied learning degree may receive up to 36 upper division WSU credit hours for coursework completed at another accredited institution that is specific to an industry or vocation. These credits hours serve as concentration hours for the degree.

EDUC 301. Industry for Prior Learning II (6-12).
Students in the Bachelor of Applied Science (BAS) in workforce leadership and applied learning degree may receive up to 36 upper division WSU credit hours for coursework completed at another accredited institution that is specific to an industry or vocation. These credits hours serve as concentration hours for the degree.

EDUC 302. Industry for Prior Learning III (6-12).
Students in the Bachelor of Applied Science (BAS) in workforce leadership and applied learning degree may receive up to 36 upper division WSU credit hours for coursework completed at another accredited institution that is specific to an industry or vocation. These credits hours serve as concentration hours for the degree.

EDUC 305. Emergency and Public Service Industry for Prior Learning I (6-12).
Students in the Bachelor of Applied Science (BAS) in workforce leadership and applied learning, emergency and public service leadership program may receive up to 36 upper-division WSU credit hours by using industry-specific courses from their community college or technical school coursework, and/or industry-specific experience and/or training. These credit hours serve as concentration hours for the program.

EDUC 310. Principles of Leadership (3).
Introduces leadership theory and practice and examines the current ideas on leadership, provides practice for developing leadership skills, and offers personal experiences for self-reflection. No previous exposure to leadership principles, ideas, models or concepts is required.

EDUC 325. Social Justice in the Workplace (3).
Examines the broad concept of social justice through the exploration of different social and professional working environments. Considers strategies for change, leadership and equity within a variety of contemporary organizational settings, situations and industries.

EDUC 400. Applied Studies Practicum (3).
Integrates coursework in the BAS - workforce leadership and applied learning program with planned and supervised professional experiences for a total of at least 160 hours. Prerequisite(s): advisor's consent.

EDUC 405. Service Learning & Community Engagement (3).
Examines the process, importance and outcomes associated with service learning and civic responsibility. Students learn how to address, formulate and structure partnerships with community agencies. Addresses topics such as basic communication and relationship skills, and the study of and exposure to underserved and underrepresented populations. Introduces skills and issues relevant to a variety of disciplines and industries.

EDUC 410. Emergency and Public Service Industry for Prior Learning II (6-12).
Students in the Bachelor of Applied Science (BAS) in workforce leadership and applied learning, emergency and public service

leadership program may receive up to 36 upper-division WSU credit hours by using industry-specific courses from their community college or technical school coursework, and/or industry-specific experience and/or training. These credit hours serve as concentration hours for the program.

EDUC 421. Organizational Design and Engagement I (3).
Directed research under the supervision of an instructor. Specifically, the student selects, plans and completes a research-based project which involves identifying an area and need for organizational redesign such as workflow, procedures and training systems, and developing a proposed redesign. Prerequisite(s): advisor's consent.

EDUC 422. Organizational Design and Engagement II (3).
Continuing research under the supervision of an instructor. Specifically, the student selects, plans and completes a research-based project unique to this course. Involves identifying an area and need for organizational redesign such as workflow, procedures and training systems, and developing a proposed redesign. Prerequisite(s): advisor's consent.

EDUC 435. Developing Innovative Mindsets (3).
Focuses on understanding and expanding an innovative learning community within an organization. Students not only learn how to embrace change and innovation, but also how to measure progress. Empowering organizational personnel is a key element within this course, which emphasizes application and the mindset of innovation.

EDUC 440. Interviewing Principles and Techniques (3).
Examines the basic principles and techniques of interviewing and their application in informational, employment and organizational contexts. Applied course designed to develop basic relationship-building, interviewing, reporting, problem-solving and decision-making skills with diverse clients, co-workers, or other groups. Focuses on fundamentals and techniques that cut across multiple interviewing situations and prepare students for current real-world applications.

EDUC 450. Applied Studies Internship (3-6).
Provides the student an applied learning experience, which integrates theory with a planned and supervised professional experience in the BAS-Workforce Leadership and Applied Learning program. Student must document at least 400 hours of applied learning. Repeatable for a total of 6 credit hours. Prerequisite(s): program admission and advisor's consent.

EDUC 485. Critical Organizational Studies (3).
Provides students with the knowledge and critical thinking important for evaluating, understanding and leading within a variety of organizational environments. Introduces key concepts and models associated with critically examining organizational and social dynamics, networks, rituals and interactions.

EDUC 499. Cultivating Culture and Inspiring Change in Organizations (3).
Students examine the concept of team learning by exploring mental models and systems thinking practices. Through practice, students learn about the current workplace trends and create a foundation for organizational culture from a leadership perspective.

EDUC 500. Dimensions of Wellness (3).
Students holistically examine meanings of wellness, including relevant biological, psychological and social concepts. As a result, students gain an understanding of how to identify, program and promote individual, organizational and community wellness initiatives.

EDUC 505. Emergency and Public Service Industry for Prior Learning III (6-12).
Students in the Bachelor of Applied Science (BAS) in workforce leadership and applied learning, emergency and public service leadership program may receive up to 36 upper-division WSU credit hours by using industry-specific courses from their community college or technical school coursework, and/or industry-specific experience and/or training. These credit hours serve as concentration hours for the program. For majors only.

EDUC 507. Managerial Leadership (3).
Introduces the concepts, responsibilities and styles of managerial leadership. Students learn about the various components of organizations and how to apply managerial decision making and leadership theories in an environment of complexity and diversity.

EDUC 520. Principles of Learning Environments (3).
Focuses on human growth and development, and learning theory with special attention paid to motivation, learning environment management, human behavior, principles of cognition, and their implications for workforce trainers. Examines the biological and societal influence on these factors, emphasizing the application of these principles to a variety of workforce environments.

EDUC 540. Leading for Creativity (3).
Focuses on the practical application of creative ideas and how they are related to organizational results. Specifically, students learn strategies for promoting, capturing and harnessing creativity for measurable results.

EDUC 550. Applied Studies Apprenticeship I (3-6).
Provides the student an applied learning experience, which integrates theory with a planned and supervised professional experience in the BAS-Workforce Leadership and Applied Learning program. Student must document at least 480 hours of applied learning. Repeatable for a total of 6 credit hours. For undergraduate credit only. Prerequisite(s): program admission and advisor's consent.

EDUC 600. Applied Studies Apprenticeship II (3-6).
Applied learning experience, with both a planned and supervised professional experience and documented learning outcomes in the BAS-Workforce Leadership and Applied Learning program. Student must document at least 640 hours of applied learning. Repeatable for a total of 6 credit hours. For undergraduate credit only. Prerequisite(s): program admission and advisor's consent.

EDUC 602. Human-Centered Service and Design (3).
Focuses on how to humanize the design-thinking process concentrating on empathy for end users. Students learn how to anticipate product impact and the importance of understanding not only how to observe user behavior, but also to incorporate that information in future products or services. Students synthesize a variety of theoretical concepts focusing on organizational or workplace applications.

EDUC 610. Collaboration and Leadership (3).
Helps students identify team needs, set expectations for collective and individual development, and continuously improve their leadership skills. Students learn tools, such as servant leadership, which will add value to the roles and behaviors of their team members, and define their team's purpose. Students learn how to identify their own leadership style and the importance of culture, values and ethical decision-making within an organizational environment.

EDUC 618. Education and Workplace Training (3).
Helps students understand the fundamental issues associated with learning, transfer of information, how to understand the learner, and how to design organizational interventions with a special focus on employee development. Students are exposed to current issues and best practices associated with workplace training and professional growth and development.

EDUC 625. Interpersonal Communication in the Workplace (3).
Shows students the importance of effective interpersonal communication in today’s modern workplace. Students learn how to

recognize various communication styles and effective ways to adapt communication to meet the needs of co-workers, bosses and customers. In addition, students improve their understanding of nonverbal communication and individual influences on communication skills. Finally, students learn techniques for dealing with negative situations, handling difficult individuals, presentations and meeting techniques.

EDUC 751. Special Studies (0.5-3).
Professional development course. EDUC 751 is an umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 751A, 751B, etc.). Students should enroll in the lettered courses with specific topics in the titles rather than in this root course.

EDUC 751A. Talent Development and the Workplace (3).
Introduces key concepts and systems associated with understanding, motivating and developing individual employee skill sets. In addition, students learn useful skills for developing workplace environments emphasizing formal and informal learning, while focusing on how to implement concepts, systems and models into everyday organizational practices.

EDUC 751B. Teaching as Leadership (3).
Identifies the fundamental forms of teaching, mentoring and educational processes within organizational environments. Students see how teaching and learning are related to leadership within a variety of organizations.

EDUC 751C. Organizational History and Leadership (3).
Students learn the foundational concepts, theories and methodologies for examining historical processes within a variety of organizations. The course highlights how understanding an organization's history is connected to strong organizational cultures, productive community relationships and future decision-making strategies.

EDUC 751D. Organizational Ethics and Decision-Making (3).
Students learn the foundational concepts, theories and methodologies for examining ethical dilemmas and evaluative processes within a variety of organizations. The course focuses on examining underlying values and elements of organizational decisions, processes and relationships. Students engage in not only ethical discussions, but also apply ethical models, concepts and frameworks to real-world case studies. Ultimately, students use these concepts, models and case studies to examine their own leadership and decision-making styles and processes within organizational environments.

EDUC 751E. Leading a Remote Workforce (3).
Introduces important concepts associated with workforce productivity. Students learn about the psychological needs necessary to lead a workforce remotely, useful tools to better engage and motivate employees, how to manage autonomous working environments, and useful tools to maintain and/or increase professional productivity.

EE - Electrical Engineering

For a course to be used as a prerequisite, it must have been passed with a *C*- or better.

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

EE 281I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

EE 282. Circuits I (4).
3 Classroom hours; 2 Lab hours. Electric circuit principles and methods of analysis. Includes DC circuits, network theorems, capacitance and inductance, AC circuit analysis, phasor plane techniques, complex power and balanced three-phase circuits. Pre- or corequisite(s): MATH 243. Corequisite(s): EE 282L.

EE 284. Circuits II (3).
Includes circuits with mutually coupled elements, transfer functions emphasizing frequency response, two-port networks, Laplace transforms and application to transient circuit analysis, and the application of computer-aided analysis software toward circuit analysis and design. Prerequisite(s): EE 282, MATH 243. Pre- or corequisite(s): MATH 555.

EE 285L. Programming with MATLAB for Electrical and Computer Engineers (1).
Develops a deeper understanding of electrical and computer engineering related programming and analysis. MATLAB is a strong high-level programming language which is popular in science and engineering fields. Once a student learns to develop solutions to electrical and computer engineering problems using MATLAB, the programming skills can be easily extended to other programming languages. These skills are critical for both industry and graduate studies. Course covers visualization, developing and solving equations for electrical and computer engineering, symbolic toolboxes, and advanced programming methods for electrical and computer engineering applications. Prerequisite(s): CS 211. Pre- or corequisite(s): EE 284.

EE 383. Signals and Systems (3).
Properties of signals and systems, convolution and its application to system response, Fourier series representation of periodic signals, Fourier transforms and continuous spectra, filters, time domain sampling and Z-transforms. Many of these topics include discrete as well as continuous systems. Prerequisite(s): EE 284, EE 285L and MATH 555.

EE 463. Applied Engineering Electromagnetics (3).
Maxwell's equations in integral and differential form. Transient and steady state response of circuits containing transmission lines with emphasis on applications in communications and digital electronics. Additional topics in optics and electromagnetic radiation as time permits. Prerequisite(s): MATH 344, PHYS 314.

EE 477. Selected Topics in Electrical Engineering (1-4).
New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite(s): departmental consent.

EE 477A. Semiconductor Devices (3).
Covers the physics and applications of semiconductor devices: physics of semiconductor devices, energy bands, electrons and holes, P/N and metal semiconductor diodes, characteristics, operation, properties and limitations of bipolar transistors and field effect transistors (JFETS and MOSFETS), and PNPN devices. Prerequisite(s): PHYS 314.

EE 481. Cooperative Education (1).
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Prerequisite(s): departmental consent.

EE 481A. Cooperative Education (1).
Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating coursework with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignments and need not be enrolled in any other course. Repeatable for credit. Prerequisite(s): departmental consent.

EE 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

EE 481N. Internship (1).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent..

EE 481P. Cooperative Education (1).
Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating coursework with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 credit hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignments. Repeatable for credit. Prerequisite(s): departmental consent.

EE 488. Electric Machines and Transformers (4).
3 Classroom hours; 2 Lab hours. Theory and analysis of transformers, DC machines and AC machines. Includes single-phase and three-phase transformers, DC machines, synchronous machines and induction motors. Prerequisite(s): EE 282.

EE 492. Electronic Circuits I (4).
3 Classroom hours; 2 Lab hours. Introduces semiconductor devices and applications in discrete and integrated circuit design. Applications include, but are not limited to, op-amp circuits, rectification and transistor amplifiers. Pre- or corequisite(s): EE 284 and 285L. Corequisite(s): EE 492L.

EE 493. Electronic Circuits II (4).
3 Classroom hours; 2 Lab hours. Investigates the theory and application of discrete and integrated circuits. Includes op-amp construction, frequency response, feedback and stability, power amplifiers and nonlinear integrated circuits. Prerequisite(s): EE 492. Corequisite(s): EE 493L.

EE 577. Special Topics in Electrical and Computer Engineering (1-4).
New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite(s): departmental consent.

EE 577L. Renewable Energy Engineering (3).
Analysis and design of renewable energy systems, including solar, wind, hydroelectric, geothermal and biomass systems. Analysis and design of energy storage systems that integrate with renewable energy systems. Integration of renewable energy systems with the electric power supply system. Prerequisite(s): PHYS 314 and EE 282.

EE 577M. Real-Time Signal Processing Applications (3).
In most digital signal processing operations, it is assumed that we have sampled signals which are considered as digital signals. Often in classroom educations, these signals are usually stored for subsequent retrieval or synthesized when needed, for convenience for demonstrations or computer-based assignments. However, this does not allow for real-time processing of the signals. Real-time processing means guaranteed delivery of data by a certain time. This undergraduate elective course is hardware based with hands-on simulations to introduce students to the analysis, design, and implementation of real-time digital signal processing (DSP) applications. The course first briefly introduces basic DSP theory, then focuses on a practical, step-by-step framework that provides hands-on experience in real-time DSP to reinforce the basic DSP theory. Students are expected to learn how to use/apply the DSP theory in real-time applications. Prerequisite(s): EE 383 or equivalent, CS 211. Corequisite(s): EE 577ML.

EE 585. Senior Design Project I (2).
3 Lab hours. Design project under faculty supervision chosen according to the student's interest. Does not count toward a graduate degree in electrical engineering, computer engineering or computer science. For undergraduate credit only. This class should be taken in the semester prior to the one in which the student is going to graduate. Prerequisite(s): senior standing, CS 480 or EE 492. Pre- or corequisite(s): PHIL 354 or 385.

EE 586. Introduction to Communication Systems (4).
3 Classroom hours; 2 Lab hours. Fundamentals of communication systems; models and analysis of source, modulation, channel and demodulation in both analog and digital form. Reviews Fourier series, Fourier transform, DFT, probability and random variables. Studies in sampling, multiplexing, AM and FM analog systems, and additive shite Gaussian noise channel. Additional topics such as PSK and FSK digital communication systems covered as time permits. Prerequisite(s): EE 383, IME 254. Corequisite(s): EE 586L.

EE 588. Advanced Electric Motors (3).
Advanced electric motor applications and theory. Includes single-phase motors, adjustable speed AC drive applications and stepper motors. Prerequisite(s): EE 488.

EE 595. Senior Design Project II (2).
3 Lab hours. Does not count toward a graduate degree in electrical engineering, computer engineering or computer science. This is the second part of a sequence of two courses (EE 585 and EE 595) that have to be taken in two consecutive semesters. Students failing this course must retake the EE 585 course. For undergraduate credit only. Prerequisite(s): EE 585.

EE 598. Electric Power Systems Analysis (3).
Analysis of electric utility power systems. Topics include analysis and modeling of power transmission lines and transformers, power flow analysis and software, and introduces symmetrical components. Prerequisite(s): EE 488.

EE 610. Introduction to Quantum Computing (3).
Introduces the theory and practice of quantum computing. Topics covered include the basics of quantum mechanics, Dirac notation, quantum gates and circuits, entanglement, measurement, teleportation and algorithms. Prerequisite(s): MATH 511.

EE 684. Introductory Control System Concepts (3).
Cross-listed as ME 659. Introduces system modeling and simulation, dynamic response, feedback theory, stability criteria, and compensation design. Prerequisite(s): (1) EE 282 and MATH 555, or (2) EE 383.

EE 688. Power Electronics (4).
3 Classroom hours; 2 Lab hours. Deals with the applications of solid-state electronics for the control and conversion of electric power. Gives an overview of the role of the thyristor in power electronics application and establishes the theory, characteristics and protection of the thyristor. Presents controlled rectification, static frequency conversion by means of the DC link-converter and the cyclo converter, emphasizing frequency, and voltage control and harmonic reduction techniques. Also presents requirements of forced commutation methods as applied to AC-DC control and firing circuit requirement and methods. Introduces applications of power electronics to control AC and DC motors using new methods such as microprocessor. Prerequisite(s): EE 383, 488, 492. Corequisite(s): EE 688L.

EE 697. Electric Power Systems Analysis II (3).
Analysis, design, modeling and simulation of high-voltage electric power transmission systems and rotating generators. Simulations include short circuit studies, economic dispatch and transient stability. Prerequisite(s): EE 598.

EE 726. Digital Communication Systems I (3).
Presents the theoretical and practical aspects of digital and data communication systems. Includes the modeling and analysis of information sources as discrete processes; basic source and channel coding, multiplexing and framing, spectral and time domain considerations related to ASK, PSK, DPSK, QPSK, FSK, MSK, and other techniques appropriate for communicating digital information in both base-band and band-pass systems; intersymbol interference, effects of noise on system performance, optimum systems and general M-ary digital systems in signal-space. Prerequisite(s): EE 586 and 754.

EE 754. Probabilistic Methods in Systems (3).
Course in random processes designed to prepare the student for work in communications controls, computer systems information theory and signal processing. Covers basic concepts and useful analytical tools for engineering problems involving discrete and continuous-time random processes. Discusses applications to system analysis and identification, analog and digital signal processing, data compression parameter estimation, and related disciplines. Prerequisite(s): EE 383 and IME 254.

EE 777. Selected Topics in Electrical Engineering (1-4).
New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite(s): departmental consent.

EE 777C. Network Programming (1-4).
Introduces techniques for developing TCP and UDP network clients, servers and applications. Topics covered include sockets, client/server design alternatives, concurrent processes and threads, web applications, and security. Programming-intensive course that assumes some experience with programming in a high-level language. Prerequisite(s): CS 300 (or an equivalent course).

EE 777M. Optimization Techniques for Cyber-Physical Systems (3).
This course aims to provide necessary theory and methods to solve optimization problems with the emphasis on cyber and physical systems. Integration of computation, communication, and physical systems to improve engineered systems requires understanding of basic optimization techniques and advanced optimization algorithms. This course covers basic optimization theory, convex optimization, heuristic optimization techniques, constraint relaxation and applications. Prerequisite(s): MATH 511 and MATH 555 or graduate standing.

EE 777OL. Digital Communications I Lab (1).
Lab objective is for the students to implement and explore each block in a wireless communications system signal chain by combing LabVIEW software and the National Instrument (NI) Universal Software Radio Peripheral (USRP) hardware. Covers pseudorandom bit generation, path loss in wireless radio frequency (RF) communication channel, forward error correction (FEC) channel coding, wireless digital communications modulation, demodulation, synchronization (timing recovery), bit error rate (BER), and a multiple-input and single-output (MISO) wireless system.

EE 782. Digital Signal Processing (3).
Presents the fundamental concepts and techniques of digital signal processing. Time domain operations and techniques include difference equations and convolution summation. Covers Z-transform methods, frequency-domain analysis of discrete-time signals and systems, discrete Fourier transform, and fast Fourier transform. Emphasizes the frequency response of discrete-time systems and the relationship to analog systems. Prerequisite(s): EE 383.

EE 784. Digital Control Systems (3).
Studies the effects of sampling and quantization, discrete systems analysis, sampled-data systems and Z-domain and state space design. Prerequisite(s): EE 684 or ME 659.

EE 792. Linear Systems (3).
Reviews mathematics relevant to state-space concepts. Formulation of state-variable models for continuous-time and discrete-time linear systems. Concepts of controllability, observability, stabilizability and detectability. Pole placement and observer design. State transformation techniques and their use in analysis and design of linear control systems. Prerequisite(s): EE 684 or ME 659.

EE 796. Electric Power Distribution (3).
Analysis, design, modeling and simulation of radial medium-voltage electric power distribution systems. Simulations include power flow and short circuit. Prerequisite(s): EE 598.

EEPS - Earth, Environmental and Physical Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

EEPS 700. Technical Sessions (1).
Through seminar presentations by students, faculty and guest lectures, students critically analyze essential elements and skills of effective oral presentation of scientific research methodology, data and results to audiences of diverse backgrounds; learn techniques of effective use of visual display media, presentation styles and speaker-audience interactions. Must be taken for two semesters for maximum of 2 credit hours toward the degree. Prerequisite(s): graduate standing or instructor's consent.

EEPS 701. Computer Methods in Science (3).
1 Classroom hour; 4 Lab hours. Cross-listed as GEOL 690AJ. Surveys computer applications commonly used by scientists, emphasizing nonstatistical applications. Includes computer-assisted instruction, data management, presentation packages, internet resources, digital image analysis, graphics and spreadsheets, reference acquisition and management, desktop publishing, and specialized applications for modeling, simulations, mapping and time-series analysis. Lectures and demonstrations involve individual hands-on activities and student projects. Prerequisite(s): graduate standing or instructor's consent.

EEPS 702. Research Methods (1).
Essential elements and principles in scientific research, such as project design, funding, literature research, publication practices and issues of conflict of interest and commitment. Also addresses research misconduct and ethical issues in data acquisition, management, sharing and ownership. May include speakers from the library and research offices. Prerequisite(s): graduate standing or instructor's consent.

EEPS 710. Great Discoveries and Controversies in Science (3).
Foundation, history and insights that led to great discoveries in various scientific fields, and which caused great and continuing controversies in scientific theory, the advancement of science, and lessons and perspectives to be learned for future scientific research. Course involves lectures, seminars, literature research, essay writing and presentation by students. *Course includes diversity content*. Prerequisite(s): graduate standing or instructor's consent.

EEPS 720. Scientific Writing (1).
Procedure, organization, format and style of a variety of technical and scientific publication vehicles, such as abstracts, professional

journal articles, government and industrial reports and paper and book reviews. Essential elements and skills of effective scientific written communication. Must be taken in conjunction with any course (except EEPS 889 and 890) that requires extensive writing. Repeatable for a total of 2 credit hours toward the degree. Prerequisite(s): EEPS 700.

EEPS 721. Current Issues in Global Environmental Science (3).
Introduces and uses basic concepts relating to ecosystems, habitats, environments and resources as a basis for understanding environmental problems at different spatial and temporal scales. An interdisciplinary approach frames these problems to facilitate understanding of inter-relationships required for environmental analysis, remediation and management. *Course includes diversity content*. Prerequisite(s): EEPS 710 or instructor's consent.

EEPS 781. Cooperative Education (1-6).
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Prerequisite(s): departmental consent.

EL - Educational Leadership

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

EL 750. Experienced Administrator's Workshop (1-6).
Offers a variety of administrative topics.

EL 750G. Serving on an Accreditation Team (1-3).
Workshop open to any educator serving as member of an AdvancED External Review Team. Credit is earned by participating during the entire review and submitting the required reports.

EL 750V. School Improvement Plan 1 (2).
Workshop open to any educator serving as an AdvancED external visiting team chairperson or a member of the internal steering committee. Credit is earned by: (1) completing a school profile or peer review report, and (2) attendance at an AdvancED Kansas profiling workshop or the fall conference.

EL 750W. School Improvement Plan 2 (2).
Workshop open to any educator serving as an AdvancED external visiting team chairperson or a member of the internal steering committee. Credit is earned by: (1) completing a school improvement plan or a peer review report, and (2) participating in an AdvancED Kansas school improvement plan workshop/webinar or fall conference.

EL 750Y. School Improvement Implementation I (1-2).
Open to any educator serving as an AdvancED external visiting team chairperson or a member of the internal steering committee. Credit is earned by: (1) documented school implementation of the school improvement plan or a peer review report, and (2) participating in an AdvancED Kansas data workshop/webinar or fall conference.

EL 750Z. School Improvement Implementation II (2).
Open to any educator serving as a member of the internal steering committee. Credit is earned by: (1) completing the accreditation report, and (2) participating in the AdvancED Kansas external review workshop/webinar or fall conference.

ENGL - English

Courses numbered 99 or below do not count toward any degree program.

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ENGL 011. Syntax, Logic and Organization (3).
Reviews the basic elements of written English. Students write paragraphs and short essays. Combines lecture, small-group discussion and individual tutoring. For students whose ACT-English scores or placement test scores do not qualify them for ENGL 101. Credit not applied for graduation.

ENGL 013. Basic Skills for ESL I (3).
Teaches the fundamental elements of written and spoken English, emphasizing the acquisition of basic grammatical and syntactical structures and the writing of paragraphs and short essays. Credit not applied for graduation.

ENGL 015. Basic Skills for ESL II (3).
Extends the skills developed in ENGL 013. Students continue to practice using basic grammatical and syntactical structures, work on reading comprehension skills, and continue to master essay structure. Credit not applied for graduation. Prerequisite(s): ENGL 013 or satisfactory score on placement test.

ENGL 100. English Composition (3).
General education foundation course. Required composition course for non native-speaking students scoring below a certain level as determined by a departmental placement examination or ACT scores. Emphasizes reading and writing skills appropriate to academic discourse. Integrates the writing process, rhetorical modes and library skills into writing assignments related primarily to nonfiction readings. Substitutes as ENGL 101 for non native-speaking students. Prerequisite(s): qualifying score on ACT or placement exam, or successful completion of ENGL 013 or ENGL 015.

ENGL 101. College English I (3).
General education foundation course. Focuses on developing reading and writing skills appropriate to academic discourse. Integrates the writing process, rhetorical modes and library skills into writing assignments related primarily to nonfiction readings. Prerequisite(s): qualifying score on ACT or placement exam, or successful completion of ENGL 011.

ENGL 102. College English II (3).
General education foundation course. Emphasizes critical reading, research and argumentation. ENGL 102 should be taken after ENGL 101 in the freshman year. Prerequisite(s): ENGL 101 with a C or better.

ENGL 150. Workshop (1-4).
Repeatable for credit. Material varies according to the needs of students.

ENGL 150D. Crafting Your Memoir and Creative Nonfiction (0.5).
Join us as explore what makes for an effectively written memoir. We will look closely at successful memoirs over the ages and discuss what unites those efforts. This will also be a class where you will be encouraged to develop strategies to help you complete your own memoir whether you’re writing your memoir for yourself, for specific others or for publication.

ENGL 150E. Early American Poetry and Ecology (0.5).
Discover the lush forests and concrete jungles of the United States as 19th-century American poets have recorded them. As the states were settled, early poets were straying from convention and exploring new forms. From the origins of “Home on the Range” to well-known authors such as Emily Dickinson and Robert Frost, this class follows along as poets break from the traditional British form and write about their natural surroundings. Topics of poetry include ecology, form, movements and influence of historical events.

ENGL 150F. Shakespeare (0.5).
Designed for everyone – whether new to Shakespeare or well-acquainted with his work – who wants to explore his work in depth. Students read a representative sample of Shakespeare's plays to acquaint themselves with the joys and complexities of his language and storytelling, consider some of the historical and literary influences on his work, and look at some film and stage performances of these plays to think about the ways Shakespeare's work continues to be reimagined.

ENGL 150G. Memoir: Transforming Your Life Story Through Focus and Craft (0.5).
Students begin the journey of transforming their life stories into well-crafted memoirs. Borrowing from literary techniques used in fiction, students finesse and focus their sagas into larger arcs that resonate and inspire readers. By engaging in concrete exercises, studies in craft, and close reading of successful memoirs for guidance and inspiration, students shape the events of their lives into impactful and meaningful narratives.

ENGL 152. Language of Food (3).
General education humanities course. Cross-listed as LING 152. Examines how the way we talk about food offers a window into history, psychology, culture and economics. Students are asked to think critically about language and taste as well as to explore the hidden meanings and influence of the language that surrounds us. Analyzes the language of food through menus, recipes, Yelp reviews, TV food shows, as well as the history and etymology of food words. Examples are drawn from American, African, Asian food and culture and beyond. *Course includes diversity content*.

ENGL 202BA. Badge: Achieving Cultural Competency Through Narratives of Intersectionality (1).
Uses reading, discussion and reflective writing to explore the ways intersectionality can help service providers understand the barriers to and opportunities for service engagement, healing and self-determination of those traditionally marginalized or oppressed. May not be counted for credit in the English major or minor. *Course includes diversity content*. Graded Bg/NBg. Prerequisite(s): ENGL 102.

ENGL 210. Composition: Business, Professional and Technical Writing (3).
Provides instruction and practice in writing the kinds of letters, memos, instructions and reports required in the professional world of business and industry. Emphasizes both formats and techniques necessary for effective and persuasive professional communication. Prerequisite(s): ENGL 101, 102 or instructor's consent.

ENGL 210BA. Professional Writing Badge: Crafting Your Resume and Cover Letter (0.5).
Emphasizes how to successfully compose a professional resume and cover letter. Using open educational learning materials, students learn how to write concise and professional business documents that are directly applicable to the field of business. Students also learn about the proper composition of these documents, discuss them with their peers, and ultimately produce a resume and cover letter of their own. May be "stacked" with ENGL 210BB, 210BC, 210BD, 210BE and 210BF for ENGL 210 credit. Graded Bg/NBg.

ENGL 210BB. Professional Writing Badge: Professional Correspondence, Emails and Memos (0.5).
Emphasizes how to successfully compose professional correspondence including emails and memos. Using open educational learning materials, students learn the basics of audience-specific, professionally written communication for paper and paperless correspondence. In addition to understanding best-practices for a variety of approaches, students learn how to avoid common errors and misunderstandings. May be "stacked" with ENGL 210BA, 210BC, 210BD, 210BE and 210BF for ENGL 210 credit. Graded Bg/NBg.

ENGL 210BC. Professional Writing Badge: Writing for Social Media (0.5).
Emphasizes how to successfully write for various social media. Using open educational learning materials, students learn how to develop a unique and professional social media tone directly applicable to their field of business. Students also learn about the proper written composition for social media, discuss written social media opportunities, and ultimately produce a professional blog of their own. May be "stacked" with ENGL 210BA, ENGL 210BB, ENGL 210BD, ENGL 210BE, ENGL 210BF for ENGL 210 credit. Graded Bg/NBg.

ENGL 210BD. Professional Writing Badge: Editing Social Media (0.5).
Emphasizes how to successfully edit personal social media accounts to highlight professionalism. Using open educational learning materials, students learn how to analyze personal social media accounts for unprofessionalism in images and text. Students also learn about professional social media accounts and how they can be used in job searches and for professional networking. May be "stacked" with ENGL 210BA, ENGL 210BB, ENGL 210BC, ENGL 210BE, ENGL 210BF for ENGL 210 credit. Graded Bg/NBg.

ENGL 210BE. Professional Writing Badge: Researching Grants that Apply to You (0.5).
Explores ways to successfully research and identify grants that apply to the student's professional career. Using open educational learning materials, students learn about different resources available to them for grant research. Students also learn how to identify the most applicable grants for them or their company. At the conclusion of the course, students create a grant writing action plan they would potentially like to complete for one of the grants they have identified. May be "stacked" with ENGL 210BA, ENGL 210BB, ENGL 210BC, ENGL 210BD and ENGL 210BF for ENGL 210 credit. Graded Bg/NBg.

ENGL 210BF. Professional Writing Badge: Presenting Online (0.5).
Emphasizes how to successfully complete an online presentation. Using open educational learning materials, students learn to prepare presentation materials. Students also learn about the proper etiquette of online presentations, discuss etiquette with their peers, and ultimately complete a successful online presentation for their instructor. May be "stacked" with ENGL 210BA, ENGL 210BB, ENGL 210BC, ENGL 210BD, ENGL 210BE for ENGL 210 credit. Graded Bg/NBg.

ENGL 230. Exploring Literature (3).
General education humanities course. Instruction in the critical reading of literature in its major traditional periods or genres (especially drama, fiction and poetry). Pre- or corequisite(s): ENGL 102.

ENGL 232. Themes in American Literature (3).
General education humanities course. Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Pre- or corequisite(s): ENGL 102.

ENGL 232D. Themes in American Literature: Literature in the Jazz Age (3).
General education humanities course. Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Pre- or corequisite(s): ENGL 102.

ENGL 232E. Themes in American Literature: American Dream (3).
General education humanities course. Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Pre- or corequisite(s): ENGL 102.

ENGL 232I. Crime, Mystery and Detection (3).
General education humanities course.

ENGL 232K. Images of Insanity (3).
General education humanities course. Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Pre- or corequisite(s): ENGL 102.

ENGL 232L. Asian American Fiction (3).
General education humanities course. Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Pre- or corequisite(s): ENGL 102.

ENGL 232M. Ecology and the Wild in American Literature (3).
General education humanities course. Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Pre- or corequisite(s): ENGL 102.

ENGL 232OH. Coming of Age Honors (3).
General education humanities course. Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Pre- or corequisite(s): ENGL 102.

ENGL 232P. Images of Women in 20th Century Literature (3).
General education humanities course. Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Pre- or corequisite(s): ENGL 102.

ENGL 232Q. The Midwestern Identity (3).
General education humanities course. Surveys classic and contemporary works that are about the Midwest and/or written by Midwestern authors while emphasizing common themes. Examines various forms of literature including poetry, fiction, nonfiction, memoir, short stories and film. Prerequisite(s): ENGL 102.

ENGL 232R. Horror and the Supernatural (3).
General education humanities course. Surveys classic and contemporary works of horror and the supernatural, emphasizing themes and ideas common to the genre. Examines various forms of literature, including fiction, poetry, short stories, plays, graphic novels and film. Emphasizes style and character analysis. Prerequisite(s): ENGL 101, 102 and/or instructor's consent.

ENGL 232S. Writing by Women of Color (3).
General education humanities course. Focusing on short fiction, novels, plays and essays by women writers of color, the course explores the physical, social and psychological spaces inhabited by these “dual others” throughout American history in an attempt to examine the intersecting impacts of race, gender and class on marginal identity as represented in contemporary American literature.

ENGL 232T. Hip-Hop and Culture (3).
General education humanities course. Introduces students to the terms, analytic techniques and interpretive strategies within cultural studies, and to thinking about how they are a fruitful site for exploring the vast world of hip-hop music and culture. Emphasizes how cultural processes and artifacts are produced, shaped, distributed, consumed and responded to by audiences, as well as how that impacts culture and cultural production. Through small and large group discussion, research, writing and presentations, students are encouraged to critically examine these various dimensions of culture and their broader social, political, aesthetic and ethical contexts.

ENGL 240. Introduction to Shakespeare (3).
General education humanities course. Surveys the plays and poetry of William Shakespeare with attention to their literary and historical contexts, recent stage and film adaptations, and Shakespeare's continuing influence on popular culture. Prerequisite(s): ENGL 101, 102.

ENGL 241. Jane Austen and Popular Culture (3).
General education humanities course. Explores adaptations of Jane Austen's novels in relation to the literary works on which they are based. Students are introduced to recent theories of adaptation and investigate adaptations of Austen's novels in both established genres, such as film, fiction and drama, and emerging genres, such as web series and role-playing games. Students are required to develop their own adaption of literary work. *Course includes diversity content*. Prerequisite(s): ENGL 101, 102, and/or instructor's consent.

ENGL 252. Modern American Writers (3).
General education humanities course. Surveys important works by major writers of the United States, from the 20th century to today. Pre- or corequisite(s): ENGL 101, 102.

ENGL 254. Modern British Literature (3).
General education humanities course. Survey of important works by major writers of the British Isles, including Ireland, in the 20th century. Pre- or corequisite(s): ENGL 102.

ENGL 273. Science Fiction (3).
General education humanities course. Surveys key classic and contemporary works of science fiction and speculative literature, emphasizing themes and ideas common in the genre and its subgenres. Prerequisite(s): ENGL 101, 102.

ENGL 276. The Literature of Sports (3).
General education humanities course. Introduces the general education student to interpretations and representations of sports as a cultural phenomenon. Readings may include fictional and nonfictional texts and films. Prerequisite(s): ENGL 101, 102.

ENGL 277. The Detective Story (3).
General education humanities course. Introduces detective fiction, covering classic authors in the genre such as Sir Arthur Conan Doyle and Agatha Christie, as well as contemporary authors, films and graphic novels, emphasizing the genre's larger social and historical concerns. Prerequisite(s): ENGL 101, 102.

ENGL 278. Literary Representations of LGBTQ + Culture (3).
General education humanities course. Looks at LGBTQ+ fiction through various forms of literature, including novels, poetry, short stories, graphic novels and films. Emphasizes close-reading techniques and character and style analysis. *Course includes diversity content*. Prerequisite(s): ENGL 101, 102, and/or instructor's consent.

ENGL 285. Introduction to Creative Writing (3).
General education humanities course. Introduces the techniques and practice of imaginative writing in its varied forms, primarily literary poetry and fiction. Prerequisite(s): ENGL 101, 102.

ENGL 301. Fiction Writing (3).
Primary emphasis on student writing of literary fiction. Students study form and technique by reading published works and apply those studies to the fiction they write. Repeatable for a total of 6 credit hours. Prerequisite(s): ENGL 285 with a B- or better.

ENGL 303. Poetry Writing (3).
Primary emphasis on student writing of literary poetry. Students study form and technique by reading published works and apply those studies to the poetry they write. Repeatable for a total of 6 credit hours. Prerequisite(s): ENGL 285 with a grade of B- or better.

ENGL 305. Creative Nonfiction Writing (3).
Primary emphasis is on student writing of imaginative nonfiction. Students study form and technique by reading published classical and contemporary works and applying those studies to the essay, the travel essay, the essay of place and nature writing. Repeatable for a total of 6 credit hours. Course limit: 15. Prerequisite(s): ENGL 285 with a grade of B- or better.

ENGL 307. Narrative in Literature and Film (3).
Explores the relationship between literature and film, addresses theoretical and practical issues involved in adaptation, and offers case studies of adaptations of novels, short stories, plays and nonfiction works. Provides comprehensive analysis of the narrative, historical and stylistic contexts in which the adaptation of texts to screen takes place. Prerequisite(s): ENGL 102, one college-level literature or film course.

ENGL 308. Critical Studies in Film (3).
A critical aesthetic analysis of the literary themes, motifs, genres, and sources of film. Notes critical values in the characteristics of film, covering historical, cultural, canonical, and theoretical developments. Prerequisite(s): ENGL 102.

ENGL 310. Nature of Poetry (3).
General education humanities course. Acquaints the student with the variety of poetic forms and techniques. Notes contributions of culture, history and poetic theory as background to the works under study, but primarily emphasizes the characteristics of poetry as a literary communication. Prerequisite(s): ENGL 102.

ENGL 315. Introduction to English Linguistics (3).
General education humanities course. Cross-listed as LING 315. Introduces linguistic principles, including phonological and grammatical concepts.

ENGL 316. English Sentence Structure (3).
Cross-listed as LING 316. The basic rules of English syntax, specifically designed for prospective teachers of English but open to all students interested in English sentence structure.

ENGL 317. History of the English Language (3).
Cross-listed as LING 317. Linguistic and cultural investigation of the development of English. Prerequisite(s): LING 315/ENGL 315 or departmental consent.

ENGL 318. Dialectology (3).
Cross-listed as LING 318. Introduces the study of regional and social dialects of English. The relationship between language and factors such as socioeconomic class, social networks, sex, nationalism and geography. *Course includes diversity content*.

ENGL 320. The Nature of Drama (3).
General education humanities course. Acquaints the student with drama as a form of literary expression. While introducing a variety of plays drawn from different cultures and historical periods, course focuses on the characteristics of drama, giving some attention to dramatic history and theory. Prerequisite(s): ENGL 102.

ENGL 322. Origins of Western Literature (3).
General education humanities course. Studies the literary forms that first appear in classical and Biblical literature and reappear in the English literary tradition. Readings from mythology, the classics and selected books of the Bible. Prerequisite(s): ENGL 102.

ENGL 323. World Literature (3).
General education humanities course. Surveys major works of European, African, Asian and South American writers. Aims to deepen appreciation and understanding of individual works, to examine their relationship to other literature in their tradition, and to achieve a sense of each work as an expression of the culture that originated it. Prerequisite(s): ENGL 102.

ENGL 330. The Nature of Fiction (3).
General education humanities course. Acquaints the student with narrative fiction in a variety of forms: the short story, short novel and novel. Covers works of fiction drawn from different cultures and historical periods; focuses on the characteristics of fiction, giving some attention to historical development and to theories of fiction. Prerequisite(s): ENGL 102.

ENGL 340. Shakespeare (3).
General education humanities course. Surveys the plays and poetry of William Shakespeare, read with attention to the historical and cultural contexts of his time. Prerequisite(s): ENGL 102.

ENGL 343. Great Plains Literature (3).
General education humanities course. Covers literature written about the region from Kansas north into southern Canada and from the Mississippi River to the Rocky Mountains. Texts include works by Willa Cather, O.E. Rolvaag and Mari Sandoz, as well as works by contemporary authors including Native Americans. Topics include contemporary environmental issues and the history of exploration and settlement. Prerequisite(s): ENGL 102.

ENGL 344. Regional Literature (3).
General education humanities course. Introduces students to the literature of a particular regional culture or cultures (e.g., literature of the American South, New England regionalism) and examines how that literature relates to a larger national (American or British) tradition. Prerequisite(s): ENGL 102.

ENGL 346. American Multicultural Literature (3).
Provides broad exposure to the literature of various cultures in the U.S., including African-American, Native-American, Asian-American, Chicana/o and immigrants from other cultures. *Course includes diversity content*. Prerequisite(s): ENGL 101, 102.

ENGL 360. Major British Writers I (3).
General education humanities course. Covers the primary writers in British literature from the beginnings through the 18th century. Prerequisite(s): ENGL 102.

ENGL 361. Major British Writers II (3).
General education humanities course. Covers the primary writers in British literature from the 19th century to the present. Prerequisite(s): ENGL 102.

ENGL 362. Major American Writers I (3).
General education humanities course. Covers important works of American writers from the beginnings to the end of the 19th century. Prerequisite(s): ENGL 102.

ENGL 363. Major American Writers II (3).
General education humanities course. Covers important works of American writers from the end of the 19th century to the present. Prerequisite(s): ENGL 102.

ENGL 365. African-American Literature (3).
General education humanities course. Surveys the most significant African-American writers from the 1700s to the present. Covers early slave narratives and early slave poetry to the Harlem Renaissance; student reading, discussion and writing begin with the Harlem

Renaissance and end with the 1970s. *Course includes diversity content*. Prerequisite(s): ENGL 102.

ENGL 375. Popular Literature (3).
General education humanities course. Studies various forms of popular literature (e.g., revolutionary literature, science fiction, Western fiction, detective novel) emphasizing both the literary merit of the works and the way they reflect popular tastes and values. Repeatable for credit with change of content. Prerequisite(s): ENGL 102.

ENGL 377. Graphic Novels (3).
General education humanities course. Introduces the history of sequential art and graphic novels. Explores social, cultural and aesthetic issues related to the form. Emphasizes the literary merit of the works and their relationship to other literary forms.

ENGL 378. Technologies of the Book (3).
General education humanities course. What is a book? Course addresses this question through a variety of readings about the history of text technologies and hands-on workshops. Addresses developments in writing, publishing, bookselling, copyright, and the physical features of books from the advent of humanity to the present day. Analyzes the contemporary publishing trade, digital platforms and the book, shifting conceptions of ownership, and potential future iterations of the book. Investigates how books, as social and material objects, impact readers and their societies. Pre- or corequisite(s): ENGL 101 and 102 or equivalent.

ENGL 379. Storytelling, Video Games, and Literature (3).
General education humanities course. Introduces students to literary theories that bridge literature and narrative-driven video games and game design. Specifically, this course aims to understand the unique structure of interactive narratives and their effects on those who play them. Prerequisite(s): ENGL 101, 102.

ENGL 380. Special Topics (1-3).
Topic selected and announced by individual instructor. Prerequisite(s): ENGL 102.

ENGL 390. The Bible as Literature (3).
Studies the Bible as a literary artifact through extensive readings in both Old and New Testaments. Points out literary techniques and discusses their meaning for the manner of composition of the Bible. Prerequisite(s): ENGL 102.

ENGL 401. Fiction Workshop (3).
Advanced course. Manuscripts are critiqued to develop skill in writing, rewriting and polishing literary fiction. Repeatable for credit. Prerequisite(s): ENGL 301.

ENGL 403. Poetry Workshop (3).
Advanced course. Manuscripts are critiqued to develop skill in writing, rewriting and polishing literary poetry. Repeatable for credit. Prerequisite(s): ENGL 303.

ENGL 450. Independent Reading (1-3).
For majors and nonmajors who wish to pursue special reading or research projects in areas not normally covered in coursework. Repeatable once for credit. Prerequisite(s): ENGL 102 and departmental consent.

ENGL 481. Cooperative Education (1-3).
Provides the student with practical experience, under academic supervision, that complements and enhances the student's academic program. Individual programs must be formulated in consultation with appropriate faculty sponsors and approved by departmental consent.

ENGL 503. American Literature I (3).
The major fiction, poetry and nonfiction prose of the classic American period. Discussions may include the historical evolution of American letters, the development of the novel and romance, the transcendental period, and the rise of Western and regional literatures. Prerequisite(s): junior standing and one college literature course.

ENGL 504. American Literature II (3).
Fiction, poetry and drama from the late 19th century to after World War II. Readings also may include literary criticism and other types of nonfiction prose. Discussions cover themes, topics and literary forms inspired by the social and cultural movements and events of the first half of the 20th century. Prerequisite(s): junior standing and one college literature course.

ENGL 505. Advanced Creative Nonfiction Writing (3).
Emphasizes advanced accomplishment in writing imaginative nonfiction. Students study the form and technique of master practitioners of the genre, and articulate and debate the qualities leading to successfully executing an imaginative essay while developing such essays themselves. Both readings and student work explores various subgenres, some of which may include travel essay, the essay of place (immersive essay), nature essay and varieties of narrative nonfiction. Repeatable for credit. Prerequisite(s): for undergraduate students: (1) ENGL 305, with a B- or better, or (2) at least two upper-division creative writing courses, with a B- or better, and creative writing director’s consent; for graduate students: creative writing director's consent.

ENGL 508. Critical Studies in Film (3).
Subjects announced each semester. Intensive analysis of a particular film genre, period, director or theme, giving special attention to the historical, cultural, theoretical and technical contexts in which the films were made. Repeatable once for credit with a change of content. Prerequisite(s): ENGL 102, one college-level literature or film course.

ENGL 512. Studies in Fiction (3).
Subjects announced each semester. Repeatable once for credit. Prerequisite(s): junior standing and one college literature course.

ENGL 513. Studies in Poetry (3).
Subjects announced each semester. Repeatable once for credit. Prerequisite(s): junior standing and one college literature course.

ENGL 514. Studies in Drama (3).
Subjects announced each semester. Repeatable once for credit. Prerequisite(s): junior standing and one college literature course.

ENGL 515. Studies in Shakespeare (3).
Subjects announced each semester. Repeatable for credit, except by students who take ENGL 340. Prerequisite(s): junior standing and one college literature course, or instructor's consent.

ENGL 516. Studies in a Major Author (3).
Designed to allow in-depth study of the works of a major American or British author, emphasizing the development of that author's art and considering the work from a variety of critical perspectives.

ENGL 517. Scriptwriting I (3).
General education humanities course. Cross-listed as THEA 516. Writing scripts for performance. Emphasizes both verbal and visual aspects of scriptwriting. If possible, the scripts are given in-class readings by actors. Prerequisite(s): instructor's consent.

ENGL 518. Scriptwriting II (3).
General education humanities course. Cross-listed as THEA 517. Writing scripts for performance in theatre, film, television and the Internet. Emphasizes both verbal and visual aspects of scriptwriting. If possible, the scripts are given in-class readings by actors. Prerequisite(s): instructor's consent.

ENGL 520. Epic and Romance (3).
Readings in classic and early Western narratives, beginning with Homer's Bronze-Age epic and ending with late medieval romance. Examines the literary conventions and cultural assumptions that typify these works. Pays particular attention to the historical shift in interest from epic to romance as a reflection of broad changes, not only in literary form and content, but also in social customs and worldview. Prerequisite(s): junior standing and one college literature course.

ENGL 521. Medieval Literature (3).
Works by writers of the eighth to 15th centuries, often thematically or historically focused. Readings may include lyric poetry, epic, romance, saga and drama. Prerequisite(s): junior standing and one college literature course, or instructor's consent.

ENGL 522. Renaissance Literature (3).
Works by writers of the 16th through the mid-17th centuries, often thematically or historically focused. Readings may include poetry, drama, fiction and nonfiction prose. Prerequisite(s): junior standing and one college literature course, or instructor's consent.

ENGL 524. Restoration and 18th Century Literature (3).
Works by writers of the late 17th through the 18th centuries, often thematically or historically focused. Readings may include poetry, fiction, drama and nonfictional prose. Prerequisite(s): junior standing and one college literature course, or instructor's consent.

ENGL 526. Romantic Literature (3).
Works by writers of the late 18th and/or early 19th centuries, often thematically or historically focused. Readings may include fiction, poetry, drama, and/or literary criticism or other nonfiction prose. Prerequisite(s): junior standing and one college literature course, or instructor's consent.

ENGL 527. Victorian Literature (3).
Works by writers of the mid to late 19th century, often thematically or historically focused. Readings may include fiction, poetry, drama, and/or literary criticism or other nonfiction prose. Prerequisite(s): junior standing and one college literature course, or instructor's consent.

ENGL 532. Modern British Literature (3).
Irish and English literature of the 20th century. Subjects announced each semester. Repeatable once for credit with change of topic. Prerequisite(s): junior standing and one college literature course.

ENGL 533. Contemporary Literature (3).
Modern literature, primarily British and American, since 1950. Subjects announced each semester. Repeatable once for credit. Prerequisite(s): junior standing and one college literature course.

ENGL 536. Writing by Women (3).
Cross-listed as WOMS 536 and WOMS 381C. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored, and specific authors studied vary in different semesters. *Course includes diversity content*.

ENGL 540. Introduction to Critical Theory (3).
Introduces students to critical literary theory. Topics may include readings in gender theory, historicism, psychoanalytical theory, cultural criticism, Marxism, reader-response theory and deconstruction. May also offer a survey of classical and early-modern critical methodologies from Plato to the formalist schools of the early 20th century. Prerequisite(s): ENGL 102 and/or instructor's consent.

ENGL 546. Studies in Ethnic Literature (3).
Studies literature by a specific ethnic group or groups in the United States or Great Britain. Content varies by instructor, and subjects are announced each semester. Fosters an appreciation for the unique literary tradition of a distinct ethnic group or groups and gives students some understanding of the larger historical and national contexts in which that tradition emerged. *Course includes diversity content*. Repeatable once for credit with a change in topic. Prerequisite(s): junior standing and one college-level literature course.

ENGL 550. Independent Reading (1-3).
For majors and nonmajors who wish to pursue special reading or research projects in areas not normally covered in coursework. Repeatable once for credit. Prerequisite(s): ENGL 102 and departmental consent.

ENGL 560. Grammar and Style in Composition (3).
Explores writing at the sentence and paragraph levels. Students learn to craft stylish, surprising and impactful sentences and paragraphs suited to various kinds of writing. Examines the social, cultural and political dimensions of English usage, such as correctness, the teaching of grammar, and new writing technologies. Because of its combined emphases on practice and theory, this course should appeal both to students who wish to enhance their writing skills and to those interested in teaching English. Prerequisite(s): ENGL 101 and 102 for undergraduate students.

ENGL 576. Advanced Studies in the Graphic Novel (3).
Designed to allow in-depth study of the graphic novel with special emphasis on critical responses. Readings may be thematically or historically focused. Prerequisite(s): junior standing, ENGL 377, and at least one other college literature course or instructor's consent.

ENGL 579. Introduction to Digital Humanities (3).
General education humanities course. Introduces students to some of the tools and projects that constitute the digital humanities, and considers issues raised by the field. Prerequisite(s): ENGL 101, ENGL 102, one literature course 200-level or above, or instructor’s consent.

ENGL 580. Special Studies (1-3).
Topic selected and announced by the individual instructor. Repeatable once for credit. Prerequisite(s): junior standing and one college literature course or departmental consent.

ENGL 580AD. Writing and Invention (3).
Considers invention as a canon of rhetoric, a stage in the writing process, and a product of thinking, writing or making. Surveys theories of invention as they are expressed in rhetorical theory, composition pedagogy, historical works, creative writing and literature. With readings and accompanying writing assignments, students pursue questions such as: Does invention entail discovering something that already exists or creating something new? Can an invention be “new” if it is composed of preexisting materials? Can invention be taught or prompted, and if so, which approaches are effective? Writing assignments include a mix of critical, creative, researched, and pedagogical pieces. Course welcomes students with interests in composition, pedagogy, literature and/or creative writing.

ENGL 580AE. Game of Thrones: In Print, on Screen, and in Popular Culture (3).
Explores the world created by George R. R. Martin’s novel series A Song of Ice and Fire and what the popularity of both the novels and the HBO series A Game of Thrones might say about our world. In addition to exploring Song/GoT themselves, throughout the semester students look at multiple media sources to scrutinize the myriad and complex ways they have been received. Students need not have read Martin’s novels, but they need to have access to them in order to look at various passages together. Students should view the series before the semester starts and make sure they can review scenes/episodes (including the

final season) during the semester. Assignments for the course include presentations and research essays. Winter is coming to WSU!

ENGL 580AF. Languages and Language Attitudes in the U.S. (3).
Cross-listed as LING 590M. Community-based research seminar examines the social, economic and educational ramifications of various languages and attitudes to these languages in the U.S. Topics include the linguistic intersection of race, gender and social class; comparisons of standardized and Standard English to other dialects such as African American Vernacular English (AAVE); and the role of linguistics in the formation of language policy. Course takes a hands-on approach and students are involved in research design and data analysis. Students also have opportunities to participate in service learning, in organizations such as International Rescue Committee and AmeriCorps.

ENGL 580AG. Young Adult Literature (3).
Introduces various genres of young adult literature. Overviews current scholarly and/or pedagogical approaches commonly found in the study of young adult literature. Prerequisite(s): junior standing and one college literature course, or departmental consent.

ENGL 581. Composition Practicum (1).
Required for all teaching assistants in English. Does not count for credit toward the MA or MFA degree. Focuses on techniques and strategies for teaching composition. Each participant enrolls in the syllabus group appropriate to the composition course he or she teaches. Repeatable for credit. Prerequisite(s): appointment as a graduate teaching assistant in the department of English.

ENGL 585. Writer's Tutorial: Prose Fiction (3).
Tutorial work in creative writing in literary fiction with visiting writer. Repeatable for credit. Prerequisite(s): consent of creative writing director.

ENGL 586. Writer's Tutorial: Poetry (3).
Tutorial work in creative writing in literary poetry with visiting writer. Repeatable for credit. Prerequisite(s): consent of creative writing director.

ENGL 590. Senior Seminar (3).
In-depth study of a specialized literary topic. Emphasizes focused readings, interactive debate, individual research and the presentation of research reports and essays. Topics vary according to the specialization of the instructor. Required capstone course for the English major and should be taken during a student's final year of study. Not available for graduate credit. Prerequisite(s): completion of 18 credit hours toward the major.

ENGL 663. Languages and Language Attitudes in USA (3).
Cross-listed as LING 663. In this community-based research seminar, students examine the social, economic and educational ramifications of various languages and attitudes to these languages in the USA. Covers the linguistic intersection of race, gender and social class; compares standardized and Standard English to other dialects such as African American Vernacular English; and the role of linguistics in forming language policy. Takes a hands-on approach and involves students in research design and data analysis. *Course includes diversity content.*

ENGL 664. Quantitative Methods for Literary and Linguistic Studies (3).
Cross-listed as LING 664. Introduces the basic concepts of data analysis and statistical computing as used in literary and linguistic studies. Students get a better understanding of applying quantitative reasoning, visualization and data analysis to several problems in a wide range of fields in the humanities, such as linguistics, literature, and by extension, psychology and cognitive science. Students also consider practical applications of quantitative analysis in the humanities, including bibliometric and attribution study. *Course includes diversity content.*

ENGL 665. History of the English Language (3).
In-depth historical study of the English language tracing the history of how the language has changed across time. Considers Old, Middle, Modern and American English as well as newer World Englishes. Addresses the nature and mechanisms of language change over time and the social, political and other historical conditions related to such changes. Focuses on the particular phonological, morphological, syntactic, lexical and semantic changes that have happened diachronically, while touching on the literature and culture of the different historical periods. Prerequisite(s): ENGL 315/LING 315.

ENGL 667. English Syntax (3).
Cross-listed as LING 667. Studies the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite(s): ENGL 315/LING 315 or equivalent, or departmental consent.

ENGL 668. Field Methods of Linguistics (3).
Cross-listed as LING 668. Students learn how to collect and analyze data from a language unknown to them by interacting with a native speaker – course language consultant. Students gain some familiarity with the phonetics, phonology, morphology and syntax of the language, while developing techniques for studying an unfamiliar language more generally and for managing the data collected. *Course includes diversity content.* Repeatable three times for a total of 9 credit hours. Prerequisite(s): ENGL 315/LING 315.

ENGL 680. Theory and Practice in Composition (3).
Introduces theories of rhetoric, research in composition and writing programs, and practices in schools and colleges. Students investigate the process of writing, analyze varieties and samples of school writing, and develop their own writing skills by writing, revising and evaluating their own and others' work. Designed especially for prospective and practicing teachers.

ENGL 681. Editing American English (3).
Students master the rules and conventions of grammar, sentence structure, spelling, punctuation, usage and mechanics, and learn how to apply them while they are revising and editing a written text. Students work as tutors in the writing center to learn and understand the practical application of editing rules. Includes instruction in the conventions of Editing Standard English (also known as Edited American English) and in methods of effective tutoring. Prerequisite(s): ENGL 101, 102.

ENGL 686. Professional, Technical and Scientific Writing and Editing (3).
Introduces students to editing and writing in professional, scientific, technical and medical fields. Through careful reading and analysis of exemplary technical and scientific documents, students gain exposure to numerous writing genres produced for different audiences and contexts. They practice writing in several forms, which may include research summaries, press releases, procedures, specifications, infographics, public service announcements, fact sheets and popular science writing. Assignments help strengthen students' rhetorical awareness, as well as the precision, clarity and readability of their writing.

ENGL 700. Introduction to Graduate Study in English (3).
Prepares students to perform effectively in graduate classes in English. Covers: (1) basic bibliographical tools; (2) terminology both technical and historical; (3) various approaches to the study of literature, such as intrinsic analysis of a literary work, the relationships of biography to literary study, and the relevance of other disciplines, such as psychology, to literature; and (4) the writing of interpretative and research essays. Maintains a balance between criticism and research throughout the semester. Fulfills the university's professional and

scholarly integrity training requirement covering research misconduct, publication practices and responsible authorship, conflict of interest and commitment, ethical issues in data acquisition, management, sharing and ownership for students who receive a grade of B or better.

ENGL 703. Seminar in American Literature I (3).
Advanced study of major issues and themes in fiction, poetry and nonfiction prose from the early American period to the Civil War, with attention to the social and cultural contexts that shaped the literary history of the colonial period and the early nation. Repeatable once for credit with a change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 704. Seminar in American Literature II (3).
Advanced study of major issues and themes in fiction, poetry and nonfiction prose from the post-bellum period to 1920, with attention to the social and cultural contexts that shaped such trends as realism and modernism. Repeatable once for credit with a change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 705. Seminar in American Literature III (3).
From 1920 to 1970. Advanced study of major issues and themes in fiction, poetry and nonfiction prose from 1920 to the contemporary period, with attention to the social and cultural contexts that shaped such trends as modernism and postmodernism. Repeatable once for credit with a change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 712. Graduate Studies in Fiction (3).
Selected topics in the development of the form and content of prose fiction. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 713. Graduate Studies in Poetry (3).
Selected topics in forms, techniques and history of poetry. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 714. Graduate Studies in Drama (3).
Selected topics in the history and nature of dramatic literature. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 715. Seminar in Chaucer (3).
Advanced study of Chaucer's major works. Readings are in Middle English and include selections from the Canterbury Tales, Troilus and Criseyde, the dream visions, the lyrics, and a limited number of comparative readings in other late 14th century authors such as Langland, the Gawain-Poet and Gower. Emphasizes close reading and interpretation of the text, and the historical context of Chaucer's work, which involves studying subjects such as the black plague, the peasants' revolt, guilds, fairs, chivalry, trade and healing. Repeatable once for credit with a change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 721. Seminar in Medieval Literature (3).
Advanced study of selected works from Old and Middle English literature and continental literature of the medieval period, with an emphasis on close reading as well as the social and cultural context of the readings. Content varies at the discretion of the instructor. Readings may include epic, romance, drama, lyric and satire, as well as examples of discourse — oratory, history, memoir, political writings, philosophy — and major works and authors such as Beowulf, Cynewulf, Wulfstan, Chretien de Troyes, Marie de France, Chaucer, the Gawain-Poet and Malory. Repeatable once for credit with a change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 722. Seminar in Renaissance Literature (3).
Advanced study of works by important writers of the 16th and earlier 17th centuries. Content varies at the discretion of the instructor. Offerings may be thematically or historically focused, and may include poetry, drama, fiction or nonfiction prose. Repeatable once for credit with a change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 724. Seminar in Restoration and 18th Century British Literature (3).
Advanced study of major selected works and authors of the period between 1660 and 1789, covering the crucial genres of drama, poetry, the essay and the novel. Content varies at the discretion of the instructor. Study may include satire, political discourse, comedy, tragedy, parody, and/or innovative forms such as the novel and fictionalized biography. Canonical figures such as Congreve, Dryden, Pope, Swift, Fielding and Johnson may figure prominently. Historical contexts are emphasized. Repeatable once for credit with a change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 726. Seminar in Romantic Literature (3).
Advanced study of the authors, genres, themes and/or movements in late 18th and early 19th century literature, with content varying at the discretion of the instructor. Possible topics might include Romantic-era women writers, the historical contexts of the French Revolution and British imperialism, the rise of the novel, the canonical Romantic poets (Blake, Wordsworth, Coleridge, Shelley, Byron and Keats), the development of mass print culture, and/or representations of sublime landscapes, solitary meditation and European travel. Repeatable once for credit with a change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 728. Seminar in Modern British Literature (3).
Advanced study of the authors, genres, themes and/or movements in British literature (1900 to 1980). Possible topics may include the British novelists (Conrad, Lawrence, Woolf, Forster, Joyce, Waugh, Greene, Amis, Durrell, Burgess, etc.) and; the British poets (Housman, Yeats, Lawrence, Eliot, Auden, Thomas, Hughes, etc.); the playwrights (Shaw, Beckett, Eliot, Coward, Maugham, etc.). The seminar may also focus on additional poets, novelists and dramatists, such as modernism, postmodernism, etc. Repeatable once for credit with change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 730. Seminar in Victorian Literature (3).
Advanced study of the authors, genres, themes and/or movements in Victorian literature (1832-1900). Possible topics might include the Victorian novelists (William Thackeray, Charles Dickens, George Eliot, Anthony Trollope, Thomas Hardy, Rudyard Kipling, etc.); the Victorian poets (Tennyson, Browning, Arnold, Arthur Hugh Clough, Dante, Gabriel Rossetti, Christina Rossetti, George Meredith, Algernon Charles Swinburne, etc.); the Victorian prose writers (Carlyle, Mill, Newman, Ruskin, Arnold, Pater, etc.). The seminar may also focus on themes within Victorian literature, such as the Young England movement, the Higher Criticism and its effects, the Woman Question, industrialization and labor, or the Victorian Empire. Repeatable once for credit with a change of content and departmental consent.

Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 733. Seminar in Contemporary Literature (3).
Covers selected topics in the literature of the last quarter-century, including literature in translation. Deals with a broad range of authors and genres. Repeatable for credit with change of content and departmental consent. Prerequisite(s): completion of or concurrent enrollment in ENGL 700, or English graduate coordinator's consent.

ENGL 780. Advanced Theory and Practice in Composition (3).
For teaching assistants in English. Reviews new theories of rhetoric, recent research in composition, and new promising developments in composition programs in schools and colleges. Students are given practice in advanced writing problems, situations and techniques and may propose projects for further special study.

ENGL 781. Cooperative Education (1-3).
Similar to ENGL 481 in design and content, this course provides the student with practical experience, under academic supervision, that complements and enhances the student's academic program. Individual programs must be formulated in consultation with appropriate faculty sponsors and approved by departmental consent. Prerequisite(s): ENGL 700 and at least 12 total credit hours in graduate English courses.

ENGL 785. Current Theories in the Teaching of Writing (3).
Examines current areas of interest in rhetoric and composition. Specific topics vary from semester to semester but may include digital and multimedia composition; online writing instruction; language diversity; writing program administration; place, space and embodiment; transfer; and assessment. Students explore the teaching of writing in settings other than first-year composition, such as writing across the curriculum and writing in the disciplines, undergraduate writing majors, and business, technical and professional writing. Students leave this course with a fuller understanding of current research in rhetoric and composition and the many types of writing instruction available at colleges and universities.

ENGL 787. Writing and Invention (3).
Examines invention as a canon of rhetoric, a stage in the writing process, and a product of thinking, writing or making. Students survey theories of invention as they are expressed in rhetorical theory, composition pedagogy, historical works, and/or literature. Students consider the relationships among invention, originality and creativity, and the ways in which these concepts impact the teaching of English.

ENGR - Engineering

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ENGR 101. Introduction to Engineering (3).
Assists engineering students in exploring engineering careers and opportunities. Provides information on academic and life skills essential to becoming a successful engineering student. Promotes connections to specific engineering majors and provides activities to assist and reinforce the decision to major in engineering.

ENGR 202. Service Learning in Engineering (1).
Intentional and thought-provoking application of classroom learning to active and engaging engineering work by participating in a group project that meets identified community needs. Course is project based, with a report and reflections. Project is identified by the student and could be mentoring or leading a team of students in an engineering service effort.

ENGR 220. Applied Analog and Digital Electronics (3).
Provides a fundamental understanding of electronics and programming through content and active learning. Introduces basic electronic components and principles, sensors, actuators and electronic diagnostic tools. Builds confidence and creativity by designing, constructing and debugging circuits as well as programming a micro-controller to perform desired tasks. Introduces students to semiconductors and integrated circuits such as op-amps, combinational logic circuits and flip-flops. Students learn methods to interact with the physical world. At the end of the course, students should be comfortable developing simple electronic prototypes for future projects. Prerequisite(s): MATH 111.

ENGR 302. Accessible Design (3).
Provides a set of multidisciplinary hands-on learning experiences in designing and creating assistive technologies for community members of all ages with mobility challenges, hearing or vision loss, communication challenges or other disabilities. Students develop a mindset to understand customer needs and are equipped with a skillset needed to source materials and build designs using tools in the laboratory/shop. Guest lectures from across campus — including but not limited to, communications sciences and disorders, early childhood unified, physical therapy or biomedical engineering — present different design perspectives and product design challenges.

ENGR 360. Special Topics (1-4).
New or special topics presented on sufficient demand at the undergraduate level. Prerequisite(s): instructor's consent.

ENGR 482. Fundamentals of Engineering Review (1).
Covers the common subjects of the Fundamental of Engineering (FE) Exam in EE, ME and IME. Covers the mathematics, Engineering Probability and Statistics, Engineering Economy, Engineering Mechanics, and Electricity and Magnetism. Prerequisite(s): MATH 242, PHYS 314.

ENGR 501. The Engineer as Leader (3).
Develops engineering students for leadership roles soon after graduation. Covers leadership theory, leadership in the context of engineering (both formal and informal) and has several invited speakers. Students complete leadership reflections as well as other assignments. For undergraduate credit only. Prerequisite(s): junior standing.

ENGR 501H. The Engineer as Leader Honors (3).
Develops engineering students for leadership roles soon after graduation. Covers leadership theory, leadership in the context of engineering (both formal and informal) and has several invited speakers. Students complete leadership reflections as well as other assignments. For undergraduate credit only. Prerequisite(s): junior standing.

ENGT - Engineering Technology

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ENGT 121. Cybersecurity Awareness (3).
The ability to secure information and systems within a modern enterprise in this modern globalized environment is a growing challenge. Ever-present human threats are global, persistent and increasingly sophisticated. Natural threats are unpredictable but inevitable. Vulnerabilities continue to be discovered and exploited with devastating impact. This course is designed to familiarize users with information, cyberspace and security principles needed to understand these threats. It addresses a range of topics, including information

infrastructures, social engineering, information system exploitation techniques, and countermeasures to the threats discussed.

ENGT 201. Introduction to Engineering Technology (1).
Introduces students to history, concepts, roles and trends in engineering technology in society and industry. Prerequisite(s): WSUE 102A.

ENGT 203. Introductory Design Project (1).
The first of the three-course project design series. In this introductory course, students learn project management tools, team working tools, how to perform market research and develop videos, and prototype development. Prerequisite(s): either WSUE 102A, WSUE 102B, ID 300 or instructor's consent.

ENGT 210. Introduction to Facilities Management (3).
Defines facility management which is a profession that encompasses multiple disciplines to ensure the functionality, comfort, safety and efficiency of the built environment by integrating people, place, process and technology. Students learn facility management concepts including the basic functions of facility management, responsibilities of a facility manager, the technical and business skills needed for facilities management, and the 11 facility management competencies as defined by the International Facilities Management Association (IFMA).

ENGT 222. Applied Computing and Networking I (3).
Information technology (IT) connects people and businesses in the world, and operations of organizations in the public and private sector rely on this connectivity. Course allows students to gain vital concepts in computer hardware, operating systems, networking, and security to solve real-world computing challenges. Students collaborate effectively and think critically to develop specialized foundational skills in computing and networking. Students learn to use industry-standard tools through hands-on class projects. Covers fundamental concepts in computer hardware, Linux and Windows operating systems, virtualization, computer networking including OSI layer, LAN, WAN, VPN, and basic network security including hashing and encryption. Prerequisite(s): none.

ENGT 281. Cooperative Education (1).
Introduces the student to engineering practice by working in industry in an engineering/technology related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Repeatable for credit.

ENGT 281I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ENGT 301. Fundamentals of Engineering Technology (3).
Introduces students to engineering design concepts with an entrepreneurial mindset, engineering report writing, and engineering technology software programs including Multisim and MS Project. Prerequisite(s): sophomore standing or departmental consent.

ENGT 305. Intermediate Design Project (2).
The second of the three-course project design series. In this intermediate course, students learn the importance of the voice of the customer, the customer/product market fit through using the business model canvas, and engineering design tools. Students learn and practice customer interview techniques and, through the feedback, help to develop appropriate solutions and prototypes. In the second half of the course, students perform individual observations to discover unmet needs in industry and, after refining the needs, teams form to solve these needs. Prerequisite(s): ENGT 203 or instructor's consent.

ENGT 312. Applied Statics (3).
2 Classroom hours; 2 Lab hours. Studies force systems, resultants and equilibrium, centroids of areas and centers of gravity of bodies; trusses, frames, beams, friction, and moments of inertia of areas and bodies. Prerequisite(s): PHYS 213. Pre- or corequisite(s): MATH 243 or MATH 252.

ENGT 313. Applied Dynamics (1).
Introductory concepts of applied dynamics including particle kinematics, force and acceleration methods for particles, and energy methods for particles. Prerequisite(s): PHYS 213. Pre- or corequisite(s): ENGT 312 or AE 223; and MATH 243 or MATH 252.

ENGT 320. Circuits Technology with Lab (4).
3 Classroom hours; 2 Lab hours. Studies electric circuit technology principles and their applications. Includes DC circuits, network theorems, capacitance and inductance, AC, circuit analysis, phasor plane techniques, complex power and balanced three-phase circuits. Includes a laboratory. Prerequisite(s): MATH 242 or 251. Corequisite(s): ENGT 320L.

ENGT 321. Applied Computing and Networking II (3).
Continuation of Applied Computing and Networking I. In-depth look at Windows and Linux operating systems operation and administration. Also, more detailed topics are covered on OSI 7-Layer Model, common networking protocols and services (heavier on Layers 5 through 7), VOIP, etc. Students go into more depth on network enterprise design and operation including wireless and mobile technology use and system operation. Introduces IoT, cloud services (web-based storage, applications, services, hosts). Prerequisite(s): ENGT 222 or MIS 325.

ENGT 322. Applied Programming and Scripting (3).
Designed for IT professionals interested in learning basic coding and scripting skills. Teaches the vital skills needed to develop as well as customize applications that interact with file systems, databases, networks and websites. Scripting is a method that automates the long or complex commands in a specific environment and allows professionals to be more productive by avoiding repetitive works. Covers command shell scripting (cmd, powershell, bash) in Windows and Linux operating systems. Emphasizes scripting cybersecurity tasks such as system configuration, system auditing, and penetration testing. Also covers Arduino microcontrollers, coding Arduino in Python, and coding TCP Traceroute. Python language is used in this course. Prerequisite(s): ENGT 222 or MIS 325.

ENGT 323. Introduction to Fluids (3).
2 Classroom hours; 2 Lab hours. Provides a fundamental study of fluid mechanics in various applications. Studies include closed and open systems, conservation laws, velocity and acceleration fields, deformation of fluid elements, constitutive relations, flow boundary conditions, nonisothermal flows, dynamics of external flows, Euler and Bernoulli equations, turbomachinery and more. Prerequisite(s): (MATH 243 or MATH 252) or equivalent. Pre- or corequisite(s): ENGT 312 or AE 223.

ENGT 324. Applied Web Applications and Database Development (3).
When browsing on a web application, look for two things: how user-friendly the web app is and how the information is stored, controlled and used. Each web application has a set of requirements such as financial transaction, customer information, etc. Course covers web and database technologies, services, protocols, design and operation. Students learn a variety of languages including HTML, CSS, Apache and MySQL. Course is designed to apply the languages through hands-on projects. Prerequisite(s): ENGT 222 or MIS 325.

ENGT 326. Cyber Operations (4).
Covers concepts related to cyber attack, penetration testing, cyber intelligence, cryptography, and cyber defense. Students learn the attacker's perspective and how security infrastructure integrates with the rest of the business and IT infrastructure through the use of hands-on projects. Prerequisite(s): ENGT 121, ENGT 321 and ENGT 322 (or collective equivalent) with a C- or better grade or instructor's consent.

ENGT 334. Introduction to Strength and Mechanics of Materials (3).
Provides students with a foundational knowledge of strength of materials, with an emphasis on applications and problem solving. Includes topics such as simple stresses and strains, shaft torsion, shear force and bending moment diagrams, beam stresses, combined stresses and experimental stress analysis. Prerequisite(s): (MATH 243 or MATH 252) or equivalent. Pre- or corequisite(s): ENGT 312 or AE 223.

ENGT 348. Machine Elements (3).
Applies statics, dynamics and strength of materials methods to the selection of basic machine components. Develops the fundamental principles required for selection of individual elements that compose a machine. Prerequisite(s): ENGT 313 and ENGT 334 or equivalent.

ENGT 354. Statistical Process Control (3).
Focuses on the applied aspects of statistical process control. Includes an introduction to probability and statistics, applied control charts, acceptance sampling, and lean six sigma concepts. Pre- or corequisite(s): MATH 243 or 252.

ENGT 361. Industrial Controls and Instrumentation (4).
3 Classroom hours; 2 Lab hours. Cross-listed as IME 361. Introduces the principles of measurement and data acquisition, transmission and application in industrial and commercial systems. The theory and application of electronic programmable devices such as programmable logic controllers, temperature controllers, counters, etc., Ladder logic and input/output devices are emphasized. Laboratory exercises include loop wiring, calibration, controller configuration and troubleshooting. Prerequisite(s): ENGT 320 or EE 282 with a minimum grade of C (2.000).

ENGT 363. Human Threats to Cybersecurity (3).
Kevin Mitnick, who popularized the term "social engineering," explained that it is much easier to trick someone into revealing a password for a system than to exert the effort of hacking into the system. This course covers human threats to cybersecurity in political, social and economic contexts. Includes targeted exploitation/manipulation of individuals, small groups and larger groups through social engineering, marketing, propaganda, psychological operations by personal contact, email, social networking, web and RF transmission. Prerequisite(s): ENGT 121 (or collective equivalent) with a C- or better grade or instructor's consent.

ENGT 370. Environmental Engineering Technology (3).
Introduces students to the causes and effects of environmental problems, and to the engineering processes that can control them. Students get an overview of the major themes in the field of environmental engineering including the effect of human population growth and increased urbanization on the environment, energy consumption and production, water supply and treatment, air pollution and global climate change. Prerequisite(s): ENGT 301, CHEM 211; or departmental consent.

ENGT 399. Selected Topics (1-4).
New or special topics presented on sufficient demand. Students should enroll in the lettered courses with specific topics in the title (e.g. 399A, 399B, etc.) rather than in this root course. Repeatable for credit when subject material warrants. Prerequisite(s): instructor's consent.

ENGT 401. Senior Project I (3).
Comprehensively covers the student's concentration in engineering technology and its applications. Students work with faculty to determine their senior project. Prerequisite(s): ENGT 201, and departmental consent.

ENGT 402. Senior Project II (3).
Continuation of ENGT 401, Senior Project I. Prerequisite(s): ENGT 401, senior standing.

ENGT 403. Senior Design Project (3).
The last of the three-course project design series. Covers the student's concentration in engineering technology and its applications. Students collaborate with industry and faculty, and each student leads a team of junior and sophomore students to develop their unique capstone project. Prerequisite(s): ENGT 305 or instructor's consent.

ENGT 410. Robotics Technology (3).
2 Classroom hours; 3 Lab hours. Cross-listed as IME 410. Examines systems using robotics in technology. Provides the fundamentals of manipulators, sensors, actuator, end-effectors, and product design for automation. Includes kinematics, controls, programming of manipulator, and simulation. Also covers artificial intelligence. Prerequisite(s): IME 361 or ENGT 361 with a minimum grade of C (2.000) or instructor's consent.

ENGT 411. Microcomputer-Based Mechanical Systems Technologies (3).
2 Classroom hours; 3 Lab hours. Focuses on microcomputer-based real-time control of mechanical systems technologies. Familiarizes students with software methodologies used for real-time control. Includes laboratory sessions involving interfacing microcomputers to mechanical systems. Prerequisite(s): ENGT 361 or instructor's approval.

ENGT 440. Engineering Technology Management (3).
Introduces the management and control of technologically based projects as they apply to engineering. Considers both the theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development and personal skill assessment. Prerequisite(s): IME 254, 255.

ENGT 441. Analysis of Decision Processes in Technology (3).
Provides decision analysis as it applies to capital equipment selection and replacement, process design, and policy development. Develops and applies explicit consideration of risk, uncertainty and multiple attributes using modern computer-aided analysis techniques. Prerequisite(s): IME 255.

ENGT 461. Digital Forensics (3).
Covers concepts related to hardware and software forensics, incident response, cyber crime and cyber law enforcement. Students learn different aspects of computer and cyber crime and ways to uncover, protect, exploit and document digital evidence. Students are exposed to different types of tools (both software and hardware), techniques and procedures, and are able to use them to perform rudimentary forensic investigations. Focuses on the entire life cycle of incident response including preparation, data collection, data analysis and remediation. Real world case studies reveal the methods behind and remediation strategies for today's most insidious attacks. Prerequisite(s): ENGT 326 with a C- or better grade or instructor's consent.

ENGT 462. Cyber Physical Systems (4).
Focuses on trustworthy and resilient CPS, starting with NIST's CPS Framework. Students learn about common IoT infrastructures, integrate CPS into organizational risk management, and conduct cybersecurity risk assessments for critical cyber physical systems. Prerequisite(s):

ENGR 220 and ENGT 326 with a C- or better grade, or instructor's consent.

ENGT 463. Cyber Risk Management (3).
Covers application of risk and information security management to improve organizational resilience. Concepts include business impact analysis, incident response planning, disaster recovery planning, business continuity planning, and security auditing. Prerequisite(s): ENGT 326 with a C- or better grade or instructor's consent.

ENGT 464. Web Application Security (3).
Develops an understanding of common web-based vulnerabilities and their impacts. Concepts include development and management of secure web-based systems, security mitigation strategies and penetration testing. Prerequisite(s): ENGT 324 and ENGT 326 with a C- or better grade or instructor's consent.

ENGT 481A. Cooperative Education (1).
Introduces the student to engineering practice by working in industry in an engineering/technology related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Repeatable for credit. Prerequisite(s): junior standing and approval by the appropriate faculty sponsor.

ENGT 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ENGT 481N. Internship (1).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ENGT 481P. Cooperative Education (1).
Introduces the student to engineering practice by working in industry in an engineering/technology related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 credit hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Repeatable for credit. Prerequisite(s): junior standing and approval by the appropriate faculty sponsor.

ENGT 490. Sustainable Power Generation (3).
Provides the fundamentals of sustainable power generation including solar, geothermal, biomass, wind, hydro, tidal and wave. Covers embedded renewable generation: technical challenges, opportunities and connection in electrical transmission and distribution grids. Prerequisite(s): ENGT 360. Pre- or corequisite(s): ME 469.

ENGT 491. Applied Fluid Mechanics (3).
2 Classroom hours; 2 Lab hours. Covers fluid properties, fluid statics, fluid flow concepts, dynamic similitude, fluid resistance, ideal flow, compressible flow, and pneumatic and hydraulic applications. Prerequisite(s): ENGT 303.

ENGT 492. Energy Management and Sustainability (3).
Provides a study of the global energy situation and the interactions between human activities in the energy field and in the environment. Provides knowledge of available management systems (ISO 14001 and ISO 50001) and tools as well as technical mitigation methods relevant to the energy field that are applicable within the existing legal framework. Prerequisite(s): ENGT 360 or ENGT 370. Pre- or corequisite(s): IME 255.

ENGT 497. Electrical Machines and Electronic Circuits (4).
3 Classroom hours; 2 Lab hours. Covers introduction to three phase circuits; ideal, practical, single phase, three phase, and auto transformers; single phase and three phase induction motors; synchronous machines; DC shunt, series, compound machines, their characteristics, and armature reaction; introduction to semiconducting materials, ideal and practical diode and their characteristics, and introduction to transistors Prerequisite(s): ENGT 320 or EE 282. Corequisite(s): ENGT 497L.

ENGT 510. Solar and Wind Engineering (3).
2 Classroom hours; 2 Lab hours. Covers types of solar generation, solar radiation, sun path charts, shading effect, sizing of solar panels, inverters, batteries, V-1 curves for solar panels, grid connected and off-grid solar system, types of batteries, NEC codes for solar systems, economic analysis of PV system, carbon footprint, wind power generation, advantages and disadvantages of wind power, comparison between the wind energy and solar energy, wind energy system economics and environmental aspects and impacts. Prerequisite(s): ENGT 320 or EE 282.

ENGT 572. Applied Machine Learning (3).
Introduces the key ideas in machine learning. Emphasis is on constructing machine learning applications and assessing performance rather than the theoretical underpinnings. Through lectures, readings and programming projects, students learn how to apply machine learning algorithms to real applications, run evaluations and interpret results. There is a heavy project focus, and when students complete the course, they are fully prepared to attack new problems using machine learning. Prerequisite(s): ENGT 322 and PSY 301 or STAT 370.

ENGT 574. Modeling and Simulation of Discrete Event Systems (3).
Focuses on important methods and aspects of discrete event simulation modeling, including network modeling with particular emphasis on applications in manufacturing, services and business processes. Prerequisite(s): ENGT 354 or IME 254 or instructor's consent.

ENGT 590. Independent Study in Engineering Technology (1-3).
Arranged individual independent study in specialized areas of engineering technology under the supervision of a faculty member. Repeatable for credit. Prerequisite(s): consent of the supervising faculty member.

ENGT 600. Water and Wastewater Treatment (3).
Studies water quality constituents and introduces the design and operation of water and wastewater treatment processes. Prerequisite(s): ENGT 323, ENGT 370; or departmental consent.

ENGT 610. Hydraulics and Hydrology (3).
Studies water resources engineering topics and methods. Hydraulic and hydrological concepts are explored through the application of fundamental conservation laws and ecologically-based design theory. Students apply the concept of fluid mechanics to pipe networks, hydraulic machinery, and open channel flow, flow control devices, flood routing, groundwater flow and management, and develop quantitative approaches for answering questions in engineering hydrology. Prerequisite(s): ENGT 323 or departmental consent.

ENGT 620. Structural Analysis and Design (3).
Studies the functions of structure, design loads, reactions and force systems; analysis of statically determinate structures including beams trusses and arches; energy methods of determining deflections of

structures; influence lines and criteria for moving loads; analysis of statically indeterminate structures including continuous beams and frames. Prerequisite(s): ENGT 334 or departmental consent.

ENGT 664. Engineering Project Management (3).
Introduction to the design and control of technologically-based projects. Considers both the theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development and personal skill assessment. Prerequisite(s): IME 255, (IME 254 or ENGT 354), all with a C or better.

ENTR - Entrepreneurship

Department of Management

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ENTR 310. The Entrepreneurial Experience (3).
General education social and behavioral sciences course. Overview of the study of entrepreneurship, including its economic foundations, the principles of venture creation, financial sources of capital and strategy/business plan creation. Explores the entrepreneurial mentality and philosophy toward risk-taking, innovation and creativity. Prerequisite(s): ENGL 101, 102, COMM 111.

ENTR 403. Marketing Research (3).
Cross-listed as MKT 403. Studies the design and implementation of research procedures that support systematic and objective decision making for marketing planning and strategy development. Prerequisite(s): ECON 231, 232, MKT 300 with a minimum grade of C + (2.300), junior standing, advanced standing.

ENTR 440. New Venture Feasibility Analysis (3).
General education social and behavioral sciences course. Focuses on identifying the sources of business opportunities, understanding industry characteristics that are more or less favorable for new ventures, generating business ideas, evaluating the feasibility of business ideas, and investigating appropriate business models prior to formal business plan development. Prerequisite(s): junior standing for nonbusiness students.

ENTR 455. Entrepreneurial Finance (3).
Exposes students interested in business start-up or management of a growing firm to the principles, methods and tools used in financial planning, analysis and control of the small business enterprise. Covers short-term financial planning and control, creation of pro forma financial statements and business valuation techniques. Presents how and where to seek financing via a variety of debt and equity sources. Prerequisite(s): ENTR 310, junior standing.

ENTR 481. Cooperative Education (1-3).
Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): junior standing and 2.250 GPA.

ENTR 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ENTR 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

ENTR 605. Technology Entrepreneurship (3).
The innovative transformation of ideas and technical knowledge (intellectual property) into commercially useful applications is a key driver of economic development. Students are immersed in the process of moving intellectual property from mind to market. Technology commercialization concepts, tools and techniques are applied to active technologies from university research, students, community and national research lab sources. Students evaluate the potential for intellectual property to be the basis for a startup enterprise or licensed to an existing business. Prerequisite(s): junior standing.

ENTR 608. Selling and Sales Force Management (3).
Cross-listed as MKT 608. Analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisite(s): MKT 300 with a grade of C+ (2.300) or better, MKT 405.

ENTR 620. Growing and Managing an Entrepreneurial Firm (3).
Focuses on the organization, operation, marketing and financial management of an ongoing entrepreneurial firm. Emphasizes the strategic management of growth associated with a rapidly changing business, as distinguished from small business management, which could include small enterprise units that are static. Teaches the practical aspects of managing a growing business on a day-to-day basis. Practical application to intrapreneurship, such as growing a division or department within a larger organization. For undergraduate credit only. Prerequisite(s): ENTR 310, and junior standing.

ENTR 668. New Venture Development (3).
Emphasizes the development of a comprehensive business plan around a unique product or service idea that satisfies a customer need or solves a customer problem. Focuses on conceptualizing a value proposition and business model for a new venture and validating each with customers and industry experts. Financial and organizational principles associated with entrepreneurial finance including financial structuring of the firm, pro forma development of financial statements, and the capitalization of the firm are also examined. Provides opportunity to pitch and present one's business concept and plan as well as to learn how to evaluate the business ideas of others. For undergraduate credit only. Prerequisite(s): ENTR 440, 455, senior standing.

ENTR 690. Special Topics in Entrepreneurship (1-3).
Advanced course with in-depth study of emerging topics in entrepreneurship. Repeatable for credit with instructor's consent. Prerequisite(s): ENTR 310, junior standing or instructor's consent, advanced standing.

ENTR 690W. Study Abroad in France A (2-3).
This course establishes a foundation of entrepreneurship fundamentals and small business management principles. We will discuss the steps, principles, and methods associated with the venture creation process and how to generate and evaluate good business ideas, and develop those ideas in ways that are attractive to business partners and investors.

ENTR 705. Technology Entrepreneurship (3).
Explores issues surrounding the transformation of knowledge into commercially useful products, services and viable businesses. Employs a hands-on experiential approach using current active technologies from the university, community or national research laboratories.

Market validation, opportunity recognition, intellectual property protection (patents, copyright, trade secrets) and valuation are core learning elements employed in the commercial-potential evaluation process. Evaluation documents produced in the course are provided to intellectual property owners to aid moving a technology into commercial markets. Prerequisite(s): junior standing.

ENTR 706. Seminar in New Product and Technology Development (3).
Cross-listed as MKT 706. Provides a form to the function of idea commercialization. Examines the product development practices of successful, innovative companies and focuses on how customer needs can be translated into products and innovations. Students explore idea generation, market validation, prototype development, product concept testing, product launch strategies, postlaunch product evaluation, and managing innovative teams. Students apply learning through developing and testing a product idea that solves a customer problem.

ENTR 750. Workshop in Entrepreneurship (1-4).
Prerequisite(s): junior standing.

ETHS - Ethnic Studies

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ETHS 100. Introduction to Ethnic Studies (3).
General education social and behavioral sciences course. Orientation to the nature and scope of ethnic studies. Emphasizes the unique nature of the experience of ethnic groups in this country. Also studies communication and its relationship to behavior in the United States. *Course includes diversity content*.

ETHS 210. Fundamentals of Cross-Cultural Communications (3).
General education social and behavioral sciences course. Examines the effects of different cultures on language and methods of communicating. Also studies communication and its relationship to behavior. *Course includes diversity content*.

ETHS 320. Martin Luther King (3).
Studies the life and philosophy of the Rev. Dr. Martin Luther King, Jr. Emphasizes Dr. King's motivation, obstacles he faced, and the impact of his life on the civil rights movement and race relations in the United States. *Course includes diversity content*.

ETHS 330. Ethnic America, 1500-1924 (3).
General education social and behavioral sciences course. Introduces the ethnic experience from the 1500s to the 1920s. Themes include the context of emigration, immigration laws, nativism and exclusion, adaptation and acculturation, community development and political empowerment. *Course includes diversity content*.

ETHS 331. The Black Family (3).
General education social and behavioral sciences course. Examines the fictional and factual images of black American families from slavery to the present. Focuses on the adaptive abilities of poor, working class and middle class black families. *Course includes diversity content*. Prerequisite(s): ETHS 100, 210, or instructor's consent.

ETHS 332. The Native American (3).
General education social and behavioral sciences course. Examines contemporary issues facing the Native American, focusing on the Osage tribe. *Course includes diversity content*.

ETHS 334. Ethnic America in the 20th Century (3).
General education social and behavioral sciences course. Cross-listed as HIST 333. In-depth study of the ethnic experience in the 20th century. Major historical topics include identity formations, intergenerational conflict, class differentiation and social mobility, the politics of ethnicity, resistance and civil rights movements, the racialization of immigration laws, and transnationalism. *Course includes diversity content*.

ETHS 350. Workshop (1-4).
Focuses on the nature and scope of ethnic studies. Emphasizes the unique nature of the experiences of specific American ethnic groups. *Course includes diversity content*.

ETHS 360. Dealing with Diversity (3).
General education social and behavioral sciences course. Discusses the pluralistic nature of U.S. society. Equips students with skills to live and work within a diverse society, with particular attention on the global community. *Course includes diversity content*.

ETHS 370. The Black Experience in America (3).
Examines the status of blacks in American society. Emphasizes the status of blacks in the current and historical social, economic and political framework of this country. *Course includes diversity content*.

ETHS 380. Native American Tribal Systems (3).
Overview of three tribes from different parts of the U.S. Covers historical background, discussion of governments, and information about culture and prominent individuals through lecture, discussion and movies. *Course includes diversity content*.

ETHS 381. Special Topics (1-3).
Detailed study of topics in ethnic studies with particular emphasis established according to the instructor's expertise. *Course includes diversity content*.

ETHS 381AC. Issues and Perspectives on African Women and Globalism (3).
General education social and behavioral sciences course. Cross-listed as WOMS 383, WOMS 513. For those whose primary notions of Africa derive from little or unconfirmed information. Uses research, writing and other expressions by African women to present women dealing with their postcolonial and globalized national contexts. When possible, a teleconference with an author is arranged for a more global learning experience. Learning through local African communities, dramatic/artistic expressions and group projects is encouraged. Aims to help students develop critical and independent thinking about Africa, African women and their global engagement. *Course includes diversity content*.

ETHS 381AD. The African-American Historical Experience (3).
Cross-listed as HIST 509. Provides a panoramic examination of the African-American experience. Chronologically, it covers life in Africa before the trans-Atlantic slave trade to the present day. It focuses on the social, political and economic development of the transplanted Africans in the United States. *Course includes diversity content*. Prerequisite(s): junior, senior or graduate status.

ETHS 381E. 20th Century African American History (3).
Cross-listed as HIST 510. The 20th century witnessed a dramatic transformation of the African-American community. As the century began, the vast majority of African-Americans lived in the rural South. At century's end, the vast majority of African-Americans lived in urban areas across the U.S. Besides the demographic relocation of black America, the 20th century also witnessed the Black Freedom Movement (comprised of the Civil Rights and Black Power movements), which dramatically changed the social, economic and political status of blacks. Course examines these and other aspects of the African-American experience during the pivotal 20th century. *Course includes diversity content*.

ETHS 381G. African-American Business History (3).
Cross-listed as HIST 527. Surveys the history of African-Americans as entrepreneurs and business people. Drawing from a commercial tradition dating back to pre-trans-Atlantic Africa, business minded

blacks overcame a variety of obstacles (such as slavery and Jim Crow segregation) to establish a commercial presence in America. Besides chronicling these efforts, the course also examines why African-American business history has traditionally received minimal attention in both the realms of American business history and African-American history. *Course includes diversity content.*

ETHS 381O. Racial Profiling (3).
Cross-listed as CJ 540. Examines racial profiling, or as it is also referred to — biased-based policing. Emphasizes racial minority citizens who believe they were stopped by police authorities because of their race. Examines how racial minority citizens experience what they believe to be racial profiling, and how they interpret and give meaning to it. Examines police perspectives on racial profiling.

ETHS 399. Asian American Women and Men (3).
General education social and behavioral sciences course. Cross-listed as WOMS 399. Examines the unity and diversity of historical and contemporary experiences among diverse groups of Asian Americans before and after the passage of the Immigration and Nationality Act in 1965. Analyzes the intersections of race/ethnicity, class, gender, sexual identities, citizenships and native born/immigrant status in shaping the lives of Asian Americans. Relationships between Asian American women and men and their participation in American society are also discussed. *Course includes diversity content.*

ETHS 400. The Black Child (3).
Examines the historical impact of the black experience on black childhood, growth and development. Emphasizes the social, educational and psychological theories, perspectives and interventions applied to black child-rearing. Exposes students to good practices at home, school and in urban communities that build a healthy sense of self among children. Focuses on contemporary issues and concerns of parents, professionals and others assisting black children with the transition into adult life. *Course includes diversity content*. Prerequisite(s): ETHS 100, 210 or equivalent, or instructor's consent.

ETHS 410. African American Male (3).
Examines the impact of racism on the role and lifestyle of the African-American male in American society. *Course includes diversity content.* Prerequisite(s): ETHS 100, 210, or instructor's consent.

ETHS 481. Cooperative Education (1-4).
Allows the student to examine the impact of minority status in the work environment. Examines interpersonal interactions, communication, acceptance in and adjustment to the multicultural work environment. *Course includes diversity content*. Prerequisite(s): program consent.

ETHS 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. *Course includes diversity content*. Prerequisite(s): departmental consent.

ETHS 491. Urban Seminar (3).
Exposes students to contemporary literature on urban problems in the context of the Wichita community. Instructors and neighborhood leaders familiarize students with the history, demographics and culture of the neighborhood. Students are required to devote 16 hours per month for three months with a neighborhood-based agency. *Course includes diversity content.* Prerequisite(s): 2.000 GPA, ETHS 100 or 210, or instructor's permission. Corequisite(s): must be currently enrolled in at least 3 credit hours in addition to ETHS 491.

ETHS 512. Diversity and Aging (3).
General education social and behavioral sciences course. Cross-listed as AGE 512. Introduces students to issues in aging that are unique to minority older adults. Demonstrates differences in the aging experience by race/ethnicity and addresses the differential patterns of health and illness in later life in relation to race/ethnicity, gender and culture. In addition, the student develops an appreciation for how race/ethnicity affects mental and social dimensions of life. Attention is given to the impact on the social, financial and health aspects of those who speak a language other than English. Course perspective is interdisciplinary, taking into account the physical, psychological, interpersonal and social influences which shape our understanding of the challenges older minorities face when relocating to the United States. *Course includes diversity content.*

ETHS 540. Advanced Cross-Cultural Communication (3).
General education social and behavioral sciences course. Special topics in human relations. *Course includes diversity content*. Prerequisite(s): ETHS 210.

ETHS 545. Cross-Cultural Communication Theory (3).
Examines current cross-cultural communication theory and its impact on contemporary cross-cultural issues. *Course includes diversity content.*

ETHS 579. Asian Women in Modern History (3).
Cross-listed as HIST 579 and WOMS 579. Examines women's historical and contemporary experiences in Asian America and eight major countries in modern Asia. Covers topics on Asian women's activism in relation to nationalism and women's rights. Investigates Asian women's roles and statuses in the family and society and their educational attainment and contributions to the export-oriented industrialization of the Asia-Pacific region. Examines the intra-regional migration of female guest workers among various countries in Asia. Traces the ways in which the changes in immigration laws during the 20th century affect patterns of Asian women's migration to the United States. Introduces writing that integrates Asian women's lives and Asian American experiences into the discourses on ethnicity, national origin, class, gender and sexual orientation in the United States and the Asia-Pacific region. *Course includes diversity content.*

ETHS 580. Individual Projects: Ethnic Studies (1-3).
Students conduct independent research related to a specific ethnic group. *Course includes diversity content*. Repeatable for a total of 6 hours. Prerequisite(s): 50 hours of Wichita State credit or program consent.

ETHS 725. Concepts of Cross-Cultural Communication (3).
Critical survey of the concepts of cross-cultural communication. In-depth examination of the rationale used to evaluate different ethnic groups' language and behavior. Provides a conceptual understanding of special implications and necessary adaptations of communication to, between and among diverse ethnic groups in our society. *Course includes diversity content.*

FA - Fine Arts

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

FA 110. Introduction to the Fine Arts (3).
General education fine arts course. Team taught introduction to significant developments in the fine arts, with an emphasis on culture, history, politics, technology, identity and globalization.

FA 150. Workshop (1).
Intensive study of topics related to fine arts. Differing topics are denoted by a letter following the course number (i.e., 150C, 150P, etc.).

FA 301. An Introduction to Entrepreneurship in the Arts (3).
General education fine arts course. Helps students focus on business and marketing aspects of the arts. Examines from the artist's perspective techniques for launching a career in the arts. Gives attention to

elementary concepts of marketing artistic talents, goal setting, financing, legal issues and public demographics.

FA 321. Avant-Garde Art, Film, Rock Music and Subcultures (3).
General education fine arts course. Exploration of 20th century avant-garde art and film movements and their influence on late 20th century popular music, visual culture, and countercultures and subcultures such as mod, glam, punk, hacker, goth, rave and others. Required attendance at art exhibitions, film screenings, lectures.

FA 481. Cooperative Education (1-2).
Field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Repeatable for credit. Prerequisite(s): satisfactory academic standing prior to the first job assignment.

FA 481N. Internship (1-2).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

FA 590. Special Topics in the Fine Arts (1-4).
For group instruction. Repeatable for credit. Involves interdisciplinary upper-division/graduate-level topics with the fine arts (music, art, dance and theatre). Prerequisite(s): senior undergraduate or graduate standing or instructor's consent.

FA 710. Seminar in Creativity and Innovation (1-3).
As one of four core courses in the Master of Innovation Design, the purpose of this seminar is to help the student better understand and appreciate the subject of creativity. To that end, this course focuses on developing new ways of thinking which are different from those typically learned in single discipline design programs. The seminar provides many opportunities to apply these new ways of thinking through class exercises, possible course projects, and conversations with a wide array of guests who have prospered through incorporating creativity/innovation into what they do professionally. Students learn techniques for improving the flexibility and originality of their thinking and explore approaches used by others to create and sustain high levels of innovation. Topics include: personal thinking preferences, everyday creativity and eliminating mental blocks, creative thinking techniques, idea selection approaches, teaming techniques for creativity, conditions that promote creativity, design for interaction, disruptive technologies, and intellectual property. Seminar uses fun and hands-on activities to stimulate innovation. Repeatable for credit.

FA 750. Workshop (1-4).
Intensive study of topics related to fine arts. Differing topics are denoted by a letter following the course number (i.e., 750C, 750U, etc.).

FA 750M. Arts Partners (1).
Provides professional development in partnership with Wichita Arts Partners.

FIN - Finance

Department of Finance, Real Estate & Decision Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

FIN 140. Personal Finance (3).
Management of the cash flows experienced by individuals and families. Analyzes alternative strategies to meet individual financial goals through various investment media emphasizing risks and returns. Exposes the student to a set of tools that can be applied in personal financial management to provide a flexible and relevant framework for future decision making.

FIN 340. Financial Management I (3).
Studies corporate organization, types of securities and types of financial institutions. Includes analysis of risk and rates of return and long-term investment decisions. Prerequisite(s): ACCT 210, junior standing, advanced standing.

FIN 390. Special Group Studies in Finance (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): junior standing, advanced standing.

FIN 440. Financial Management II (3).
Studies long-term financing decisions and financial planning. Also includes working capital management, mergers and acquisitions, and international financial management. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 450. Applied Financial Analysis (3).
Uses Microsoft Excel to apply and reinforce the concepts learned in FIN 340 and 440. Students completing this course have a strong functional knowledge of how to use Excel to analyze financial problems. Excel skills developed include using absolute and relative cell references to efficiently build spreadsheet models, correct use of Excel's built-in financial functions, and other related topics. Course is application oriented, using concepts from FIN 340 and 440 as subjects for the financial models built in class. In the process, students gain a new, deeper understanding of these concepts, and are exposed to more advanced versions of the theories developed in earlier classes. FIN 440 and 450 may be taken concurrently. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing. Pre- or corequisite(s): FIN 440 with a grade of C+ (2.300) or better.

FIN 481. Cooperative Education (1-3).
Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): junior standing, advanced standing, and 2.250 GPA.

FIN 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

FIN 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

FIN 610. Insurance and Risk Management (3).
Topics include risk identification and analysis, risk management, legal aspects of insurance, structure of the insurance industry, regulation, reinsurance, underwriting, financial issues and analysis, policy analysis, and an overview of many types of personal and commercial insurance including: automobile, homeowner's, property and casualty, umbrella, commercial general liability, errors and omissions, directors and

officers, health insurance (including traditional indemnity, HMO and PPO), disability, long-term care and life. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 611. Real Estate Finance (3).
Cross-listed as RE 611. Covers the institutions and instruments used to finance residential and commercial properties, and provides essential knowledge and skills for students who are interested in a career as a commercial bankers, mortgage banker or an analyst or investor in mortgage-related securities. Topics include fixed-rate and alternative mortgage instruments, financial analysis and decision making, residential mortgage underwriting, mortgage market regulations, primary and secondary mortgage market structure and institutions, and mortgage-backed securities. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 618. Real Estate Investment Analysis (3).
Cross-listed as RE 618. Covers the tools and techniques used to evaluate the financial profitability of real estate investments, as well as real estate decisions affecting businesses. Students learn about pro forma and discounted cash flow analysis of real estate, the effects of leverage on real estate investments, federal tax treatment of real estate investments, and disposition and renovation decisions. In addition, topics such as lease-versus-own analysis, sale-leasebacks and other corporate real estate issues are discussed. Prior enrollment in RE 310 recommended for students with a declared emphasis in real estate. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 620. Investments (3).
Analyzes investment risks, financial information and industry characteristics. Examines corporate, government, municipal and financial institution securities and other investment types. Presents personal portfolio construction, supervision and management. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 622. Future and Options Markets (3).
Overview of the futures and options markets. Discusses basic theoretical concepts as well as the practical issues of hedging and speculating in these markets. Prerequisite(s): FIN 340 with a grade of C + (2.300) or better, junior standing, advanced standing.

FIN 625. International Financial Management (3).
Cross-listed as ECON 674 and IB 625. Studies the international financial and monetary system, emphasizing currency markets. Also examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing.

FIN 631. Fixed Income Securities and Markets (3).
Analyzes the market for fixed-income securities from the investor's point of view. Emphasizes pricing these securities and understanding the factors that determine the structure and level of interest rates. Portfolio management techniques and using derivatives are also covered. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 632. Bank and Financial Institution Management (3).
Presents and analyzes asset and liability management by banks and financial institutions. Also covers financial institution structure, management, regulation and operations. Covers risk management topics in detail. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 635. Commodity and Energy Trading (3).
Focuses on trading in commodity and energy markets. Introduces how commodity and energy markets function, emphasizing trading and hedging strategies. Explores the control systems trading firms need in place to manage market, credit, and liquidity risks, as well as the financial accounting, regulatory compliance, and tax issues that arise from trading. Much of the classwork is hands-on exercises. Students engage in a simulated commodity and energy trading game and use real-world database management software from Allegro Development. Students also have the opportunity to interact with local business experts in commodity and energy trading throughout the semester. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 675. Analytics Decision Modeling With Spreadsheets (3).
Cross-listed as DS 675. Introduces key principles of business analytics modeling: descriptive, predictive and prescriptive. Models covered in each area may differ from semester to semester. Students learn how to make decisions not based on intuition or “gut feel,” but on models and data. Course adopts a practical approach to the modeling of a wide variety of business problems in various functional areas. Models are built in Excel and add-ins to Excel, allowing students to gain advanced Excel skills, which will benefit them in their careers. Prerequisite(s): DS 350 and FIN 340 each with a grade of C+ (2.300) or better, junior standing, advanced standing or instructor's consent.

FIN 750. Workshop in Finance (1-4).
Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing.

FREN - French

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

FREN 111. Elementary French I (5).
Develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work.

FREN 111H. Elementary French I Honors (5).
Develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work.

FREN 112. Elementary French II (5).
Further develops the four fundamental skills in language learning (listening, speaking, reading, and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work. Prerequisite(s): one unit of high school French, FREN 111, or departmental consent.

FREN 112H. Elementary French II Honors (5).
Further develops the four fundamental skills in language learning (listening, speaking, reading, and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work. Prerequisite(s): one unit of high school French, FREN 111, or departmental consent.

FREN 150. Workshop in French (1-4).
Repeatable for credit.

FREN 150G. Francophone Cinema (2).
Intended for individuals with limited knowledge of French language and culture. Francophone cinema presents movies in French with English subtitles. Discussions provide insights into Francophone cultures.

FREN 150I. French for Global Exchange (2).
Intended for individuals with no proficiency or extremely limited knowledge of French language and culture. Introduces learners to basic concepts and information about the French culture and language to facilitate engagement and communication in Francophone countries.

FREN 210. Intermediate French (5).
General education humanities course. Continues to develop the four fundamental language skills: understanding, speaking, reading and writing; emphasizes conversation and cultural readings. Prerequisite(s): two units of high school French, or FREN 112, or departmental consent.

FREN 210H. Intermediate French Honors (5).
General education humanities course. Continues to develop the four fundamental language skills: understanding, speaking, reading and writing; emphasizes conversation and cultural readings. Prerequisite(s): two units of high school French, or FREN 112, or departmental consent.

FREN 215. French Study Abroad (3-6).
Transfer of credit from a French-speaking university in (1) grammar, (2) conversation, (3) reading.

FREN 215A. Selected Topics Grammar (3-6).
Review of major French verb tenses and moods (indicative, imperative, conditional, and subjunctive); in-depth exploration of structural elements of the language including pronouns, adjectives, adverbs, prepositions; special emphasis on written French through composition and essential practice in revision. FREN 210 strongly encouraged.

FREN 215B. Special Topics Conversation (3-6).
Develops oral proficiency through listening, vocabulary building, culturally appropriate communication strategies and pronunciation practice in an immersion environment. FREN 210 strongly encouraged.

FREN 215C. Special Topics Reading (3-6).
An introduction to literary discourse in the French and Francophone traditions. Readings focus upon the cultural characteristics and verbal nuances of texts selected as exemplary models of imaginative usage and thought. FREN 210 strongly encouraged.

FREN 223. Intermediate French Readings I (3).
General education humanities course. Intensive reading of diverse literary works in French. Course satisfies the LAS literature requirement. Prerequisite(s): FREN 210 or equivalent.

FREN 223H. Intermediate French Readings I Honors (3).
General education humanities course. Intensive reading of diverse literary works in French. Course satisfies the LAS literature requirement. Prerequisite(s): FREN 210 or equivalent.

FREN 300. Intermediate French Readings II (3).
General education humanities course. Intensive reading and analysis of French literary works of all periods. Course satisfies the LAS literature requirement. Prerequisite(s): FREN 223 or equivalent.

FREN 300H. Intermediate French Readings II Honors (3).
General education humanities course. Intensive reading and analysis of French literary works of all periods. Course satisfies the LAS literature requirement. Prerequisite(s): FREN 223 or equivalent.

FREN 324. Intermediate Conversation and Composition (3).
Improves oral and written proficiency through vocabulary acquisition and interactive grammar exercises. Prerequisite(s): FREN 210 or equivalent.

FREN 324H. Intermediate Conversation and Composition Honors (3).
Improves oral and written proficiency through vocabulary acquisition and interactive grammar exercises. Prerequisite(s): FREN 210 or equivalent.

FREN 398. Travel Seminar in French (1-4).
Interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science and economics, while visiting historic places of interest. Prerequisite(s): departmental consent.

FREN 501. French for Business (3).
Designed for French speakers at the intermediate level seeking to communicate accurately in professional situations and especially for those pursuing parallel studies in business or management. Prerequisite(s): FREN 324 or departmental consent.

FREN 505. Advanced French Phonetics (3).
2 Classroom hours; 2 Lab hours. Cross-listed as LING 505A. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future French teachers. Prerequisite(s): any 200-level FREN course or departmental consent.

FREN 515. Major Topics in French (1-4).
Special studies in (A) language, (B) literature, (C) commercial French, (D) the language laboratory, (E) music, (F) composition, (I) problems in teaching French, (J) civilization, (L) translation, (K) conversation, and (M) phonetics. Repeatable for credit. Prerequisite(s): departmental consent.

FREN 520. Novel and Film (3).
Analyzes and discusses celebrated French novels together with major film versions of the same. Focuses on the status of the image in relation to the works' historical and cultural contexts. Prerequisite(s): FREN 300.

FREN 525. Advanced French Conversation (3).
Designed to increase proficiency in spoken French. Assignments include oral reports, dialogs and work in the language laboratory. Prerequisite(s): FREN 324 or departmental consent.

FREN 526. Advanced French Composition and Grammar (3).
Emphasizes theme writing, original compositions and detailed study of modern French grammar. Prerequisite(s): FREN 324 or departmental consent.

FREN 540. French Literature in English Translation (3).
General education humanities course. Topic varies. May be used to satisfy the LAS literature requirement and may count toward a French major or minor if readings and papers are done in French.

FREN 541. French Literature of Africa and the Caribbean in Translation (3).
General education humanities course. Studies the concept of Negritude through the works of major African and Caribbean writers. No knowledge of a foreign language is necessary. May be used to satisfy the LAS literature requirement and may count toward a French major or minor if readings and papers are done in French.

FREN 551. French Civilization: The Middle Ages to the Restoration (3).
Emphasizes key aspects of the civilization of France as seen in its art, architecture, political structure, social evolution and intellectual traditions. Interdisciplinary course complements studies in French language and literature. Classwork and required readings are in French. Pre- or corequisite(s): FREN 300.

FREN 552. Contemporary French Civilization (3).
Emphasizes the major events, themes, ideas, trends and movements in French civilization since the Revolution. Interdisciplinary course complements French language and literature courses. Classwork and readings are in French. Pre- or corequisite(s): FREN 300.

FREN 623. Seminar In French (2-3).
Seminar in French literature, language or civilization. Repeatable for credit. Prerequisite(s): FREN 300.

FREN 629. Medieval French Literature (3).
Analyzes and discusses major French works from 900 to 1500, the literary movements to which they pertain, and the place of individual authors in the overall tradition. Prerequisite(s): FREN 300.

FREN 630. Renaissance French Literature (3).
Analyzes and discusses major French works, 1500-1600. Prerequisite(s): FREN 300.

FREN 631. 17th Century French Literature (3).
Prerequisite(s): FREN 300.

FREN 632. 18th Century French Literature (3).
Prerequisite(s): FREN 300.

FREN 633. 19th Century French Literature (3).
Prerequisite(s): FREN 300.

FREN 634. 20th Century French Literature (3).
Analyzes and discusses major works of French fiction, poetry and drama from the Belle Epoque through World War II. Prerequisite(s): FREN 300.

FREN 635. Introduction to Romance Linguistics (3).
Cross-listed as LING 635 and SPAN 635. Provides a contrastive examination of the phonology, morphology and syntax of the major contemporary Romance languages (French, Spanish, Italian, Portuguese, Catalan and Romanian). Introduces students to the sound and writing system and basic grammar of Latin, and contrasts the phonological and grammatical systems of the contemporary Romance languages (French and Spanish in particular) with those of Latin. It compares specific features of the modern Romance languages synchronically (i.e., apart from Latin) as well. Students are advised to have a solid grounding in at least one Romance language (preferably French or Spanish) and a familiarity with at least one other (French, Spanish, Latin, Italian or Portuguese). Prerequisite(s): departmental or instructor's consent.

FREN 636. Contemporary French Literature (3).
Analyzes and discusses major works of French fiction, poetry and drama, 1945-present. Prerequisite(s): FREN 300.

FREN 726. French Composition and Stylistics (3).
Offers background in rhetoric and stylistics as an approach to literary models, with a view to developing the creative use of style together with grammatical accuracy in writing. Practice in revision forms the basis of this course. Prerequisite(s): FREN 526 or departmental consent.

FREN 750. Workshop in French (2-4).
Repeatable for credit.

FREN 750C. Contextualized Language Instruction (2).
Cross-listed as SPAN 750C. Workshop on foreign language pedagogy. Required for GTAs in Spanish; open to advanced undergraduate French, Latin, or Spanish teaching majors. Prerequisites(s): enrolled in the MCLL Teaching Major, acceptance into the MA program in Spanish or French, or departmental consent.

FS - Forensic Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

FS 381. Special Topics (1-3).
An umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 381A, 381B, etc.) Students should enroll in the lettered courses with specific topics in the titles rather than in this root course. Generally, the FS 381_ courses are detailed studies of topics in forensic science with particular emphasis established according to the expertise of the various instructors.

FS 381AA. Basics of Firearms, NIBIN and Toolmarks Examination (3).
Cross-listed as CJ 581AA. Firearms and toolmark identification is an applied forensic science discipline established from validated theories in the physical sciences area of material and engineering sciences. Course introduces the identification of markings formed by the tooling processes—including firearms—most often found and used in the forensic and criminal justice field. Includes the operation of firearms, cartridges, gunshot residue analysis, powder pattern determination, bullet and fired cartridge case comparisons. Students learn the fundamentals of fired cartridge case determinations used by the National Integrated Ballistic Information Network (NIBIN) and the Integrated Ballistic Identification System (IBIS) as used by the Wichita Crime Gun Intelligence Center. Prerequisite(s): CJ 191. Pre- or corequisite(s): CJ 341 or CHEM 212.

FS 381AR. Terrestrial 3D Laser Scanning/Mapping (3).
Cross-listed as CJ 581N. Hands-on course designed to teach the basics of High Definition 3-Dimensional Scanning (HDS) to capture millions of data points. Students use time-of-flight scan equipment to capture data and state-of-the-art software to register (stitch) the data into a 3D coordinated system of point clouds and other related products used in many professions to include geographic information systems (GIS), civil infrastructure, crime scene and accident reconstruction, building information modeling (BIM), the documentation of large industrial complexes, heritage preservation, and the detailing of archaeological excavations. Prerequisite(s): basic understanding of the Microsoft Window operating system.

FS 381AS. Forensic Photography (3).
Cross-listed as CJ 581I. Photographic documentation plays a major role in recording crime scenes and physical evidence upon its discovery. Course provides photography theory and hands-on application as applied to criminal investigations and criminalistics. Provides an understanding of theory, methods and skills needed for proper exposure, lighting techniques and composition to produce sharp, well defined, properly exposed digital images used as part of the criminal investigative and judicial process. Students become familiar with the use of digital single-lens reflex camera equipment and develop the photographic methods to recognize, take and prepare images for investigative and/or courtroom use. Students are given the opportunity to apply learned skills while processing mock crime scenes and other photographic assignments.

FS 381AV. Forensic 3D Laser Scanning/Mapping (3).
Cross-listed as CJ 581O. Advanced course using high definition 3-dimensional scanning (HDS) in which students use time-of-flight scan equipment and related software to learn methods of 2D and 3D scene documentation. Examines data collection techniques and workflows particular to crime scenes including shooting incident reconstruction, anthropological and clandestine gravesite excavation documentation, as well as the types of visual deliverables which can be created to assist investigative and judicial proceedings. Prerequisite(s): CJ 581N or FS 381AR, and an understanding of the Microsoft Windows file system.

FS 381CB. Basic Bloodstain Pattern Analysis (3).
Cross-listed as CJ 581P. Designed for those interested in becoming investigators, crime scene technicians, forensic technicians and others involved in criminal and medical-legal investigations and crime scene analysis. Provides a fundamental knowledge of the discipline of bloodstain pattern analysis. Students learn the basic principles of bloodstain pattern analysis and the practical application of the discipline

in criminal casework. Provides the foundation of bloodstain pattern analysis and is a prerequisite to other advanced bloodstain training taught in the criminal justice system; this course is not intended to create an "instant" expert. Prerequisite(s): CJ 191.

FS 450. Forensic Identification of Marijuana (1).
Focuses on the botanical and chemical background necessary for the identification of marijuana. Students gain practical experience in the microscopic and chemical analysis of the marijuana plant. Prerequisite(s): BIOL 210, 211, CHEM 211, 212.

FS 451. Forensic Identification of Narcotics and Other Illicit Substances (1).
Provides a background in selected analytical chemistry procedures used in the forensic lab to ensure a specific qualitative identification of various licit and illicit controlled substances. Students gain experience in the theory and application of various colorimetric, chromatographic and spectrophotometric techniques used in the modern forensic lab. Prerequisite(s): BIOL 210, 211, CHEM 211, 212.

FS 452. Forensic Toxicology Alcohol (1).
Provides a didactic background for understanding the pharmacology/ toxicology of alcohol. Students gain an understanding of the testing of biological fluids for alcohol, the interpretation of the results, including various pharmacokinetic calculations used in forensic settings, and the application of alcohol results in a judicial arena. Prerequisite(s): BIOL 210, 211, CHEM 211, 212.

FS 453. Forensic Serology (1).
Provides a background in the detection, characterization and identification of biological fluids. Students gain a fundamental background in the characteristics of blood, saliva and semen, and practical hands-on experience in the forensic analytical techniques used in their detection and identification. Prerequisite(s): BIOL 210, 211, CHEM 211, 212.

FS 454. Fingerprint Development and Analysis (1).
Provides an understanding of the development of fingerprint classification systems, and the detection, collection and preservation of latent fingerprints. Students gain practical hands-on experience using various powders and chemicals for development and recovery of latent fingerprints. Prerequisite(s): BIOL 210, 211, CHEM 211, 212.

FS 455. Forensic Arson Analysis (1).
Provides exposure to the detection and classification of various flammable chemicals used in arson fires. Students gain exposure to the analytical techniques used in the laboratory investigation of suspicious fires. Prerequisite(s): BIOL 210, 211, CHEM 211, 212.

FS 498. Seminar in Forensic Sciences Techniques I (3).
Part one of the comprehensive academic-year-long overview of how forensic science techniques influence the criminal investigation process. Students receive instruction from faculty in the chemistry, biological sciences, anthropology and criminal justice departments. Prerequisite(s): FS 450, 451, 452, 453, 454, 455, CJ 420.

FS 499. Seminar in Forensic Sciences Techniques II (3).
Part two of the comprehensive overview of how forensic science techniques influence the criminal investigation process. Students receive instruction from faculty in the chemistry, biological sciences, anthropology and criminal justice departments. Prerequisite(s): FS 450, 451, 452, 453, 454, 455, 498, CJ 420.

GEOG - Geography

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

GEOG 125. Principles of Human Geography (3).
General education social and behavioral sciences course. Introductory course examining the development of human and cultural landscapes.

GEOG 210. Introduction to World Geography (3).
General education social and behavioral sciences course. Surveys world geography including an analysis of the physical, political, economic, historical and cultural geography. *Course includes diversity content*.

GEOG 235. Meteorology (3).
General education math and natural sciences course. Cross-listed as GEOL 235. Introductory study of the atmosphere and its properties and the various phenomena of weather. Includes a brief survey of important principles of physical, dynamic, synoptic and applied meteorology. Does not apply toward a major or minor in geology. Requires field trips at the option of the instructor. Prerequisite(s): instructor's consent.

GEOG 510. World Geography (3).
A study of world regions including an analysis of each region's physical, political, economic, historical and cultural geography. Focus on a specific geographical problem for in-depth study and analysis. May not be taken if credit has been received for GEOG 210. Prerequisite(s): instructor's consent.

GEOG 530. Geography of Latin America (3).
General education social and behavioral sciences course. Physical, political, economic, historical and human geography of Latin America.

GEOG 542. Geography of Europe (3).
General education social and behavioral sciences course. Physical, political, economic, historical and human geography of Europe.

GEOG 695. Special Studies in Geography (1-3).
3 or 2 Classroom hours; 3 Lab hours. Lab fee. (Lab is included when appropriate.) Systematic study in a selected area of topical interest in geography. Course given on demand; repeatable for credit when content differs. May require field trips. Prerequisite(s): junior standing.

GEOL - Geology

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

GEOL 102. Earth Science and the Environment (4).
3 Classroom hours (for the 3 credit hour option); or 3 Classroom hours; 2 Lab hours (for the 4 credit hour option). *General education math and natural sciences course*. Studies the processes that shape the Earth's physical environment, the impact of human activities on modifying the environment, use and abuse of natural resources including soil, water and air, waste disposal, and natural environmental hazards. *Course includes diversity content*. GEOL 102 (4) 3 Classroom hours; 2 Lab hours is recommended for students desiring general education credit for a natural sciences laboratory experience. Credit not allowed in both GEOL 102 and 111.

GEOL 111. General Geology (4).
3 Classroom hours; 2 Lab hours. *General education math and natural sciences course*. Overview of the Earth, the concepts of its origin, composition, materials, structure, landforms and history, and natural processes operating to create the Earth's physical environment. May require field trips into the earth laboratory. Credit not allowed in both GEOL 102 and 111. Corequisite(s): GEOL 111L.

GEOL 150B. Introduction to Meteorology (0.5).
Covers basic concepts of meteorology, otherwise known as atmospheric science; in particular, the interrelationships and distributions of temperature, pressure, wind and moisture. The organization of weather systems and storms are presented, including a thorough description of severe storms. Students are given the capability to follow the progress

of weather systems via sources of readily-available data on the internet, as they learn to read and understand weather maps, soundings, radar images and satellite photos. Exercises related to real example cases provide practice applying the basic concepts. Opportunities for students to share personal experiences with weather phenomena are also given.

GEOL 150C. Introcuction to Geology: Understanding Earth (0.5).
Geology is the study of the earth — its place in the universe, its formation, its history, and what makes it special. During this introductory course, students learn about the science of geology and how the work of geologists impacts everyday lives.

GEOL 150D. Oceanography: Journey into the Abyss (0.5).
Although the majority of earth's surface is covered by seawater, most of us know very little about how it controls and affects the planet and human lives. Topics include how the oceans formed, what is at the bottom of the ocean, how and why ocean water moves, how the oceans affect human lives, current issues affecting oceans, and how land-locked Kansans play a role.

GEOL 200. Introduction to Environment and Sustainability (3).
General education math and natural sciences course. Explores a variety of environmental processes and contemporary environmental issues. The first eight weeks of the semester introduces the various aspects of environmental and sustainability issues and provides overviews of the science behind these issues, technology and policies developed to address them, the ethics that underlie how these issues are evaluated, and the impacts to human society. The second eight weeks of the semester are taught by WSU faculty and lecturers that specialize in aspects of environment and sustainability as it relates to the various tracks offered as part of the environment and sustainability certificate program. The second eight weeks of the class may involve field trips or other activities outside of normal class times. Course is required for all students enrolled in the certificate in environment and sustainability, but is open to all WSU students. *Course includes diversity content*.

GEOL 235. Meteorology (3).
General education math and natural sciences course. Cross-listed as GEOG 235. Introductory study of the atmosphere and its properties and the various phenomena of weather. Includes a brief survey of important principles of physical, dynamic, synoptic and applied meteorology. Does not apply toward a major or minor in geology. Requires field trips at the option of the instructor. Prerequisite(s): instructor's consent.

GEOL 300. Energy, Resources and Environment (3).
General education math and natural sciences course. Studies the dependence of human beings on the Earth's metallic, nonmetal, industrial mineral, energy, soil and water resources; the methods for their discovery and recovery; their uses, and the influence of economics, politics and social institutions in determining how exploitation affects the natural environment and our standard of living. *Course includes diversity content*. Prerequisite(s): any introductory course in biology, chemistry, geology or physics.

GEOL 302. Earth and Space Sciences (3).
2 Classroom hours; 2 Lab hours. *General education math and natural sciences course*. General survey of the physical environment, including elements of geology, geography, meteorology, climatology, oceanography and astronomy. May require field trips. Corequisite(s): GEOL 302L.

GEOL 310. Oceanography (3).
General education math and natural sciences course. Geologic origin of ocean basins and sea water; dynamics of waves, tides and currents; physical and chemical properties of sea water, diversity of life in the oceans, economic potential, law of the sea, and the effect of people on the marine environment.

GEOL 312. Historical Geology (4).
2 Classroom hours; 4 Lab hours. *General education math and natural sciences course*. Systematic review of earth history and its preservation in the rock record using field evidence for sequences of physical, biological and tectonic events in selected areas. Also includes the origin and evolution of life. Field trips required. Prerequisite(s): GEOL 102 or 111 or 302 or equivalent. Corequisite(s): GEOL 312L.

GEOL 320. Mineralogy and Optical Mineralogy (4).
1 Classroom hour; 6 Lab hours. Elementary crystallography. A study of the origin, composition and structure of the rock-forming minerals with laboratory emphasis on recognition of their typical forms, occurrences, associations and identification, and optical recognition via thin-section petrography. May require field trips. Prerequisite(s): GEOL 102 or 111; CHEM 103 or 211; MATH 112 or 123. Corequisite(s): GEOL 320L.

GEOL 324. Petrology and Petrography (3).
1 Classroom hour; 4 Lab hours. The origin, distribution, occurrence, description and classifications of igneous, metamorphic and sedimentary rocks with laboratory emphasis on their hand-sample and optical (thin-section petrographic) recognition. Prerequisite(s): GEOL 320. Corequisite(s): GEOL 324L.

GEOL 430. Field Studies in Geology (2-6).
Off-campus, systematic field study in a selected area of geologic significance. Course is given upon demand and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging and board costs are charged.

GEOL 430C. Geology of National Parks (3).
Examination of National Parks from a geologic perspective. The landscapes of U.S. national parks result from movements of large tectonic plates of Earth's outer shell. Mountains, volcanoes, shorelines and various types of rocks develop through interactions along plate boundaries, or where a plate moves over a hotspot. Course is intended for college and university students who have had no previous geology courses.

GEOL 430D. Mass Extinctions (3).
Cross-listed as GEOL 690AQ. Mass extinctions have punctuated the geologic history of this planet. This course will compare the past extinction causation to our modern world for similarities and differences.

GEOL 481. Cooperative Education (1-6).
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Prerequisite(s): departmental consent.

GEOL 490. Environment and Sustainability Seminar (1).
Focuses on the integration of the work each student has done in the environment and sustainability certificate program. Student discussion driven course in which students recap what they have learned during the certificate program and debate policies, practices and research needed to move towards a more environmentally sustainable society. As such, the capstone is not only about expanding knowledge, but also about communication, personal expression and advancing the conversation on environment and sustainability. Required for all students enrolled in the certificate in environment and sustainability. *Course includes diversity content*. Prerequisite(s): all required coursework for the certificate in environment and sustainability.

GEOL 522. Sedimentology and Stratigraphy (4).
3 Classroom hours; 3 Lab hours. Origin, classification, primary structures and physiochemical processes controlling deposition of sedimentary rocks. Surveys modern and ancient sedimentary depositional environments and petrographic study of sedimentary rocks in thin sections. Description, classification, methods of correlations and

determination of relative ages of stratigraphic rock units; stratigraphic principles and practice, the nature of cyclic sedimentation and controls on deposition, and elements of sequence stratigraphy. May require field trips. Prerequisite(s): GEOL 102 (with lab) or GEOL 111.

GEOL 540. Field Map Methods (3).
6 Lab hours. Field mapping methods with special reference to use of level, compass, barometer, alidade and airphotos. Field trips required. Prerequisite(s): GEOL 102 (with lab) or 111 or GEOL/GEOG 201.

GEOL 544. Structural Geology (3).
2 Classroom hours; 2 Lab hours. Stress-strain theory and mechanics of rock deformation, description, and genesis of secondary structural features in crustal rocks resulting from diastrophism, elements of global tectonics, and laboratory solution of geologic problems in three dimensions and time. May require field trips and field problems. Prerequisite(s): MATH 112 or 123; GEOL 312; and GEOL 324 or 522. Corequisite(s): GEOL 544L.

GEOL 560. Geomorphology and Land Use (3).
Cross-listed as GEOL 810AG. Identification of landforms and their genesis, processes producing landforms, the influence of geomorphology in aspects of natural hazards such as landslides, floods, earthquakes and volcanic activity; soil erosion, drainage basin modification, coastal and desert environments, mineral resource exploitation, and their effects on humans; importance of these influences in environmental management and land-use planning. Prerequisite(s): GEOL 111 or GEOL 102 or GEOL/GEOG 201.

GEOL 564. Remote Sensing Interpretation (3).
2 Classroom hours; 2 Lab hours. Introduces interpretation techniques for most types of images acquired by remotely positioned means. Physical principles that control various remote sensing processes using the electromagnetic spectra are applied to geology, land use planning, geography, resource evaluation and environmental problems. Derivative maps generated from a variety of images. May require field trips. Prerequisite(s): GEOL 102 or 111 or GEOL/GEOG 201.

GEOL 570. Biogeology (3).
2 Classroom hours; 2 Lab hours. *General education math and natural sciences course*. Systematic survey of major fossil biogeological materials, analysis of the origin and evolution of life, and paleoecological interpretation of ancient environments and climates. Includes handlens and binocular microscopic examination of major fossil biogeological materials. Includes application of analyzed fossil data to the solution of problems in biogeochronology, paleoecology, paleoclimatology and paleogeography. Cites examples from fields of invertebrate, vertebrate and micropaleontology, and palynology. May require museum and field trips. Prerequisite(s): GEOL 312. Corequisite(s): GEOL 570L.

GEOL 574. Special Studies in Paleontology (3).
2 Classroom hours; 2 Lab hours. *General education math and natural sciences course*. A systematic study in selected areas of biogeology and paleontology. Content differs, upon demand, to provide in-depth analysis in the fields of: (A) invertebrate paleontology, (B) vertebrate paleontology, (C) micropaleontology, (D) palynology, and (E) paleoecology. Gives appropriate laboratory instruction in the systematics, taxonomy and biogeological relationships within the selected fields listed. May require field trips. Repeatable for credit to cover all five areas listed.

GEOL 574C. Micropaleontology (3).
General education math and natural sciences course.

GEOL 621. Geochemical Cycling (3).
Capstone course. The geochemistry of earth materials and the important geochemical processes; cycles operating on and within the atmosphere, hydrosphere and lithosphere through time; anthropogenic effects on these cycles today. Prerequisite(s): GEOL 102 (with lab) or GEOL 111 and CHEM 211; or instructor's consent.

GEOL 630. Field Studies in Geology (2-6).
Off-campus, systematic field study in a selected area of geological significance. Course given upon demand, repeatable for credit when locality and/or content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisite(s): instructor's consent.

GEOL 640. Field Geology (6).
Capstone course. Field investigation of sedimentary, igneous and metamorphic rock units and their structures. Includes the application of mapping methods in solving geologic problems. Held at an off-campus field camp for five weeks (including weekends). Preparation of geologic columns, sections, maps and an accompanying report are due on campus during the sixth week. Prerequisite(s): GEOL 324, 522, 540, 544.

GEOL 650. Geohydrology (3).
2 Classroom hours; 2 Lab hours. Capstone course. The hydrologic cycle, physical and chemical properties of water; fluid flow through permeable media, exploration for and evaluation of groundwater, water quality and pollution, and water law. Prerequisite(s): GEOL 522, MATH 242 and 243; or instructor's consent. Corequisite(s): GEOL 650L.

GEOL 657. Earth Science Instructional Methods (3).
Practice in teaching an introductory course in the earth sciences. Developing and presenting the latest scientific laboratory techniques and evaluating their effectiveness. May be taken more than once if content and objectives differ. Prerequisite(s): senior standing and department chairperson's permission.

GEOL 678. Geologic Perspectives on Climatic Change (3).
Capstone course. Modern climate and climactic changes and analysis of climactic deterioration; systematic study of geologic evidence of climate change through time. Emphasizes theoretical causes, feedback mechanisms and recognition of effects on climactic perturbations in the rock record. Prerequisite(s): GEOL 312 , 522.

GEOL 682. Petroleum Geology (3).
2 Classroom hours; 2 Lab hours. The origin, migration and accumulation of oil and gas in the earth's crust; reservoir trap types in common hydrocarbon fields, origin and types of porosity systems, and distribution of world petroleum supplies. Introduces subsurface study techniques. May require field trips. Prerequisite(s): GEOL 522. Corequisite(s): GEOL 682L.

GEOL 684. Methods of Subsurface Analysis (2).
1 Classroom hour; 2 Lab hours. Methods of remotely logging and describing the geologic occurrence of subsurface strata; characterization of subsurface strata, including laboratory analysis of recovered subsurface samples; application to petroleum geology, mineral resource evaluation and environmental geology. Prerequisite(s): GEOL 312, 522; or instructor's consent.

GEOL 690. Special Studies Geology (1-3).
Systematic study in selected areas of geology. Offered on demand; repeatable for credit when content differs. Requires laboratory work or field trips (instructor's option). Prerequisite(s): instructor's consent.

GEOL 690AJ. Computer Methods in Science (3).
1 Classroom hour; 4 Lab hours. Cross-listed as EEPS 701. Surveys computer applications commonly used by scientists, emphasizing nonstatistical applications. Includes computer-assisted instruction, data management, presentation packages, internet resources, digital image analysis, graphics and spreadsheets, reference acquisition and management, desktop publishing, and specialized applications for

modeling, simulations, mapping and time-series analysis. Lectures and demonstrations involve individual hands-on activities and student projects. Prerequisite(s): graduate standing or instructor's consent.

GEOL 690AK. Soils (3).
Geologic analysis of soil types, their formation, occurrence and mineralogy; soil management and conservation, environmental aspects of soil occurrence including stability studies, pollution and reclamation.

GEOL 690AO. History of Geology (3).
The course examines the historical development of Earth science from prehistoric to modern times. The course analyzes the various techniques of data collection and interpretation that were used throughout history.

GEOL 690AP. Petroleum Engineering: An Introduction for Geoscientists (3).
An introduction to the theory and application of petroleum engineering to oil and gas exploration and development. Oriented to students with a geology or geoscience background.

GEOL 690AQ. Mass Extinctions (3).
Cross-listed as GEOL 430D. Mass extinctions have punctuated the geologic history of this planet. This course will compare the past extinction causation to our modern world for similarities and differences.

GEOL 690AR. Environmental Politics (3).
Cross-listed as POLS 305. Examines the politics of environmental protection and the management of natural resources at local, national and global levels. No prerequisites, but a background in introductory political, economic and environmental science courses is helpful.

GEOL 690AS. Costa Rica Sustainability Travel Seminar (3).
Provides an opportunity for students to experience a new country, its ecology, sustainability practices, culture, language and history. It is an interdisciplinary travel seminar that allows the student to travel abroad and learn experientially to gain credit for studies of ecology sustainability practices, culture, language, history, geography, geology and biodiversity. Prerequisite(s): instructor's consent.

GEOL 692. Spatial SQL and SDE (3).
Spatial-SQL is a structural query language that allow students to effectively develop and manage spatial database. Course teaches principles of ESRI's spatial database engine (ArcSDE) which is designed to support multiple users to store and manage innumerable spatial data in a central location, and at the same time, enables others to develop (create, edit or modify and share) as well as manage the same data (concurrent multiuser geodatabase editing). Students learn how to develop geodatabase, manage the ArcSDE (enterprise geodatabase) service, script data loads with command-line ArcSDE tools, and install ArcSDE. Additionally, students are acquainted with the standard transact SQL script used frequently by Microsoft DBA's to manage large data.

GEOL 693. Python for Geospatial Analysis (3).
Students learn how to write Python scripting to perform geospatial analysis duties. Course deeply teaches how to use Python codes more efficiently to enhance, augment and even automate enormous amounts of GIS analytical tasks. The majority of this course is not spent learning to program in the Python language but on how to integrate different spatial libraries within Python code. Students learn how to do different GIS-related spatial analysis in Python programming language. Each lesson is a tutorial with specific topic(s) plus exercises where the aim is to learn how to solve both natural and social science problems while using Python tools.

GEOL 698. Independent Study in Geology (1-3).
Independent study on special problems in selected areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (i) stratigraphy, (j) geophysics, and (k) petroleum. Requires a written final report. Prerequisite(s): consent of sponsoring faculty.

GEOL 720. Geochemistry (3).
The chemistry of natural aqueous solutions and their interaction with minerals and rocks; thermodynamics and kinetics of reactions; emphasizes application to sedimentary environments and environmental problems. Requires some laboratory work. Prerequisite(s): GEOL 324 and CHEM 212 or instructor's consent.

GEOL 724. Soils (3).
Geologic analysis of soil types, their formation, occurrence and mineralogy; soil management and conservation, environmental aspects of soil occurrence including stability studies, pollution and reclamation.

GEOL 726. Carbonate Sedimentology (3).
2 Classroom hours; 2 Lab hours. The origin and genetic description of carbonate particles, sediments and rocks, mineralogy and textural classifications, depositional environments in carbonate rocks and analysis of modern and ancient depositional system. May require field trips. Prerequisite(s): GEOL 522 or equivalent. Corequisite(s): GEOL 726L.

GEOL 727. Carbonate Diagenesis (3).
2 Classroom hours; 2 Lab hours. Analyzes diagenesis of carbonate sediments and rocks. Includes mineralogic stability in natural waters, meteoric, marine and deep-burial diagenesis, dolomitization processes and products, trace-elements and isotopes as diagenetic tools, cathodoluminescence and X-ray diffraction studies of carbonates; origin and porosity. Prerequisite(s): GEOL 726 or instructor's consent.

GEOL 740. Basin Analysis (3).
A practical course in analysis of petroleum-bearing or other sedimentary basins; emphasizes detailed subsurface mapping to document depositional, tectonic and burial history of sedimentary basins; subsurface lithologic and geochemical sample analysis and evolution of sedimentary facies systems and hydrocarbons maturation history. Includes compilation of existing data to determine geologic evolution of basins. Prerequisite(s): GEOL 682, 684 or instructor's consent.

GEOL 745. Advanced Stratigraphy (3).
Analysis of stratigraphic sequences at the local to global scales in terms of sequence stratigraphic concepts and high-resolution interpretation of depositional sequences (from outcrop and subsurface data); seismic sequence stratigraphy, and significance of unconformities in sequence identification and development; local to global correlation of sequences and sea level history through time; cratonic sequences of North America. Required seven-day field trip. Prerequisite(s): GEOL 312, 522, 726.

GEOL 750G. History of Geology (3).
The course examines the historical development of Earth science from prehistoric to modern times. The course analyzes the various techniques of data collection and interpretation that were used throughout history.

GEOL 751. Advanced Geohydrology (3).
Integrations of practical and theoretical coverage of subsurface fluid flow as applied to shallow aquifers. Covers the mass transport in both the saturated and vadose zones as well as the occurrence and movement of nonaqueous fluids. Covers groundwater quality, sources of groundwater contamination, retardation of contaminants, retardation and attenuation of dissolved solids, and the response of inorganic and organic substances to subsurface aqueous and framework chemistries. Computer simulation models used whenever practical along with detailed analysis of case histories, including those related

to environmental geoscience. Prerequisite(s): GEOL 650, 681, MATH 344, or instructor's consent.

GEOL 752. Climatic Evolution of Earth (3).
Basics of climatology and paleoclimatology, and recognition of paleoclimatic indicators in the rock record. Climatic changes at different scales in Earth history and possible causes, and nature of climactic records. Roles of climate change on the evolution of Earth's biosphere, hydrosphere, atmosphere and lithosphere. Field trip(s) may be required. Prerequisite(s): GEOL 721, graduate standing, or instructor's consent.

GEOL 760. Exploration Geophysics (3).
Introduces the theory and application of geophysical techniques for hydrocarbon, mineral and groundwater prospecting. Includes use of seismic techniques, instrumentation for acquisition on land and sea, seismic processing, structural and stratigraphic modeling, 3-D seismic exploration, and seismic refraction techniques. Prerequisite(s): completion of geology undergraduate math and physics requirements; MATH 344 or 555; GEOL 324, 544, instructor's consent.

GEOL 781. Advanced Numerical Geology (3).
Involves practical implementation of algorithms and computer code. Includes the analysis of multivariate techniques and the development of the computer/algorithm skills needed to handle very large databases. Covers standard statistical approaches to data analysis, treatment of applied linear algebra and matrix theory; the application of linear and nonlinear discriminate analysis, various factor analytic techniques, hard and fuzzy clustering, linear and nonlinear unmixing analysis, and other forms of data modeling. Prerequisite(s): GEOL 681 or equivalent, competence in one or more high level computer languages, MATH 344 or 555, and instructor's consent.

GEOL 795. Earth and Space Physics (3).
Cross-listed as PHYS 795. An introduction to the geosciences and astrophysics of the solar system. Topics include the surface, interior and atmospheres of the planets with a comparative planetology approach, and the sun-planet system including solar physics and the effect of the sun on the earth's environment and geologic history. Prerequisite(s): PHYS 313-314, and MATH 242, or EEPS 721, or instructor's consent.

GERM - German

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

GERM 100. Grimm or Not So Grim? (0.5).
German authors, the Brothers Grimm, played a large role in German folklore. Course discusses the various connections between historical folklore and its influences on modern day storytelling methods, including literature, theater and more. *Course includes diversity content*.

GERM 103BA. Badge: Basic Conversational German for Business I (0.75).
Develops oral proficiency for business travelers through vocabulary building, culturally appropriate communication strategies, and pronunciation practice in an immersion environment. Repeatable for credit. Graded Bg/NBg.

GERM 103BB. Badge: Basic Conversational German for Business II (0.75).
Continues developing basic oral proficiency for business travelers through vocabulary building, culturally appropriate communication strategies, and pronunciation practice in an immersion environment. Repeatable for credit. Graded Bg/NBg.

GERM 111. Elementary German I (5).
Develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work.

GERM 112. Elementary German II (5).
Further develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work. Prerequisite(s): one unit of high school German, GERM 111, or departmental consent.

GERM 210. Intermediate German I (5).
General education humanities course. Reviews and completes the presentation of German grammar offered in GERM 111 and 112. Students are offered the opportunity to further develop their oral proficiency in German and to begin focusing attention on their reading and writing skills in a variety of contexts. Prerequisite(s): GERM 112 or equivalent, or two units of high school German.

GERM 224. Intermediate German II (3).
General education humanities course. Intensive reading and discussion of short German literary works (poems, short stories) combined with intermediate-level review of German grammar and expansion of German vocabulary. This course is required to continue the study of German at the upper-division level (i.e., GERM 300 and above). Prerequisite(s): GERM 210 or equivalent.

GERM 225. German Conversation (2).
The development of oral fluency. Prerequisite(s): GERM 210. Pre- or corequisite(s): GERM 224.

GERM 300. Intermediate German Readings (3).
General education humanities course. Reading and analysis of German short stories, prose selections from major contemporary works, and poetry, combined with oral and written practice and advanced grammar review. Prerequisite(s): GERM 224 or instructor's consent.

GERM 325. Intermediate German Conversation and Composition (2).
Emphasizes development of written skills as conversational practice continues. Prerequisite(s): GERM 225 or instructor's consent.

GERM 526. Advanced German Grammar and Composition (3).
Continues the advanced grammar review begun in GERM 300 and focuses on developing German writing skills, including the ability to express oneself with grammatical accuracy and stylistically appropriate vocabulary. Prerequisite(s): GERM 300 or instructor's consent.

GERM 650. Directed Studies In German (1-3).
Enrollment in any of the areas listed takes place only upon consultation with the department and agreement with the instructor concerned: (A) Introduction to the Study of German Literature; (B) Survey I: From the Medieval Period Through the Age of Goethe; (C) Survey II: 19th Century to 1945; (D) Contemporary Literature, including the literatures of East and West Germany, 1949-1989; (E) Special Topics in Literature, repeatable once for credit; (F) Special Topics in Language, repeatable once for credit. Prerequisite(s): GERM 300 or instructor's consent.

GREK - Greek

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

GREK 325. Classical Mythology (3).
Cross-listed as HIST 352 and LATN 325. Studies the most important myths of the Greeks and Romans. Includes the stories of creation, the gods and goddesses, the major heroes and important sagas such as Achilles, Odysseus and the Trojan War. Sources are mainly literary,

e.g., Homer, Hesiod, Virgil and Ovid, but the course also includes Greek art. All readings in English; requires no previous knowledge of Latin or Greek.

HA - Health Administration

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

HA 518. Rural Health Care Leadership (3).
Designed for the health management or administration student seeking a leadership role in the rural healthcare setting. Focuses upon the key issues and challenges related to healthcare leadership in the rural environment. Covers certain rural related issues including but not limited to recruitment, competency, stakeholder relationships, quality concerns, financial stability, rural partnerships and collaborations, and aging plant/equipment. The student connects with a current rural healthcare executive and through this contact, develops a better understanding of the variation and additional skills needed in healthcare leadership in the rural setting.

HA 621. Supervisory Management in Health Care Organizations (3).
Cross-listed as PHS 621. Studies supervisory management concepts and techniques that apply to health care organizations and programs. Emphasizes understanding the health care environment and its various health care settings, identifying issues facing front-line employees, supervisors and mid-level managers, and the development of administrative and leadership skills necessary to successfully lead health care work teams. Identifies, analyzes and solves problems that clinical department heads, supervisors and other health-related mid-management personnel encounter in their work. The principles of effective management techniques — planning, decision making, organizing, budgeting, time management, leadership, direction, delegation, communication, motivation, discipline, performance appraisal, managing change, teamwork, effective meetings, working with unions, quality improvement and career development — are covered.

HA 622. Human Resource Management in Health Care Organizations (3).
Cross-listed as PHS 622. Intended for clinical health care professionals who will assume responsibility for managing people in health services organizations. Introduces the essential theories, components and issues of human resources management in the health care field. Includes, among many other topics, the study of the effectiveness of the human resources management function, employee recruitment, selection, training, performance appraisal, benefits and compensation, employee relations and other relevant legal requirements affecting employment in the health care sector. Covers issues of contemporary relevance for human health services resource departments such as employee health and safety, employee assistance programs, occupational stress and job burnout, use of the Internet in the workplace, violence in the workplace, and work/family issues. Students are required to learn and demonstrate the ability to analyze human resources problems and to find and present sound solutions. Students are expected to learn and demonstrate effective group working skills as they join small groups and engage in collaboratively solving a number of human resources management problems.

HA 648. Concepts of Quality in Health Care (3).
Cross-listed as PHS 648. Addresses quality management in health services organizations, with a focus on a systematic approach to meet the Institute of Medicine's aim to provide care that is safe, effective, patient-centered, timely, efficient and equitable. The history and current status of quality management initiatives, as well as the role of quality in organizational strategic management are presented. Students learn the role of quality from theory to application in a broad base of organizational settings.

HIST - History

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

HIST 100. The Human Adventure: World Civilization Since 1500 (3).
General education humanities course. Introductory history of the human experience during the past five centuries, with attention to the major social, cultural, economic and political traditions of Asia, Africa and the Americas as well as Europe. *Course includes diversity content*.

HIST 101. World Civilization to 1500 (3).
General education humanities course. Introduces great world civilizations before 1500, both Western (Near East, Greece, Rome, Medieval and Renaissance Europe) and non-Western (China, Japan, India, sub-Saharan Africa and the Americas). Readings help define civilization, stress the individual contributions of each culture to world civilization, and examine the interactions and influences between cultures. *Course includes diversity content*.

HIST 102. History of Western Civilization Since 1648 (3).
General education humanities course. Introductory survey of the political, social, cultural and economic developments in Europe from 1648 until the present day that have shaped our world. Covers the development of constitutional democracies, the rise of totalitarian dictatorships, the emergence of mass society and the middle class, and revolutionary developments in politics and technology.

HIST 104. Topics in World History (3).
Familiarizes students with creative and/or nontraditional ways of examining world history. Possible topics include how contemporary society uses world history in film, the evolution of social issues through first-person accounts from a variety of cultures across the globe, or other topics and approaches.

HIST 131. History of the United States: Colonial to 1865 (3).
General education humanities course. Begins with the native peoples who occupied this continent and continues through the Civil War. Explores the origins and development of the United States, including the influence of the Puritans, the struggle for independence, the quest of the 19th century hippies to find utopia, and the challenge to abolish slavery. Examines the formation of our institutions, major political and economic issues, and the expansion of the country's boundaries.

HIST 132. History of the United States Since 1865 (3).
General education humanities course. Examines the rapid change characterizing the period of U.S. history from the Civil War to the present. Studies the growth of big business, reform movements, and the emergence of the U.S. as a world power. Explores how political, social and economic factors, as well as WWI, WWII, Korea and Vietnam continue to affect Americans and present a challenge to democracy within a growing diverse population that tests traditional institutions.

HIST 150. Workshops in History (3).
Workshop on a variety of history topics. Different topics have different letters added to the course number.

HIST 150AA. Leadership and the Local Community (3).
This course invites current and future community leaders, as well as other members of the general public, to engage the study of local history as a gateway to learn the skills of local civic and community. Using the framework of the Kansas Leadership Center’s training framework, participants will learn the skills and techniques of doing

local and community history and will apply the lessons that "nearby history" can review to address pressing issues and concerns.

HIST 150AB. Wichita Neighborhoods (0.5).
The story of Wichita through an exploration of its various neighborhoods. As the city grew and changed, new parts of the city developed. As shifts in population, economics, transportation patterns, and cultural values took place, once prominent and upscale parts of town gained new residents and businesses. Students learn to read a city and the lessons it can teach.

HIST 150AC. The Literature of Kansas (0.5).
Go anywhere in Kansas and there's an author with a book. We will examine some of the writers who during the past 157 years have shaped how we feel about Kansas and how others see us. From Laura Ingalls Wilder's "Little House On the Prairie" and L. Frank Baum's "Wizard of Oz" to Langston Hughes poetry, and Truman Capote's portrayal of Kansas in his book "In Cold Blood," we will look at the descriptions of Kansas, its culture and its residents and see, if as Kansans, we agree with how we have been portrayed throughout the literary world.

HIST 150AD. Leadtype, Bullets and Brazen Nerve, Part II (0.5).
An exploration of Kansas Journalism. Students learn how to tell what's real and what's fake news, how journalism has changed through the years, and what role they play in feeding the news – and what they can do to change it.

HIST 150AE. Kansas Railroads - Impact of the Iron Horse on the Sunflower State (0.5).
In 1867, the Union Pacific Railroad, Eastern Division - renamed the Kansas Pacific - built the first railroad across Kansas, running east and west. A few years later, the Atchison, Topeka and Santa Fe built its railroad across the state. Join us as we discuss how the railroad made and broke towns, provided transportation that helped the state grow agriculturally, put pressure on the federal government to push American Indian tribes from Kansas and fueled the cattle industry in the state.

HIST 150AF. World War I and Kansas' Involvement through Aviation, Oil and Manpower (0.5).
During the U.S. involvement in World War I, Kansas men, Kansas oil and Kansas planes contributed greatly to the cause. 5200 Kansan's including Salina native George Robb, who was awarded the Congressional Medal of Honor and Wichitan Lt. Erwin Bleckley, who was awarded the Medal posthumously bravely served our country with honor. We'll look at what price was paid and what the impact of the war was in Kansas.

HIST 150AG. America's Unending Struggle with the Meaning of the Civil War (0.5).
Examines the origins, conduct, and ongoing controversies of the American Civil War. Though the war ended in 1865, its ramifications continue to impact American society through today. We will explore the reasons for the outbreak of the conflict, discuss how various Americans participated in it, and assess the war's impact on America in the nineteenth century, the twentieth century and beyond.

HIST 150AI. Wichita Neighborhoods: The North End (0.5).
Presents the story of Wichita through the lens of one area: the North End. Taking a "deep dive" into the complex and dynamic part of the city, we will show how early developments in the 1870s and 1880s resulted in an upscale part of the city. Then, industry and transportation links reshaped developments even further to the north. Meanwhile, immigration has reshaped the area with different groups and even different generations putting their own unique stamp on the place.

HIST 150AJ. The Flora and Fauna of Kansas (0.5).
We have warblers and vireos, pelicans and seagulls, turkeys and deer, blue-winged teal, upland sandpipers, sandhill and whooping cranes, bats, swift fox, coyotes, badgers and prairie dogs — and most recently even the occasional mountain lion. Kansas is rich in diversity of its wildlife partly because of its location in the middle of the country. Shorebirds fly through the state as they migrate north or south. Species indigenous to the eastern and western United States may wander into the state. This class is exactly what it promises — we will explore the flora and fauna of Kansas.

HIST 150AK. Bread and Roses: Kansas's Quest for Women's Rights (0.5).
The cries for equality began on the Kansas prairies in 1854 and rippled throughout the nation. Kansas became the keystone state for human rights when abolitionists and slavery proponents wrestled over how Kansas would enter the Union. As Kansans we constantly define who we are — by color, gender, religion, social class and politics. In past decades, we have led the nation in the struggles for women's rights, prohibition and the rise of the Populist movement. What's happening now?.

HIST 150AM. McConnell Through the Ages (3).
McConnell Air Force Base was started through humble beginnings in the form of a city airport. Today, it has developed into a Supertanker Wing in the United States Air Force, the largest air refueling base in the world. This course will explore McConnell's origins, military operations, impact on Wichita, the KC-135's legacy and what the future may hold for the base including the new KC-46 tanker platform.

HIST 150AN. Wichita State University History (0.5).
As Wichita State University prepares to celebrate its 125th anniversary, discourse provides a chance to learn the story of the institution from its origins as Fairmount College through today's Innovation Campus. In this team taught course, students learn the story of Shocker nation and are introduced to the resources at WSU Special Collections that help preserve this narrative.

HIST 150AO. The Artists of Kansas and the Visual Images That Shaped Our State (0.5).
Explores several Kansas artists and what made them stand out. Looks at the culture that produced them – Blackbear Bosin and the Keeper of the Plains, the discrimination that Gordon Parks endured growing up in Fort Scott; the humor expressed in Henry Worrall's "Droughty Kansas." Also explores why Kansas places third in the nation in terms of numbers of grassroots artists such as M.T. Liggett.

HIST 150AP. Life Along the Santa Fe Trail (0.5).
Studies the historic Santa Fe Trail which connected the settled territory of Missouri to the settled territory of New Mexico and the gold fields of California. Emphasizes some of the deadliest portions which ran through the heart of Kansas, and explores many of the 150 historic sites that dot the 900-mile trail.

HIST 150AQ. Dirt, Grit and Jello Salad (0.5).
Studies Kansas agricultural life in the context of the Great Depression, a defining moment in American history. Considers the effects of drought and falling commodity prices in the lives of small-town Kansans.

HIST 150AR. Twilight of the Buffalo: The Extermination of the Kansas Herd, 1868-1874 (0.5).
This short course provides an introductory overview of the American Bison, the buffalo hunters and the bison hide business in Kansas in the mid-19th century. The course is based primarily on the experiences of Henry Raymond who after coming to the Wichita area in late 1872 hunted buffalo with the Masterson brothers in south-central Kansas during the summer of 1873.

HIST 150AS. Legends of the Old West (0.5).
This course examines how the evolution of the West began from Kansas, although it seldom draws the recognition of other states. It

studies not only the famous Chisholm Trail, but also the Shawnee, the Western and Goodnight-Loving trails. Students learn how the Old West began in Kansas, including the evolution of legendary characters – lawmen such as Wyatt Earp and Bat Masterson, scoundrels like Rowdy Joe Lowe, and women like Squirrel Tooth Annie. This course shows how Kansas gave the Old West everything iconic that westerners hold dear: the boot, the hat, the cowgirl, the Marlboro Man, Matt Dillon, Wyatt Earp, Bat Masterson, Buffalo Bill and even Billy the Kid.

HIST 150AT. From Prohibition to Populism: How Kansas Made a Name for Itself (0.5).
This course explores Kansas from the Prohibition to Populism. It starts with discussing how Kansas was the first state to pass a constitutional amendment, forbidding the sale and production of intoxicating liquors. Students explore how Kansas had prohibition from 1881 to 1948 – longer than any other state – and continued to prohibit liquor by the drink in bars and restaurants until 1986. However, students learn that that did not mean Kansas was dry. The course explains how many Kansans bootlegged and manufactured their own liquor. Others found it by frequenting speakeasies. Still more obtained medicinal help for various ailments. The course describes how local drugstores in the late 19th and early 20th centuries did a booming business as no prescriptions were needed. On the other side of the issue, the course discusses how mothers and grandmothers were joining the Women's Christian Temperance Union. Finally, students learn how the Populism movement started in Kansas and swept the nation with a 'can do' spirit.

HIST 150AU. "She Weren't No Fainting Lily Nor Battle-Axe": The Stories of Kansas Pioneer Women (0.5).
This course explores the stories of how women throughout Kansas' territorial period and state history overcame the odds of surviving on the Kansas prairie. The course discusses the stories of prairie women who survived border wars, hot winds, torrential rains and blizzards, cowboys and outlaws, and grasshoppers and coyotes. Students are also encouraged to share their own family stories of pioneer women. Finally, the course describes how many women learned that if they pushed too hard, they might be called a 'battle-axe' and put in categories like Carry A. Nation or Mary Elizabeth Lease. Students also learn how other women discovered they were not 'fainting lilies' as they buried husbands and raised children while paying bankers the mortgages due on farms.

HIST 150E. Workshop in Family History (0.5).
This course introduces students to the basic tools associated with genealogy. Emphasis will be on a variety of online resources available to help a student with their research including vital, census, military, religious and immigration and naturalization records as well as newspapers. This course will emphasize using the computer, internet and storing your family tree using a free internet site, FamilySearch.

HIST 150G. Wichita Looks at Rock & Roll (0.5).
This course explores the history of Rock Music from the perspective of the music scene here in Wichita. From the 1950s through the 1980s, Wichita supported a lively music scene filled with bands, clubs, music contests, and events. While some bands wrote their own music, most did not, playing instead what was popular at the time. This makes Wichita an ideal case to explore just how major music trends reached the average listener in the head of North America. This team taught course will include Dr. Jeff Hayton, who will talk about the larger history and trends in rock music. Dr. Jay Price will follow up showing how these same themes showed up in the local music scene.

HIST 150U. Chisholm Trail (0.5).
Kansas is considered the crossroads for many of the historic trails of the Old West. In its heyday, from the late 1860's through the 1880s, the Chisholm Trail served as a cattle pipeline from Texas ranches to the stockyards and railroad hubs in Abilene, Newton, Wichita, and Caldwell. It was an economic lifeline for Kansas, helping to promote the railroad and making ranching more profitable. 2017 marks the 150th anniversary of the trail.

HIST 150V. Conflict on the High Plains (0.5).
In the Age of Manifest Destiny and westward expansion, settlers often collided with Native Americans who had already called this territory home for generations. The escalation of these collisions eventually led to the involvement of the United States Army, and what is known today as the Indian Wars. A series of conflicts on the High Plains will be closely investigated and diagnosed to see did History get these stories right? Has the information changed since then? What were the accounts of the parties involved? And, what is the current view/climate of the situation? This course will explore all of these questions and more.

HIST 150W. New Kansas - Trappers, Missionaries and Travelers - the story of Kansas before 1854 (0.5).
Long before Kansas became a state, it was a wide-open territory – unexplored by the Euro-Americans, untamed by Christian missionaries and home to native American tribes. Explorers, pioneers, politicians and soldiers came to the area lured by the opportunity to acquire land for farms and homes, business opportunities, and the desire to make a free state. These people endured many hardships including storms, drought, sickness, starvation and raids. In this class we will take an in-depth look at the settlement of Kansas and the colorful characters who called it home. We will also look at how the state's geography, native American tribes and the religious views of its inhabitants still impact our state today.

HIST 150X. Kansas' Sacred Places (0.5).
Early Native American tribes believed that some places were more sacred than others, where human beings and the supernatural mingled. Likewise, when pioneers first moved to Kansas in the 19th century, some of the first structures they built were places of worship. These temples, churches and cathedrals remain testaments to the faith and service of Kansas early settlers. Many were built with the blood, sweat and sacrifice of our ancestors. Join us as we learn about some of our state's most sacred and historical spaces.

HIST 150Y. Lead Type, Bullets and Brazen Nerve (0.5).
This class will explore the history of Kansas journalism through print, radio, TV and digital news. We will study famous Kansas journalists and photographers such as William Allen White, Moses Harman, Dr. John Brinkley, Paul Harvey, Pete Souza and W. Eugene Smith. We will also discuss how to determine what's real and what's fake news.

HIST 150Z. McConnell AFB: Past, Present, and Future Directions (0.5).
McConnell Air Force Base was started through humble beginnings in the form of a city airport. Today, it has developed into a Supertanker Wing in the United States Air Force, the largest air refueling base in the world. This course will explore McConnell's origins, military operations, the KC-135's legacy and what the future may hold for the base.

HIST 225. Your Family in History (3).
Cross-listed as HIST 500. Bridges the gap between history and genealogy through demonstrations of the kinds of research techniques available to those who are interested in creating a family history. Students demonstrate understanding of these techniques in a family history project.

HIST 300. Introduction to Historical Research and Writing (3).
Basic hands-on instruction in historical research methodology, writing and criticism. Students do individual research and write articles and book reviews, a lengthy research paper, and critiques of their colleagues' paper drafts. Goal is for students to be capable of

conducting historical research and presenting findings in a professional manner. Required of history majors.

HIST 302. American Popular Culture (3).
Examines American popular culture from the Civil War to the present. Explores how popular music, cinema, pulp magazine literature, comics, television and fashion have developed over time to reflect changes in society, its myths, and its values.

HIST 306. The U.S. Century: Decades of Change (3).
General education humanities course. Examination of the major social and political events of the turbulent 20th century. Beginning with the assassination of William McKinley, this course explores the U.S. participation in wars, the economic and social crises of the Great Depression, and the reform movements of the "American Century."

HIST 308. A History of Lost Civilizations (3).
General education humanities course. A comparative examination of lost civilizations of both the Old World and New World, including the Sumerians, Hittites, Minoans, Mycenaeans, Etruscans, Mohenjo-Daro, Khymers, Incas, Mayas and Aztecs.

HIST 310. Special Topics in History (1-3).
May be taken only twice for credit toward a history major.

HIST 310A. Internship in Public History (3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

HIST 310B. 20th Century European History (3).
This course will entail selected reading in the area of 20th century European history. It will include reading approximately a book each week, a 3-5 page review of each book, and periodic meetings with the professor to discuss the book and reviews.

HIST 312. Modern Latin America (3).
General education humanities course. Begins with the wars for independence, continues with the challenges to achieve nationhood, and concludes with an examination of major social, political and economic issues Latin-American nations faced in the 20th century. Roles of Bolivar, Santa Anna, Evita and Castro are key components. *Course includes diversity content*.

HIST 314. English History (3).
General education humanities course. English history from the beginning of the Stuart period to the present.

HIST 315. Modern German History (3).
Surveys German history from the end of the Napoleonic era in 1815 to the fall of the Berlin Wall in 1989.

HIST 317. The Holocaust (3).
General education humanities course. Investigates the conditions within European society which led to and ultimately culminated in the murder of approximately six million Jews. *Course includes diversity content*.

HIST 318. The Holocaust in Film (3).
Examines ways the Holocaust has been represented in film and uses the material to evaluate the problematic nature of historical representation in film.

HIST 320. Russian History Survey (3).
General education humanities course. A survey of Russian history from A.D. 862 to the present.

HIST 321. The Vietnam Conflict (3).
General education humanities course. Studies U.S. participation in Vietnam. Includes the French experience in Indochina, U.S. troop buildup, the Tet Offensive in 1968, and the anti-war movement at home. Examines political factors as well as military strategy, tactics and major battles.

HIST 324. Modern East Asian History (3).
A comparative survey of the modern era in the history of China and Japan from approximately 1800 to the present. Considers indigenous and external factors for the political, economic and social developments of these societies, as well as their current roles in international affairs.

HIST 325. Survey of Public History (3).
A survey of the various arenas where public history takes place; an introduction to the tools and techniques that historians use to present historical research in non-academic settings.

HIST 330. The Americans: Conflict and Consensus in the Development of American Society and Culture (3).
General education humanities course. A topical examination of selected historical phenomena and personages in the evolution of American democratic society as interpreted by historians and literati.

HIST 333. Ethnic America 20th Century (3).
General education humanities course. Cross-listed as ETHS 334. In-depth study of the ethnic experience in the 20th century. Major historical topics include identity formations, intergenerational conflict, class differentiation and social mobility, the politics of ethnicity, resistance and civil rights movements, the racialization of immigration laws, and transnationalism. *Course includes diversity content*.

HIST 340. World War II (3).
General education humanities course. Introduction to the background and causes of World War II, as well as the military, diplomatic, economic, psychological and scientific dimensions of the war. Considers the legacy of the war in light of the postwar world.

HIST 348. History of Baseball (3).
Explores the evolution of America's national pastime and examines the relationship between baseball and the development of American culture, society and character. Examines the development of the sport as a uniquely American game, its heroes and bums, champions and cheaters, fans and critics, labor and owners.

HIST 352. Classical Mythology (3).
Cross-listed as GREK 325 and LATN 325. Studies the most important myths of the Greeks and Romans. Includes the stories of creation, the gods and goddesses, the major heroes and important sagas such as Achilles, Odysseus and the Trojan War. Sources are mainly literary, e.g., Homer, Hesiod, Virgil and Ovid, but the course also includes Greek art. All readings in English; requires no previous knowledge of Latin or Greek.

HIST 357. Women in the Ancient World (3).
General education humanities course. Examines the myth and realities of women's lives in the traditional societies of ancient Greece and Rome. Explores how women's social and economic roles varied from culture to culture and how they changed over time from the age of primitive matriarchy to the Christian era. Investigates the influence of these cultures on our own.

HIST 359. Greek World (3).
General education humanities course. Surveys Greek history from the Minoans to Cleopatra. Examines the early relations between the Greeks and other ancient civilizations such as Assyria and Egypt, the birth and decline of democracy in Athens, the world empire of Alexander the Great, and the later influence of Greek culture on the Roman world. Also discusses trade, law and family life.

HIST 362. The Roman World (3).
General education humanities course. Surveys Roman history and culture from the Etruscans to Constantine the Great, the first Christian emperor. Examines the history, social structure and economy of Rome

and the Roman world to answer the questions: what made Rome great and what led to her eventual decline? Includes warfare, slavery and family life.

HIST 399AA. History and Rock'n'Roll (3).
Explores the relationship between music and history. Studying a wide variety of genres, students examine the development of popular music from its rise to prominence in the late 19th century to the present day. Moving across a range of historical and cultural contexts, this course introduces students to various popular music genres — blues, rock'n'roll, punk — as they explore relationships between the production and consumption of popular music and how these traditions work to express given societies and particular historical contexts.

HIST 399AC. World (Un)Civilizations (3).
Studies of history tend to focus on major civilizations and empires, but such an approach overlooks the contributions of peoples regarded as "barbarians" or "uncivilized" to the history of the world. This course seeks to rectify this omission, allowing students to consider a few historical cultural complexes that are often marginalized. This course will look particularly at the Celts, nomadic peoples of Central Asia, Polynesians, and Australian Aborigines, considering not only historical contexts but also their use in present-day salient cultural and political discourse. In addition, this course will require students to draw on the methods specific to the disciple of history.

HIST 399AE. 1960s in Europe (3).
Cross-listed as 599AE. The 1960s evoke considerable debate: were they a period of emancipation? Or were they an era of disorder? This course explores the politics, social movements and cultural phenomenon which emerged during the 1960s in both Eastern and Western Europe. We will pay particular attention to how contemporaries made sense of the changes they were experiencing, and how they strove to translate youthful energy and activism into sustained cultural change. Above all, this course seeks to examine what was the meaning of the 1960s and what were its consequences.

HIST 399AF. Vietnam Conflict in Film (3).
Cross-listed as HIST 599AF. A retrospective study of America's longest and most divisive war. The goal of the course is to compare and contrast Hollywood's version of the war, which may be highly romanticized and subjective, with what professional historians and documentaries have said. It is anticipated that the students' knowledge and understanding of the war will be enhanced, and their critical viewing skills sharpened. Students will view a series of film, documentary as well as feature films, that deal with the war. These films will provide an in-depth treatment of several selected topics. Each viewing will be preceded by a lecture providing background and will be followed by class discussion about the merits, accuracy, and interpretation provided in the feature film.

HIST 399X. Communism and the Cold War in Film (3).
This course will be an exploration of how the communist regimes of 20th century Europe have been represented on film. It will be a 300-level class with no prior expertise. The goal is for students to learn both about communist societies as well as using film to study history.

HIST 399Y. Weimar Germany on Film (3).
This course will introduce students to the history of Weimar Germany as it has been depicted on film. In this course, we will be concerned with the historical nature of the interwar era in Germany and its representation on the silver screen.

HIST 399Z. Nazism and the Third Reich (3).
Cross-listed as HIST 599AI. Introduces the history of Nazism in Germany during the 1930s and 1940s. Focuses on the political, social and cultural manifestations of Nazism, and the consequences for both German society and the wider world down to the present day.

HIST 481. Cooperative Education (1-3).
The cooperative program covers work done at museums or archival divisions of libraries. Cannot be included for a history major or minor. Prerequisite(s): departmental consent.

HIST 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

HIST 500. Your Family in History (3).
Cross-listed as HIST 225. Bridges the gap between history and genealogy through demonstrations of the kinds of research techniques available to those who are interested in creating a family history. Students demonstrate understanding of these techniques in a family history project.

HIST 501. American Colonies (3).
General education humanities course. Colonization of the New World emphasizing the British colonists and their development.

HIST 502. American Revolution and the Early Republic (3).
General education humanities course. Examination of selected phases of the Revolutionary, Confederation and Federal periods.

HIST 503. Age of Jefferson & Jackson (3).
General education humanities course. Examines the eras of Thomas Jefferson and Andrew Jackson; that is roughly the period from 1800 to 1850. During that time, the United States experienced tremendous territorial growth, cultural ferment and reform movements, engaged in two major international wars and a number of Indian conflicts, and moved toward the sectional showdown over slavery that culminated in a bloody civil war. Focuses on political, social and military history, as America expanded from the Mississippi River across the North American continent.

HIST 504. Civil War (3).
General education humanities course. Explores the origins and history of the bloodiest war this nation has ever fought. Students study antebellum America, focusing on the sectional differences between North and South, the institution of slavery, the abolitionist crusade, and the battlefields of the Civil War.

HIST 505. The United States, 1865 to 1920 (3).
General education humanities course. Examines the political, economic, social and cultural developments during the Gilded Age and Progressive Era. Students read articles, books, and primary documents to trace the experiences of the American nation and people as they transform from a growing nation into a global power with special focus on topics such as Reconstruction, political and economic corruption and reform, industrialization, the development and mechanization of the trans-Mississippi West; the rise of corporations, railroads, cities and the American State; and the challenges of African-Americans, immigrants and women. In the end, students should walk away from the course with a better, more in-depth understanding of the history of, and major historical debates concerning, the Gilded Age and Progressive Era in the United States.

HIST 507. United States 1900-1945 (3).
General education humanities course. Major topics explored include World War I, the Great Depression, and World War II. While this period in U.S. history is noteworthy for conflict, consensus in the form of Progressivism, the New Deal, and the emergence of the modern presidency also characterize these decades. Examines political

leadership as a major component of the course. Emphasizes "history from the bottom up" as the lives of ordinary Americans are examined.

HIST 508. United States Since 1945 (3).
General education humanities course. In this time period, the United States emerged as a world leader. Although the Cold War became a defining force both at home and abroad, "hot" wars in Korea and Vietnam also produced social, economic and political repercussions in the United Sates. Course explores major issues and events of the period with a focus on international relations, the Civil Rights Movement, and the growth of the imperial presidency.

HIST 509. The African-American Historical Experience (3).
Cross-listed as ETHS 381AD. Provides a panoramic examination of the African-American experience. Chronologically, it covers life in Africa before the trans-Atlantic slave trade to the present day. It focuses on the social, political and economic development of the transplanted Africans in the United States. *Course includes diversity content*. Prerequisite(s): junior, senior or graduate status.

HIST 510. 20th Century African American History (3).
Cross-listed as ETHS 381E. The 20th century witnessed a dramatic transformation of the African-American community. As the century began, the vast majority of African-Americans lived in the rural South. At century's end, the vast majority of African-Americans lived in urban areas across the U.S. Besides the demographic relocation of black America, the 20th century also witnessed the Black Freedom Movement (comprised of the Civil Rights and Black Power movements), which dramatically changed the social, economic and political status of blacks. Course examines these and other aspects of the African-American experience during the pivotal 20th century. *Course includes diversity content*.

HIST 511. Women in Early America, 1600-1830 (3).
General education humanities course. Cross-listed as WOMS 511. Focuses on women and gender in U.S. history between 1600 and 1830 by examining the lives, experiences, and interactions with social, political and economic systems of women. Students read articles, books and primary documents that examine women's experiences from the first colonial contact with Native Americans to the dawn of the first women's movement in the 19th century. Focuses specifically on colonization, regionalism, the roles of race and ethnicity in the construction of gender, women in religious life, the impact of the American Revolution, Republican Motherhood, and women's contributions to the public sphere and market economy. In the end, students should walk away with an understanding of women in early U.S. history and of the major historical debates concerning women's and gender history. *Course includes diversity content.*

HIST 512. Women and Reform in America, 1830-Present (3).
General education humanities course. Focuses on women, gender and reform in U.S. history from 1830 to 2000 by examining the lives, experiences, and interactions with social, political and economic systems of women. Students read articles, books and primary documents that examine women's experiences from the emergence of a domestic economy in the 1830s to 21st century popular culture with specific focus on topics such as the Cult of True Womanhood, slavery, Civil War and Reconstruction, Progressivism, suffrage, WWII, postwar feminism, and popular culture. In the end, students should walk away with an understanding of women in early U.S. history and of the major historical debates concerning women's and gender history. *Course includes diversity content.*

HIST 513. History of United States and the Modern Middle East (3).
General education humanities course. Introduces U.S. relations with the Middle East from the early 20th century to the present. Discusses the fraught redrawing of the map of the Middle East after the collapse of the Ottoman Empire and considers the role of the U.S. in the region, especially focusing on American missionary and business interests in the region before World War II, including the founding of ARAMCO. Examines events in the latter half of the 20th century, including U.S. competition with the Soviets for regional clients and U.S. engagement with regional revolutionary nationalist movements such as those in Israel-Palestine, Iran, Iraq and Libya. Students discuss oil politics, peace processes, approaches to refugees and human rights issues, the rise of Al-Qaeda, attacks of September 11th, and the wars in Afghanistan and Iraq that have become the longest wars in U.S. history. *Course includes diversity content*.

HIST 514. History of the Modern Middle East (3).
General education humanities course. Examines the emergence of the Modern Middle East from the Ottoman Era to the present. Begins by examining 19th century institutions and considering Middle Eastern political innovations during the late 19th century, especially those rooted in the emergence of nationalism and transforming expectations for the relationship between governments and the people. Focuses upon these two transformations, tracing them through the 20th century, and examines the impact of colonization, World War I, Palestinian and Israeli nationalism, secular ideologies like Arab nationalism and socialism, Nasserism, Islamism and political revolutions in the region. Course features a wide array of source material beyond the texts including articles, literature, film, music and digital archives. *Course includes diversity content*.

HIST 515. Economic History of the United States (3).
Cross-listed as ECON 627. Analysis of the basic factors in economic growth. Explores agriculture, trade and commerce, industrial development and the changing role of the government in economic activity. Prerequisite(s): ECON 201 and junior standing.

HIST 517. Constitutional History of the United States (3).
General education humanities course. The evolution of the American constitutional system from English and Colonial origins through the Civil War.

HIST 517H. Constitutional History of the United States Honors (3).
General education humanities course. The evolution of the American constitutional system from English and Colonial origins through the Civil War.

HIST 518. Constitutional History of the United States (3).
General education humanities course. American constitutional development from Reconstruction to the present.

HIST 518H. Constitutional History of the United States Honors (3).
General education humanities course. American constitutional development from Reconstruction to the present.

HIST 521. Diplomatic History of the United States to 1914 (3).
General education humanities course. Beginning with the Colonial era, this course examines the diplomatic history of the United States to the brink of American participation in the First World War. Focuses on the movement toward independence, territorial expansion across the continent, the Civil War and the emergence of America as a world power.

HIST 522. United States Foreign Relations Since 1898 (3).
General education humanities course. Examines U.S. foreign relations from the wars of 1898 through the Forever Wars of the early 21st century. Examines topics including war in the Philippines, colonialism, World Wars, technology and warfare, the Cold War, humanitarian intervention, U.S. involvement in civil conflicts, oil politics, and

drone warfare. Students consider how ideas about race, religion and modernization influenced the rise and exercise of U.S. power abroad. Throughout, the course contextualizes U.S. foreign relations within and their global context. *Course includes diversity content*.

HIST 525. American Military History (3).
General education humanities course. Surveys the American military heritage and its role in shaping the modern United States. Studies the history of warfare from frontier conflicts during the Colonial period through Desert Storm, focusing on the most significant wars and battles, and the evolution of military institutions and their impact on American social, economic and political traditions.

HIST 526. The Civil Rights/Black Freedom Movement (3).
A detailed examination of the mid-to-late 20th century phenomenon known as the Black Freedom Movement, which consisted of the (passive-resistance) Civil Rights Movement and the (more aggressive) Black Power Movement.

HIST 527. African-American Business History (3).
Cross-listed as ETHS 381G. Surveys the history of African-Americans as entrepreneurs and business people. Drawing from a commercial tradition dating back to pre-trans-Atlantic Africa, business minded blacks overcame a variety of obstacles (such as slavery and Jim Crow segregation) to establish a commercial presence in America. Besides chronicling these efforts, the course also examines why African-American business history has traditionally received minimal attention in both the realms of American business history and African-American history. *Course includes diversity content*.

HIST 528. History of Wichita (3).
General education humanities course. A history of Wichita, Kansas, 1865-present, emphasizing the lessons of local history for future planning and its importance to an individual citizen's sense of place.

HIST 530. The American Woman in History (3).
General education humanities course. Cross-listed as WOMS 530. Examines the history, status and changing role of women in American society. *Course includes diversity content*.

HIST 531. American Environmental History (3).
General education humanities course. Examines the historical, physical, economic, scientific, technological and industrial interactions of the peoples of America with their environment. Emphasizes the period 1800-present. *Course includes diversity content*.

HIST 532. Women in Ethnic America (3).
Cross-listed as WOMS 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender and sexuality in women's lives. *Course includes diversity content*.

HIST 533. The American City: from Village to Metropolis (3).
A study of urbanization and urban life from Colonial times to the present-changing lifestyles and thought patterns, urban architecture, ethnic assimilation, emergence of the suburb, political and ecological adjustments, and the influence of new technology and forms of business organization.

HIST 535. History of Kansas (3).
General education humanities course. History of the Kansas region from Spanish exploration to the present, emphasizing the period after 1854.

HIST 536. Survey of American Indian History (3).
General education humanities course. Surveys the history of Native American nations from prehistoric times to the present. Includes the process of European colonization and indigenous responses, the strategies of accommodation, assimilation and resistance, and the resurgence of tribalism in the 20th century. *Course includes diversity content*.

HIST 538. The American West in the 20th Century (3).
General education humanities course. Explores the growth of the trans-Mississippi West in the 20th century, emphasizing political development, economic growth, cultural manifestations, the role of minority groups, and the impact of science and technology.

HIST 541. Modern France (3).
General education humanities course. History of the major trends in French history from Napoleon to DeGaulle emphasizing French attempts to adjust politically, socially, economically and culturally to the changing conditions of modern industrial society.

HIST 542. Religion in America (3).
Cross-listed as REL 542. Surveys various religious traditions in American history from Colonial times to the present. Discusses how religions, groups, beliefs and issues have changed over time and how they interact with each other. Includes the different branches of Christianity and Judaism, the study of awakenings and revivals, the stories of prominent religious thinkers and leaders, immigrant religious traditions, the tensions between liberal and traditional religious forms, the prophetic and apocalyptic traditions in American, and the impact of Native American, Asian and African beliefs and practices on the religious landscape.

HIST 551. The U.S. Army Since the Vietnam War (3).
Cross-listed as MILS 351. Examines the history of the U.S. Army after the end of U.S. involvement in the Vietnam War. Examines how the U.S. Army was shaped by the Vietnam War and its aftermath, and how that Army responded to the loss of the United States' only near-peer competitor with the collapse of the Soviet Union and the end of the Cold War. Examines the competing strains of thought on the Army's future through the competing lenses of its 1990s low-intensity conflict military interventions and its struggle to modernize in an era of shrinking budgets. Concludes by examining how these events shaped the U.S. Army's performance in the ongoing wars in Afghanistan, Iraq and Syria.

HIST 553. History of Mexico (3).
General education humanities course. "Poor Mexico: So far from God, so close to the United States." Examines the influences of the Maya, the everyday life of the Aztecs, and the destruction wrought when the Spanish invaded the New World. Major figures and the roles they played in Mexican history such as Santa Anna, Benito Juarez and Pancho Villa emerge in this study. Course concludes with the impact of a 2000-mile border with the United States and a brief look at NAFTA.

HIST 559. Classical Athens (3).
General education humanities course. Focuses on Athens from the sixth to the fourth centuries, from the emergence of the Greek city state to the age of Demosthenes. Examines how Athens founded and maintained the earliest democracy and how individuals such as Socrates, Pericles, Plato and Aristotle fit into their society. Other topics may include warfare, the family, farming, commerce and the law.

HIST 560. The Hellenistic World and Rise of Rome (3).
General education humanities course. Begins with the conquests of Alexander the Great and provides an overview of the new Greek world which he left behind. Examines changes in Greek culture and society as a result of the spread of Hellenism to the older kingdoms of the New East and India. Includes the rise of the Roman Republic in the context of the Greek world in the first century B.C. with the defeat of Cleopatra, or the last queen of Egypt.

HIST 562. Roman Republic (3).
General education humanities course. Covers the period of early Roman history from the founding of the city to the first emperor Augustus. Includes coverage of wars and the Roman army, government, society and culture. Emphasizes the end of the republic during the dictatorship of Julius Caesar, the civil wars, and the role of the emperor Augustus.

HIST 563. Roman Empire (3).
General education humanities course. Focuses on social and cultural achievements of the Roman empire starting with the dissolution of the republic and the invention of the empire by Emperor Augustus in the first century B.C. Ends with the sack of Rome in the fifth century A.D. Emphasizes the spread of Roman law, government and culture to areas outside of Italy, including Roman Britain, Judea and Roman Egypt, the rise of Christianity, and the reasons for the decline of Rome.

HIST 566. Medieval History 500-1200 (3).
General education humanities course. The history of Europe from the fall of the Roman Empire through the Crusades, 500 to 1200.

HIST 567. Medieval History 1200-1500 (3).
General education humanities course. History of Europe, 1200 to 1500.

HIST 569. Medieval England (3).
An examination of the development of Medieval England from the Anglo-Saxon Invasions until the end of the 14th century. The Norman Conquest, the rule of the Angevins, the reign of Edward I, and the daily life of those peoples who became the English receive particular attention.

HIST 575. Italian Renaissance (3).
General education humanities course. Italian history from the 14th through the 16th centuries emphasizing cultural achievements.

HIST 576. The Reformations: From Heresies to Diversity (3).
General education humanities course. Cross-listed as REL 576. Studies the religious changes in the 16th century in political, social and intellectual contexts. Includes the Medieval and Renaissance background of the reformations and the major doctrinal issues that separated Catholic and Protestant groups. Explores how major figures and movements developed their theologies and political strategies from the 15th century through the Catholic Reformation and the Thirty Years' War. Additionally, explores what these reformations mean for us in the 21st century world of religious pluralism.

HIST 577. Medieval Women (3).
Deals with the lives and accomplishments of Christian women in Late Antiquity and the Middle Ages. *Course includes diversity content*.

HIST 579. Asian Women in Modern History (3).
Cross-listed as ETHS 579 and WOMS 579. Examines women's historical and contemporary experiences in Asian America and eight major countries in modern Asia. Covers topics on Asian women's activism in relation to nationalism and women's rights. Investigates Asian women's roles and statuses in the family and society and their educational attainment and contributions to the export-oriented industrialization of the Asia-Pacific region. Examines the intra-regional migration of female guest workers among various countries in Asia. Traces the ways in which the changes in immigration laws during the 20th century affect patterns of Asian women's migration to the United States. Introduces writing that integrates Asian women's lives and Asian American experiences into the discourses on ethnicity, national origin, class, gender and sexual orientation in the United States and the Asia-Pacific region. *Course includes diversity content*.

HIST 581. Europe 1789-1870 (3).
General education humanities course. A focused survey of European social, cultural and political history from 1789-1870. Among the topics covered are the Enlightenment, the French Revolution, industrialization, Romanticism, nationalism, liberalism, socialism, the revolutions of 1848, and the role of women in European society.

HIST 582. Europe 1871-1945 (3).
General education humanities course. A focused survey of European history between the years 1871-1945. Among the subjects covered are the phenomena of nation building and the imperial project, the rise and growth of European socialism, the emergence of a "mass society," the role of women and minorities, the origins and impact of World War I, inter-war politics and diplomacy, the Nazi Era, and World War II.

HIST 583. Europe 1945-Present (3).
A survey of European history, 1945-present.

HIST 588. History of Early Russia (3).
General education humanities course. Covers the social, political and cultural history of Kievan and Muscovite Russia.

HIST 589. History of Imperial Russia (3).
General education humanities course. A survey of the political, social and cultural history of Imperial Russia.

HIST 592. History of Soviet Union (3).
General education humanities course. A survey of Soviet history from the Bolshevik Revolution to the present.

HIST 593. Former Soviet Union (3).
General education humanities course. Examines contemporary life in the former USSR: historical background, Marxist/Leninist ideology, industrial and agricultural economies, roles played by women, national minorities and dissidents in Soviet society, the press, literature and art, health care, and prospects for the country's future.

HIST 599AE. 1960s in Europe (3).
Cross-listed as HIST 399AE. The 1960s evoke considerable debate: were they a period of emancipation? Or were they an era of disorder? This course explores the politics, social movements and cultural phenomenon which emerged during the 1960s in both Eastern and Western Europe. We will pay particular attention to how contemporaries made sense of the changes they were experiencing, and how they strove to translate youthful energy and activism into sustained cultural change. Above all, this course seeks to examine what was the meaning of the 1960s and what were its consequences.

HIST 599AF. Vietnam Conflict in Film (3).
Cross-listed as HIST 399AF. A retrospective study of America's longest and most divisive war. The goal of the course is to compare and contrast Hollywood's version of the war, which may be highly romanticized and subjective, with what professional historians and documentaries have said. It is anticipated that the students' knowledge and understanding of the war will be enhanced, and their critical viewing skills sharpened. Students will view a series of film, documentary as well as feature films, that deal with the war. These films will provide an in-depth treatment of several selected topics. Each viewing will be preceded by a lecture providing background and will be followed by class discussion about the merits, accuracy, and interpretation provided in the feature film.

HIST 599AG. American Law and Film (3).
American popular culture has demonstrated an enduring fascination with lawyers, the law and the legal system. Course focuses on the portrayal of attorneys and the legal system in films. Uses films as a lens through which to examine the American criminal and civil justice systems, lawyers and legal education, and social and civil rights, while considering how film helps shape public perception of lawyers, creates viewer expectations regarding law and justice, and may influence the conduct of practicing attorneys and judges.

HIST 599AI. Nazism and the Third Reich (3).
Cross-listed as HIST 399Z. Introduces the history of Nazism in Germany during the 1930s and 1940s. Focuses on the political, social and cultural manifestations of Nazism, and the consequences for both German society and the wider world down to the present day.

HIST 599W. Law in American History (3).
Examines the role that law plays in American society from the early Colonial settlements through the 20th century. Examines the connection between law and society in four parts: crime and punishment in early America; property, economy and American identity; the 15th Amendment and questions of female citizenship; and the origins of the Civil Rights movement. By looking at laws and court cases in the larger context of American social history, students gain a fuller understanding of the impact and influence that law has on the development of American society.

HIST 599WH. Law in American History Honors (3).
Examines the role that law plays in American society from the early Colonial settlements through the 20th century. Examines the connection between law and society in four parts: crime and punishment in early America; property, economy and American identity; the 15th Amendment and questions of female citizenship; and the origins of the Civil Rights movement. By looking at laws and court cases in the larger context of American social history, students gain a fuller understanding of the impact and influence that law has on the development of American society.

HIST 698. Historiography (3).
Required of undergraduate history majors. This capstone course engages students in a systematic analysis of major historians and schools of historical thought. Class assignments and discussions encourage students to examine their own ideas about history as an academic discipline. Prerequisite(s): 12 upper-division hours in history or instructor's consent.

HIST 701. Introduction to Local and Community History (3).
Introduces the study of local history and community history. Discusses the various venues through which local and community history takes place including historic preservation, archival administration, museum studies, documentary work, and writing for a variety of audiences. Students learn relevant practices as well as issues that face those who study local topics and/or specific communities. Prerequisite(s): graduate standing or instructor's consent.

HIST 702. Historic Preservation (3).
Advanced survey of the multifaceted, multidisciplinary field of historic preservation. Presents a broad and sophisticated view of the many arms of preservation in the U.S., as well as the numerous opportunities available to trained professionals in the field. Prerequisite(s): HIST 701 or instructor's consent.

HIST 703. Museum Administration (3).
Addresses the many facets of museum administration from a specialist's point of view. Covers collecting, management, law and ethics, and resource development. Gives a close view of the operations of American museums. Prerequisite(s): HIST 701 or instructor's consent.

HIST 704. Interpreting History to the Public: Explaining the Past (3).
Looks at ways history can be communicated to audiences, including scholarly texts, popular written histories, movies, videos, guidebooks, museums, and other similar media. Explores the differences between various forms of historical communication and assesses the ways they reach audiences. Students learn to discern various components of historical texts to use in the design of interpretation materials on their own. Prerequisite(s): HIST 701 or instructor's consent.

HIST 705. Introduction To Archives (3).
Introduces the basic knowledge, theory and related skills of archival administration, including the nature of information, records and historical documentation; the role of archives in modern society, and issues and relationships that affect archival functions. Covers the theory and skills necessary to understand and apply basic archival functions. Prerequisite(s): graduate standing and/or instructor's consent.

HIST 725. Advanced Historical Methods (3).
Reviews basic historical research methods, the general character of field bibliographies and recent interpretations, and the techniques of professional narrative development. Required of graduate degree students during their first year of enrollment. Fulfills the university's professional and scholarly integrity training requirement covering research misconduct, publication practices and responsible authorship, conflict of interest and commitment, ethical issues in data acquisition, management, sharing and ownership. Prerequisite(s): departmental consent.

HIST 727. Readings In History (1-3).
Readings in ancient, medieval, modern, European and American field bibliographies. Repeatable for credit. Prerequisite(s): departmental consent.

HIST 730. Seminar American History (3).
Repeatable for credit. Prerequisite(s): departmental consent.

HIST 733. Seminar European History (3).
Repeatable for credit. Prerequisite(s): departmental consent.

HIST 750. Workshop in History (2-3).
Repeatable for credit but does not satisfy requirements for history majors.

HIST 781. Cooperative Education (1-2).
Graduate history students participate in internship experiences through the cooperative education program. May substitute for HIST 803. A maximum of 4 credit hours of any combination of HIST 803 and HIST 781 may count toward degree requirements with permission from the program area. Prerequisite(s): instructor's consent.

HLS - Homeland Security

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

HLS 190. Introduction to Homeland Security (3).
Introduces the principles and practices associated with homeland security, development, structure and roles of the homeland security system in America including missions and functions, operational processes, risk analysis, and defense and response actions. The federal system and the roles of state, local, territorial and tribal governments are considered as is the role of the private sector in the system.

HLS 310. Emergency Management (3).
Surveys emergency planning and response to large scale disasters, threats and major incidents in the United States. Risks, threats and response by level of government from local, state and national are examined. Examines best practices used in emergency management.

HLS 312. Risk Assessment (3).
Introduces students to the basic methods of risk and vulnerability assessment. Critiques critical infrastructure protection and attack prevention techniques. Introduces gathering and assessing intelligence relating to risk and vulnerability.

HLS 320. Border Security (3).
Examines the substantial vulnerability of the nation’s land borders, ports, inland waterways and airports, including aviation-related attacks. Issues and challenges impacting border security at the local, state

and federal levels. Law, politics, policy and operational enforcement strategies are critiqued from varying levels of law enforcement. Students are acquainted with methods to identify, prevent, respond to and recover from major catastrophes at the nation's borders and ports.

HLS 330. Legal Issues in Homeland Security (3).
Overview of the relationship between the needs of homeland security, and the traditional concepts of civil liberties within the U.S. legal system. Covers legal issues in the constitutional amendments including First, Fourth, Fifth, Eighth and 14th amendments. Emphasizes the role of law, the government's demand for more power, and civil liberties.

HLS 401. Cyber Security (3).
Covers concepts related to cyber-attack, penetration testing, cyber intelligence, reverse engineering and cryptanalysis. Students learn how security infrastructure integrates with the rest of the business and IT infrastructure, through the use of hands-on projects.

HLS 403. Physical Security (3).
Examines the premises and concepts of emergency design and application principles. Physical security surveys, integrated physical security technology systems, barriers, risk identification and mitigation are examined.

HLS 405. Intelligence Process (3).
Acquaints students with the intelligence process related to homeland security. Intelligence strategies used in homeland security and law enforcement are introduced. The collection, analysis, sharing and dissemination of information within and between local, state and federal authorities is examined.

HLS 420. Terrorism (3).
Cross-listed as CJ 581W. Introduces students to the phenomena of contemporary terrorism and extremism. Emphasizes extremism as a foundation for terrorist behavior, types of terrorism, and how governments and law enforcement agencies respond to terrorism. Particular emphasis is on domestic and home-grown terrorism. Introduces theoretical approaches to the study of terrorism. Weaves a thread of extremist literature and perspectives throughout the semester. Highlights the role of law enforcement and other public administrative agencies.

HLS 470. Special Topics (3).
An umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 470A, 470B, etc.) Students should enroll in the lettered courses with specific topics in the title rather than in this root course. In general these courses include detailed study of topics in homeland security with particular emphasis established according to the expertise of the various instructors.

HLS 470A. Immigration Policy & Politics (3).
Examines the history of legislation and policies enacted by the U.S. government to control the flow of legal and illegal immigration into the United States. Critiques the effectiveness of past and present immigration laws and policies in combating transnational crime and terrorism. Identifies issues and challenges of enforcing immigration laws from political, cultural and societal perspectives. Students will also explore possible future immigration reform measures and the political, economic, and national security impact of such actions.

HLS 470B. The History of U.S. Homeland Security (3).
Examines the history of the United States' response to internal foreign threats, from the founding of the republic to the present day. Students examine the cultural, religious, economic, and political factors influencing what Americans identified as threats, and how these factors influenced how they responded to them. Students also explore possible future threats and responses, based on the United States' history in dealing with internal foreign threats.

HNRS - Honors

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

HNRS 101. Introduction to the University (3).
Designed especially for first-year students, with the goal of preparing students to succeed in college, including graduating in a timely fashion. Provides students with information about: college expectations; academic major, career and life planning; study skills; teaching and learning styles; respecting diversity of thought and culture; critical thinking; leadership training; campus resources; university policies and procedures; personal finances; health and fitness; and the benefits of engagement in student organizations. Students are introduced to faculty and staff from across the campus, and create an individualized graduation plan through a process of developmental advising.

HNRS 104. Seminar I: Fine Arts (3-4).
General education fine arts course. Topics vary. Prerequisite(s): beginning honors student or permission of the Cohen Honors College.

HNRS 105. Seminar I: Humanities (3-4).
General education humanities course. Topics vary. Prerequisite(s): beginning honors student or permission of the Cohen Honors College.

HNRS 105G. War: Strategic Studies (3).
General education humanities course. Conflict and warfare are about as normal as anything in human affairs. Many find this shameful and disgusting and like to think of warfare as aberrant. Many of the same people who feel this way admire and respect soldiers, are stirred by military displays, and spend hours each week playing combat-based video games (or chess). This seminar is not about whether war is a good thing, a bad thing, or a necessary evil. It is about how it works. At the center of this theme lies the concept of strategy. Effective strategic thinking is one of the highest level forms of applied intelligence. It requires a synoptic grasp of many variables and is inherently interactive — great commanders know how to get inside the heads of their enemies. War is perhaps the most demanding field in which strategic thinking is employed, but not the only one. Almost all the great students of strategy approach it historically and so will we.

HNRS 106. Seminar I: Social and Behavioral Sciences (3-4).
General education social and behavioral sciences course. Topics vary. Prerequisite(s): Beginning honors student or permission of the Cohen Honors College.

HNRS 106AB. Parks, People and Place: Exploring Our National Parks (3).
General education social and behavioral sciences course. Introduces contemporary issues in our national park system through a service-learning/service-leadership orientation. Students learn about the variety of values, perspectives, resources and ideas that are represented in the multitude of units that comprise the national parks service. The role of the National Parks Service (NPS) with special attention to service, volunteer coordination and historic preservation. Also explores many of the issues facing the NPS such as conservation and human impact on environment, remaining relevant and inclusive to a diverse population, and how service-learning efforts have re-engaged college student interactions. *Course includes diversity content.* Prerequisite(s): beginning honors student or permission of the Cohen Honors College.

HNRS 107. Seminar I: Mathematics and Natural Sciences (1-5).
1-3 Classroom hours; 2-4 Lab hours.*General education math and natural sciences course*. Topics vary. Prerequisite(s): Beginning honors student or permission of the Cohen Honors College.

HNRS 150. Seminar II: Fine Arts (3-4).
General education fine arts course. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 151. Seminar II: Humanities (3-4).
General education humanities course. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 152. Seminar II: Social and Behavioral Sciences (3-4).
General education social and behavioral sciences course. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 152F. Leadership Challenge (3).
General education social and behavioral sciences course. Course takes the perspective of Astin and Astin (2000) that… "an important leadership development challenge for higher education is to empower students, by helping them develop those special talents and attitudes that will enable them to become effective social change agents." Course embraces adaptive challenges and creates conditions for students to exercise leadership in real time. Uses experiential methods so that the classroom serves as a learning laboratory for leadership development. In the end, this experience is about developing the capacity to serve as effective social change agents.

HNRS 153. Seminar II: Mathematics and Natural Sciences (3-5).
1-3 Classroom hours; 2-4 Lab hours.*General education math and natural sciences course*. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 153B. The Dynamic Universe (3).
General education math and natural sciences course. Designed to introduce students to the fascinating subject of astronomy. Focuses heavily on current space missions and astronomical events. Covers a variety of topics, including the solar system, the sun, the stars, stellar evolution (birth, life and death of stars), galaxies and cosmology (the origin and fate of the universe).

HNRS 153T. Big Bang, Black Holes, the Fate of the Universe (3).
General education math and natural sciences course. Nonmathematical introduction to the theory of the Big Bang. Examines the history of the universe from its beginning through the most recent spacecraft missions. Students learn concepts that tie many different subjects together, contributing a valuable piece to their comprehensive education.

HNRS 300. Introduction to the University for Transfer Students (1-2).
Designed especially for students who have recently transferred to WSU from another institution, with the goal of preparing students to succeed, including graduating in a timely fashion. Provides students with information about: expectations of WSU professors; academic major, career and life planning; study skills; teaching and learning styles; respecting diversity of thought and culture; critical thinking; leadership training; campus resources; university policies and procedures; personal finances; health and fitness; and the benefits of engagement in student organizations. Students are introduced to faculty and staff from across the campus, and create an individualized graduation plan through a process of developmental advising.

HNRS 304. Seminar III: Fine Arts (3-4).
General education fine arts course. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 304E. The Arts in Wichita (3).
General education fine arts course. Hybrid course (part of the course interaction is online) looks at the role of the arts (music, dance, art and theatre) in the Wichita community. Explores the role of the audience and patronage, the impact of the arts in the local community, arts management and marketing by meeting at various art events or venues in Wichita and meeting with local arts managers and artists in class. Because this is a hybrid course, part of it is delivered online. Students are expected to participate in discussion forums and online activities to earn full credit.

HNRS 304F. Discovering Creativity (3).
General education fine arts course. Based on the concept that all humans are creative beings who are involved in the creative process. Explores this concept through creative exercises inspired by the core text, Discovering the Creative Impulse by Harold Popp. Students review creative processes and products with an eye to the uniqueness of human needs, drives and activities. Diverse perspectives are integral to the creative endeavor not only in art and in science, but across disciplines, cultures, ages and experiences.

HNRS 305. Seminar III: Humanities (3-4).
General education humanities course. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 305F. Epidemics in World History (3).
General education humanities course. Focuses on the history of the impacts and human responses to a specific epidemic outbreak or outbreaks. Begins with an overview of epidemics and human response and focuses in depth on legionella and Legionnaires' disease. This examination situates current events into the history of the bacteria and traces the public health, scientific and popular responses to the infectious organism. Course is conducted seminar style with student discussion and participation forming a portion of the grade. Students are also graded on both a written project and an oral presentation of their research. If enrollment merits, the final research project may be a collaborative effort. Course objective is to get the students digging into the history of Legionnaires' disease and applying a critical eye to contemporary events and approaches to the disease.

HNRS 305G. Governing Women's Bodies in the 20th Century (3).
General education humanities course. Examines the legal, medical, and media-driven cultural attempts to govern women's bodies throughout the 20th century in the United States. Historically marginalized, American women often found the battle to secure greater legal rights; access to political, economic, and social power; and ability to make basic choices about their lives centered on a fight to control their bodies. Course covers such topics as property and wage rights, suffrage and legal access, medical authority and consent, as well as the television and movie images of the female ideal that attempt to govern women's bodies in the 20th century and shape the way contemporary Americans think about women today.

HNRS 305I. Science, Religion & Philosophy (3).
General education humanities course. Scientific inquiry and religious belief have a complicated, intertwined history. One influential view argues that religion partly inspired the rise of science and certainly the church often supported it. But some of the most dramatic and defining moments in modern history center on science-religion conflict, and many secularists and religious define the modern era as the age of anti-religion secularism. This seminar explores the relation of science and religion through case studies of some of the most dramatic conflicts and debates seemingly pitting them against one another. The primary case studies are the famous trial of Galileo by the Inquisition in the 1630s, and the reception of Darwin's theory of evolution in the later 19th century. Also examines cosmology and debates about the origins of the universe. In each case, students study the conflicting views in their own terms before considering how disputes between them can best be understood and perhaps resolved. Students do several mini-research projects to develop information on each topic. Students stage debates, mock trials, etc., to focus and sharpen the points of conflict. One outcome is guaranteed: what everyone thinks they "know" about

these famous conflicts and debates is, in fact, often false or badly distorted.

HNRS 305J. Minds and Machines (3).
General education humanities course. People have constructed machines designed to imitate living creatures in some way long before there were electronic computers. When is a machine's behavior appropriately called "intelligent?" Must it be capable of using a language? Must a machine be capable of learning in order to be regarded as intelligent? Must it be able to communicate with humans? What criteria are appropriate for judging that an animal's behavior is intelligent; should the same criteria be used for machine intelligence? What lessons about machine intelligence should be taken from debates over recent studies of intelligence in animals with nervous systems very different from humans (e.g., corvids, cephalopods)? Students consider these and other, related questions. Course takes a historical and interdisciplinary approach, drawing on works in philosophy, literature, science and history of science.

HNRS 305K. The Rise and Fall of Athens (3).
General education humanities course. Who were the men and women of Athens, what were they like and how did they see themselves? Students read Homer's Odyssey and parts of the Iliad (how they saw themselves), then track the Athenians as a developing sea power (the Rise), an empire, and then a city conquered by plague, constant war, politics, and the scarcity of wheat (the Fall). Students also try seeing Athens from other angles: Plutarch's Lives (of famous Greeks) for example, and Mary Renault's historical novels. Students investigate the Spartans, a contrasting culture and always a potential enemy of Athens. They read Brian Doerries's recent The Theater of War. He uses Greek plays (in readers' theater) to help returning veterans confront their memories. The Greeks, too, fought a very long war; their plays are full of it. Students read some of them, too, and then look at Barry Posen's Restraint (2015). He proposes for the U.S. military a grand strategy of sea power, the same strategy Perikles designed for Athens. Students finish the course with a brief look at Philip, then Alexander of Macedon, who subdued both Sparta and Athens, then united the Greeks in a years-long conquest of Persia that spread Hellenism as far as India. Great powers rise, then fall. What that entails is what this course is about.

HNRS 305M. Science Fiction and Human Destiny (3).
General education humanities course. Science fiction is chameleon-like. Although a well-defined niche in publishing, no standard definition captures its variety and scope. Even science can be an afterthought in mainstream works of science fiction. The audience for it tends to be male, but many of the most admired and successful writers in the field are women. Some classic science fiction fits narrow stereotypes ("scientists save the world," or "mad scientist threatens the world"), while other classics explode those same stereotypes. All of this, coupled with the genre's popularity, says something about where our imaginations live in the 21st century. Seminar examines a wide range of contemporary science fiction — novels, stories and films — with a view to both the methods and ideas that make science fiction what it is. Is science fiction prophetic, or more a mirror for our contemporary hopes and fears? Is it escapist literature, or a special kind of "realistic" fiction? Assignments include interpretative essays and a semester project: the creation of an invented world that could be a setting for science fiction stories.

HNRS 305P. Epics and Identities: The Emergence of European Nationhood (3).
General education humanities course. Studies early western European long poems to examine social justice, cultural patterns and world views. Epics are core expressions of national identities. Heroes, acting or reacting in difficult situations, model social behavior within a matrix of communal values. Tribes, bands, armies, towns and kingdoms demonstrate the hunger for justice guided by cultural goals and taboos. Each poem is finally an expression of nationhood, the common view of self and others acquired by dealing with adversity over time within a particular historical context.

HNRS 305Q. Dystopian Literature & the Modern Era (3).
General education humanities course. Examines some of the well-known, contemporary works of dystopian literature and explores the questions – "Are things really as bad as they seem?" and "What is the purpose of dystopian literature?" Both utopias and dystopias can be found as far back as ancient Greece. Critic Warren Wagar argues that the modern dystopian novel is preoccupied with "isolation, spiritual and emotional emptiness, alienation," and focuses more than mainstream novels do on "the alienating effects of science and technology." To test Wagar's ideas, students read works from modern English-language literature including: H.G. Wells' "The War of the Worlds," Aldous Huxley's "Brave New World," Anthony Burgess' "The Wanting Seed," Doris Lessing's "Memoirs of a Survivor," P.D. James' "The Children of Men," and Angela Carter's "The Infernal Desire Machines of Doctor Hoffman.".

HNRS 305R. Philosophy of Space Exploration (3).
General education humanities course. Explores a number of issues related to the philosophy, ethics and policy of space exploration. Begins with foundational questions: Are expenditures on spaceflight ethically justifiable? What varieties of missions should be prioritized? Moves to issues pertaining to environmentalism in space, using discussions of theories of natural value to address issues such as orbital debris, planetary protection and terraforming. Examines issues related to near-term space policy, including legal and ethical issues raised by commercial space development and by space resource exploitation (e.g., asteroid mining and lunar mining). Reading list and topics vary based on class interests.

HNRS 305S. American Law and Film (3).
General education humanities course. Focuses on the portrayal of the legal system in films. Students use film as a lens through which to examine the American criminal and civil justice systems, lawyers and legal education, and social and civil rights. Considers how film helps shape public perception of lawyers, creates viewer expectations regarding law and justice, and may even influence the conduct of practicing attorneys and judges.

HNRS 305T. The Invention of Latin America (3).
General education humanities course. Cross-listed as PHIL 590AC. Engages the writings of contemporary and 20th century Latin American thinkers emphasizing questions concerning the historical origins of Latin American identity. Focuses on the ways in which social-political oppression has shaped Latin American identity, and on the nature of philosophical reflection conducted from the 'margin' of the Western tradition. Course also emphasizes the social-political aspects of U.S. immigration policy, both its genesis and its impacts on Latin American communities. Examines more traditional philosophical topics concerning liberty, equality and security — and brings those topics to bear on current discussions of immigration and Latin American identity.

HNRS 305U. The Power of Storytelling (3).
General education humanities course. Seminar introduces students to the research in narrative and storytelling, familiarizes them with elements of effective narrative structure, and explores examples of narratives and their use to persuade through history. Students work throughout the semester to each complete a narrative account of their own life, developing story-telling techniques while also self-reflecting on key events that have been transformative. In addition, as

a class, students complete a literature review on the topic and share information.

HNRS 305V. Language and Community (3).
General education humanities course. This is an interdisciplinary course that addresses topics within the fields of linguistics, communication studies, anthropology, sociology, education, and public health. Topics include: Language, interaction, and identity in multilingual community contexts; the meaning and value of language within specific communities; how societal language ideologies are reflected in community language practices and institutional policies; health and educational disparities in minority language communities; language maintenance within minority language communities; creative and innovative ways in which individuals use language to transform communities. Through an applied learning assignments, students will consider what it means to be a scholar of language engaged in the community; gain practical experience through service to address community language needs; and engage in community-based research.

HNRS 305W. Women in Tech: Historical, Social and Philosophical Perspectives (3).
General education humanities course. Examines the rise of computing and information technology from the perspective of women in the profession, up through and including the present, and including intersection of racial and gender discrimination in the field. Course includes historical studies, effects of lack of diversity on quality of computing technology, including bias in algorithms and machine learning, and issue of gender and the culture of "tech." Papers and discussion will require students to formulate their own critique of readings. For a final research assignment, students will identify where issues of bias and discrimination might be playing a role via AI, Big Data, or computing technology, or in a computer-related STEM profession, and make suggestions as to what could be done to improve the situation, modeled on the successful programs examined in readings and reports.

HNRS 306. Seminar III: Social and Behavioral Sciences (3-4).
General education social and behavioral sciences course. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 306C. The Art of Criminal Investigation (3).
General education social and behavioral sciences course. Introduces students to the philosophical principles underlying criminal investigation, as opposed to the procedures. Students learn the basics about crime and investigation, but the emphasis is on applying the principles to daily life. Critical thinking is required to examine the difference between evidence and personal belief. Students are challenged to justify their beliefs when confronted with conflicting evidence. Instead of investigating a crime, students investigate social issues with the detective mentality.

HNRS 306D. Law and Public Policy (3).
General education social and behavioral sciences course. The required introductory course for the Honors Law and Public Policy track. Focuses on how law and politics shapes the lives of citizens. Subjects covered include criminal law, drug courts, race and incarceration, free speech, freedom of religion, and judicial politics. Students complete a collaborative research project with the instructor. While this course may be of interest to students interested in going to law school, it is designed for all Honors students who are interested in how people organize their political and social lives through the law.

HNRS 306E. Hunger in NYC: Service and Leadership Needed (3).
General education social and behavioral sciences course. Student Involvement's Alternative Spring Break program exposes WSU students to complex social and cultural issues through community visits and direct service. This experiential course uses an applied learning method of service-learning to explore food and shelter insecurities in New York City. Students travel to NYC during spring break to serve a variety of community-based organizations with the goal of fighting hunger and homelessness. Class explores social justice issues related to service through readings, discussion, writing, reorientation service in Wichita and research-based reflection.

HNRS 306F. Media Innovation, and Entrepreneurship (3).
General education social and behavioral sciences course. It is the early stage of an information revolution. In the course of an 18-year-old's lifetime, communications has become increasingly social, mobile, visual and global. This course is intended to expand students' knowledge about how digital communication and entrepreneurship have transformed society, business and lives. It is meant to inspire thinking about innovation, and what roles students may play in the future of communication. The course contributes to their media and business literacy. It may even launch them on a new path in their lives and careers. Uses reading, research, class discussion, guest speakers and blogs to broaden their understanding of what it all means to those in communication careers. Students complete a digital entrepreneurship project to conceptualize and present a website, blog, game or app they pitch to potential investors.

HNRS 306G. Alternative Break: Service Leadership (3).
General education social and behavioral sciences course. Student Involvement's Alternative Spring Break program exposes WSU students to complex social and cultural issues through community visits and direct service. This experiential course uses an applied learning method of service-learning to explore a social justice issue through multiple communities both local and in an immersive travel environment. Students travel during spring break to serve in a variety of community based organizations. Course explores social justice issues related to service through readings, discussion, writing, reorientation service in Wichita and research-based reflection. Open to all students by application to Student Involvement. Repeatable once for credit. Course may only be used to fulfil one honors curriculum requirement.

HNRS 306H. Aging as a Societal Issue: OK Boomer and Beyond (3).
General education social and behavioral sciences course. Presents demographic information about the transformation of the U.S. into an aging society, as well as current research about the aging process itself. Social policy implications are explored in areas such as healthcare, the workplace and technology. The course engages students from different generations in dialogue with dialogue topics chosen by the students and class sessions throughout the semester led by student teams. Prerequisite(s): honors student or permission of the Honors College.

HNRS 307. Seminar III: Mathematics and Natural Sciences (3-4).
1-3 Classroom hours; 2-4 Lab hours.*General education math and natural sciences course*. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 307C. Aviation and Spaceflight Physiology (3).
General education math and natural sciences course. An introduction to human physiology in aviation and spaceflight. The space environment and the earth's atmosphere. Basic principles of flight for fixed and rotary wing aircraft, rockets and parachuting. Effect of the flight environment on human physiology. Air and spaceflight crew operation and protective equipment. Prerequisite(s): MATH 112 or MATH 144 or MATH 242 or MATH 251.

HNRS 310. Honors Tutorial (1-2).
Repeatable for a total of 3 credit hours. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 310Q. Honors Tutorial - Engaging Leaders (1).
Offers students the unique opportunity to explore, discuss and analyze various professional fields directed by executive officials from different companies, corporations and industries throughout the Wichita area. Introduces participants to those leadership and transferable skills that rising leaders should possess and consider when choosing a career path. Provides for visits to various city facilities, exposure to different philosophies and styles of leadership, and gives participants a chance to assemble facts, evaluate options and become more comfortable with the transition from the classroom to the boardroom. Course can be used toward the undergraduate leadership certificate, which corresponds to the following leadership certificate outcomes: identify leadership theories and concepts; differentiate leadership practices across settings, organizations, disciplines and systems; develop leadership skills based on personal strengths and professional interests.

HNRS 310R. Honors Tutorial - Evolving Leaders (1).
Designed for returning students to WSU who are looking to expand upon their leadership skills and abilities. Program focuses on creating well balanced leaders. Each participant receives a copy of The Well-Balanced Leader by Ron Roberts and is placed in a small group to present a chapter from the book. Each participant also helps plan the Leadership Discovery Summit, a half-day leadership workshop open to any WSU student. Course can be used toward the undergraduate leadership certificate, which corresponds to the following leadership certificate outcomes: identify leadership theories and concepts; differentiate leadership practices across settings, organizations, disciplines and systems; develop leadership skills based on personal strengths and professional interests.

HNRS 310S. Honors Tutorial - Emerging Leaders (1).
Unique opportunity for WSU students to get on the fast-track to student leadership, campus, and community involvement. Participants have an opportunity to develop their leadership abilities through workshops, activities and reflection in order to prepare them for future leadership experience at WSU and beyond. Each participant is paired up with an upperclassman mentor. These mentors are trained by Student Involvement to develop leadership potential on a peer level. They operate as a campus and community resource for their mentees as well as being an observable example of the qualities, character and actions of a student leader. Course can be used toward the undergraduate leadership certificate, which corresponds to the following leadership certificate outcomes: identify leadership theories and concepts; differentiate leadership practices across settings, organizations, disciplines and systems; develop leadership skills based on personal strengths and professional interests.

HNRS 310T. Summer Leadership Institute (1).
A 5-day experience that allows each participant to evolve and expand upon leadership skills and abilities. Whether experienced or a novice leader, each individual is guided to develop and reflect upon where they currently are and where they would like to be as a leader. Participants are divided into leadership squads throughout the institute where they have the opportunity to discuss, analyze, and reflect upon the leadership lessons taught. Participants of SLI are guided to apply principles of leadership, develop self-awareness and teambuilding skills, and engage in critical thinking to address real-world leadership challenges.

HNRS 310V. LeaderShape Institute (1).
A six-day experience that challenges participants to lead with integrity and a healthy disregard for the impossible. Facilitates participants through a series of dynamic, challenging and exciting sessions designed to increase, develop and launch their leadership capacity. This experience benefits students individually and professionally, and benefits the communities/organizations they go on to lead and serve in the future. Participants cultivate leadership skills, reflect and discuss leadership lessons within a small cohort or cluster of students. Students meet at Rock Springs 4-H center on Sunday, January 7, and return to campus on Friday, January 12. Includes both large and small group discussion, guest speakers, ropes course, group activities and reflection. Prerequisite(s): permission from Student Involvement. Contact Kennedy Rogers kennedy.rogers@wichita.edu with any questions.

HNRS 310W. Homer's Odyssey (1).
This tutorial is dedicated to close reading of Homer’s Odyssey. We will discuss and ponder for 8 weeks. Each student will write a 12 to 15 page essay that is somehow connected with the Odyssey. The instructor will consult with each student throughout the semester about the essay journey as you pass from denial to dream to germination to the flowering of bright pages. Students will give brief presentations of their essays near the end of the course.

HNRS 310X. First Year Research Experience: Introduction to STEM Research (2).
This course is designed for students selected to participate in the First Year Research Experience (FYRE) in STEM and will prepare students for conducting research in STEM fields and to develop a community of scientists among students. This course is an introduction to scientific research through lectures, discussions and readings about the design of projects, the understanding of the scientific literature, and the ethics of research and publication. Each student will be matched with a research mentor and will collaborate with their mentor to identify research questions, methods, and analysis. The course will introduce students to quantitative and qualitative methods for conducting meaningful inquiry and research. They will gain an overview of research intent and design, methodology and techniques, format and presentation, and data management and analysis informed by commonly used methods in various fields. The course will develop each student’s ability to use this knowledge to become effective researchers in STEM fields. Prerequisite(s): Special permission from Honors required.

HNRS 310Z. Honors Tutorial: Contract Bridge, Critical Thinking and Decision Making (2).
Introduces students to the game of contract bridge. Contract bridge is a trick-taking game played with a standard 52-card deck that can help hone skills like memory, critical thinking, decision making, communication, quantitative reasoning, and strategy. It is a game for a lifetime. Students participate in two sessions during the semester at a local bridge club to actually play the game in a real setting. Repeatable for credit.Prerequisite(s): Honors student or permission of the Cohen Honors College.

HNRS 351. Survey of Leadership (3).
General education humanities course. The main leadership theories and a history of leadership thought are presented, leadership perspectives are debated, and examples of leadership in various contexts are discussed. After completing the seminar students should be able to recognize the main leadership theories, identify different leadership perspectives, recognize applications of leadership, and understand the benefits and challenges of leadership.

HNRS 352. Survey of Law & Public Policy (3).
General education humanities course. Interdisciplinary introduction to the role of law and public policy in the public and private sectors. Provides a basic framework for understanding the differing rationale and methods associated with developing laws and public policies, and explores the impact of the political and social environment on the development, interpretation and application of both public policy and law.

HNRS 398. Travel Seminar (1-4).
Interdisciplinary travel seminar which allows a student travelling abroad to gain credit for the study of culture, art, literature, architecture, political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of the dean of the Cohen Honors College, a faculty member in any department, or as part of a travel experience organized through the Cohen Honors College. Prerequisite(s): permission of the Cohen Honors College.

HNRS 398C. Alternative Break: Africa (1-3).
Student Involvement's Alternative Summer Break program exposes WSU students to complex social and cultural issues through community visits and direct service. Experiential course uses an applied learning method of service-learning to explore communities in developing rural Africa. Students travel to Africa during summer break to serve with community building through youth education and capacity building. Class explores social justice issues related to service through readings, discussion, writing, reorientation service in Wichita and research-based reflection.

HNRS 398E. Alt Break D.C. (3).
Experiential course uses an applied learning method of service-learning to explore a social justice issue or issues. Students travel during spring break to Washington D.C. to serve in a variety of community-based organizations. Students explore social justice issues related to service through readings, discussion, writing, reorientation service in Wichita and research-based reflection.

HNRS 398F. Corporate Social Responsibility - International Perspective (3).
Travel seminar. Examines corporate responsibility in an international perspective with visits to companies in the United Kingdom and France. Prepare for travel with a spring seminar that engages in close study and discussion of CSR, stakeholders and shareholders, sustainability reports from leading global companies, and recent developments around the world. This hybrid course requires in-class and online participation and nine days of travel (5/19-5/24) organized through the EP study abroad program. Email Dr. Atul Rai atul.rai@wichita.edu with any questions.

HNRS 398G. Travel Seminar - Paris (1).
This experiential course connects study abroad in Paris, France at Campus Paris Eiffel to students' professional goals. In addition to the academic learning, this study abroad program engages students in weekly cultural activities outside of the classroom. Students will have assigned reading and research to learn about the culture and specifically about a related professional organization such as Doctors Without Borders. Assignments will include a regular blog or some form of daily journal writing, site visits while in the country, and a final research-based reflection paper. Students may be asked to present their research and experience to other students on campus.

HNRS 398I. Travel Seminar: Central/Eastern Europe (1-3).
This travel seminar introduces students to urban environments of three central/eastern European countries: Hungary, Poland and Czech Republic. Students will study each country's history, socio-economic condition and current political environment before travel. Students also will read a book about that country from a recommended list of literary books. At the end of the travel, each student will be required to submit a travel journal. Students enrolled for 3 credit hours will submit an independent research study proposal at the beginning of the course for approval by the instructor and will submit completed independent research project at the end of the travel.

HNRS 398K. Travel Seminar: Costa Rica Sustainability (1-3).
Interdisciplinary travel seminar which allows a student travelling abroad to gain credit for the study of culture, art, literature, architecture, political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of the dean of the Cohen Honors College, a faculty member in any department, or as part of a travel experience organized through the Cohen Honors College. *Course includes diversity content*. Prerequisite(s): permission of the Cohen Honors College.

HNRS 398M. Travel Seminar: Italy (1-4).
Interdisciplinary travel seminar which allows a student travelling abroad to gain credit for the study of culture, art, literature, architecture, political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of the dean of the Cohen Honors College, a faculty member in any department, or as part of a travel experience organized through the Cohen Honors College. Country visited: Italy. Prerequisite(s): permission of the Cohen Honors College.

HNRS 404. Seminar in Fine Arts (3-4).
General education fine arts course. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 405. Seminar in Humanities (3-4).
General education humanities course. Topics vary. Prerequisite(s): honors student or permission of the Cohen Honors College.

HNRS 405B. Isms & Ologies: Choose Your Own Adventure (3).
General education humanities course. Nuclear physics! The history of burlesque! What 18th century recipe books have to say about cultural standards! Gothic cathedrals! Worldwide creation myths! Rembrandt's experience with autopsies! Course is based on the notion that a loving study of serious literature, which often takes place purely within the boundaries of academic literary criticism, can also properly touch upon the larger world, the "isms" and "ologies" of other fields of interest. Students choose a body of serious literary writing for which they've always felt passion (poetry or prose, canonical or contemporary, the choice is the student's) and then choose an outside field of interest (medicine, world religions, crime forensics, whatever: again, the choice is the student's) that links up meaningfully with the literature. In many senses, this is truly a course of the student's own making, and implies as its constituency exactly that kind of proactive, self-directed person one associates with Honors College study. The end-game moment is a final, substantial paper based on the student's semester of intense and engaged research and class presentations that summarize the papers… hopefully, this results in a series of classes toward semester's end as various and bountiful and substantial and fun as a WSU classroom can afford to contain.

HNRS 405C. Nature of Fiction: Writing the Real (3).
General education humanities course. Since the 1960s, new and different interpretive methods for studying and analyzing literary works have emerged, one after another. Text-based formalism ruled for years, but then the idea of reading a piece of literature as history took hold. Readers as generators of meaning followed, varying by education and experience. Class, race, gender, sexual preference then offered ways of seeing literature so that texts both old and new were given multiple access points. Course reviews these critical schools of thought, providing multiple lenses for those who wish to examine and re-examine literature.

HNRS 405D. Race, Racism, Social Justice (3).
General education humanities course. Explores the many connections between race, racism and social justice. What is race? Is it a natural-biological category, or something that we as a society construct? What is racism? Course examines the related psychological phenomena of racial prejudice, white privilege, and implicit racial bias, especially as these phenomena impact discussions of social justice. What is social justice? Course addresses this question while paying especially

close attention to current social justice movements in American urban communities, such as the #BlackLivesMatter movement.

HNRS 405E. The Calamitous 14th Century (3).
General education humanities course. The 14th century in England was an ironic reflection of modern times: war, plague, rebellion and the assassination of King Richard II, yet also a century of rapid economic development, advances in scientific theory, and the strengthening of the English king's power. This conflicted era produced the high art of the English Middle Ages including Chaucer's Canterbury Tales and the tales of the Gawain poet, where individual sensibility emerges for the first time, with a flurry of social diversity, changing gender roles, and the rise of the middle class. Students pursue these developments, examining a few literary and historical works in depth through discussion. Fulfills general education further studies – humanities.

HNRS 405F. Walling the Self: Dwelling and Identity in Early Lit (3).
General education humanities course. Place matters. Where you are says much about who you are, and even that you are. Where you dwell, and how you deal with and protect that place (which usually means building walls) creates the roots of a group identity—which is expressed in various ways by individual peoples. But dwelling means remaining and enduring. Usually it means struggling to maintain a way of life in that physical and social environment. Who you are as a group depends upon how you face the inner and outer dangers and contradictions that typically threaten your culture. The fears of death, loss, exile or dishonor, coupled with the means for obtaining and preserving the value feelings of comfort and joy, become your cultural signature.

HNRS 405G. After the Fall: The Search for Identity from Classical to Modern Literature (3).
General education humanities course. Nothing human is eternal. Nations fail, cities fall to ruin, and then, somehow, the human miracle: people gather themselves to begin again, starting out on the long road back to security, culture and a new identity. Stories of ruin and rebuilding belong to every age, and each of them has something to teach people. The course begins with the fall of Troy, how that terrible defeat sent Aeneas and his people across the seas to settle what would be eternal Rome. Then, the falls of men—Apuleius, undone by his appetites; Yvain the knight, prideful and repentant; Dante, in crisis, confronting his failings; Satan who cannot change, and Adam, who can. Finally, modern time: the aftermath of WWI, the great war. Each time, devastation brings the possibility of renewal, new life built on the ruins. Students find perspectives in this historical literature that inform current understanding and encourage the kind of integrative thinking and active learning expected of Honors students. Prerequisite(s): must be an honors student or receive permission of the Cohen Honors College.

HNRS 406. Seminar in Social and Behavioral Sciences (3-4).
General education social and behavioral sciences course. Topics vary. Prerequisite(s): honors student or permission from the Cohen Honors College.

HNRS 406A. What a Difference a Nonprofit Makes (3).
General education social and behavioral sciences course. Hands-on opportunity to explore a nonprofit arts, health, human service, education or advocacy organization. Students engage in real world problem-solving from the perspective of a nonprofit organization. An introduction to the nonprofit sector for those interested in starting a nonprofit or working in a nonprofit, the course covers: people and programs that make up a nonprofit; history of the nonprofit sector; history of philanthropy; nonprofit organizations as mediating institutions; how public policy shapes the nonprofit sector. Draws on the experience of an instructor who has worked with nonprofits for over 20 years as well as guest speakers from leading nonprofit organizations. Prepares students considering an internship or cooperative education experience in a nonprofit.

HNRS 406B. Leading for Change in an Unpredictable World (3).
General education social and behavioral sciences course. Explores how the individual student serves as a catalyst for change. Students continue to develop leadership capacity through work on their own challenges and aspirations. In addition to common class readings, students select readings and experiences from the vast leadership literature that help them reflect on their own values and actions. Each student designs his or her own leadership change initiative. Class sessions comprise a variety of learning formats – group coaching, experiential activities, and student-led sessions and presentations. Each student receives individual coaching. Prerequisite(s): HNRS 152F or PSY 413 or HMCD 308, or instructor's consent.

HNRS 406C. Making Social Impact (3).
General education social and behavioral sciences course. Explores the question of how to understand social forces and social change through qualitative research. Students majoring or minoring in social sciences meet together to discuss best practices in qualitative social sciences research, research expectations, ethical conduct, project management, APA writing style and research presentations. Guest lecturers from University Libraries, the institutional review board, and the Community Engagement Institute demonstrate the need of high-level skills for successful research and evaluation. Students are responsible for selecting a topic, gathering 15–20 academic journal articles, synthesizing the material, and writing a literature review. Students use the information gathered to design a qualitative research proposal and a poster presentation. Additional class meeting times may be scheduled by the instructor in consultation with student researchers. One-third of the grade is determined by participation in the class, including written assignments, presentations to the class, and other work. The remainder of the grade is based on the completed literature review and presentation. Course is meant to supplement, not replace, the research methods course found in social work and other social science majors and to engage students in conversation across fields of social scientific study. Open to honors students with a background in social sciences. Course may be used to fulfill the honors research or creative activity requirement. Contact the department of social work for permission to count this course toward major requirements. Prerequisite(s): permission of the Cohen Honors College.

HNRS 406D. Service Learning: Namibia HIV/AIDS and Food Security Service (3).
General education social and behavioral sciences course. This course offers an academic immersion experience through course reading, research, and discussion to prepare for summer travel to Namibia, Africa. Understanding the relationship between HIV/AIDS and food insecurity is especially salient in sub-Saharan Africa, given that there are roughly 25.8 million people with HIV/AIDS (UNAIDS, 2014). Students will be engaged with diverse underserved populations through site visits and volunteering in Wichita. For two weeks in summer students will learn and engage in Namibia with officials from governmental and/or non-profit agencies that work with various populations affected by HIV/AIDS and/or food security. Students are required to write a reflective paper of their study abroad immersion experience and will be prepared to submit their work for presentation at the Service-Learning Showcase and Undergraduate Research and Creative Activities Forum. This course will enhance multicultural and international awareness.

HNRS 407. Seminar in Mathematics and Natural Sciences (3-4).
General education math and natural sciences course. Topics vary. Prerequisite(s): honors student or permission from the Cohen Honors College.

HNRS 410. Independent Study (1-4).
Repeatable for a total of 6 credit hours. Prerequisite(s): permission from Honors College.

HNRS 481. Cooperative Education (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment. Prerequisite(s): consent of the Cohen Honors College.

HNRS 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

HNRS 481N. Internship (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): consent of the Cohen Honors College.

HNRS 485. Honors Research and Creative Activity Seminar (3-4).
Students who complete this course have familiarity with inquiry and research conceptualization — the process of investigating an area of interest. Students get experience formulating independent research projects, strategizing an appropriate methodology/approach, drafting abstracts and personal statements appropriate for grant or fellowship proposals, and working in interdisciplinary peer review groups. Furthermore, they learn about human subject research and research ethics, presentation and peer evaluation skills, and conduct preliminary research. Emphasis is placed on finding and evaluating source material with the goal of developing the skills for writing a research or creative activity proposal. Guest lecturers from various academic or creative disciplines including the libraries may be invited to present. Students are strongly encouraged throughout and particularly toward the end of their experience to work with their faculty mentor to continue their research and develop a publication or presentation. Because the course enrolls from different disciplines, students also become acquainted with research topics and arguments outside their fields of study. Course is meant to supplement, not replace, the Research Methods course found in many disciplines. Sophomore standing recommended.

HNRS 486. Honors Collaborative Research and Creative Activity Seminar (3).
Designed to expose students majoring in various disciplines to an opportunity to meet one hour per week and invite collaborations that cultivate an interdisciplinary research experience. Students discuss best practice in academic research and research ethics, learn of complimentary approaches to research in different subject areas, the research process (grant writing to publication), and other issues related to academic research across disciplines. Students tour facilities and laboratories with strong collaborative interdisciplinary research. Guest lectures from the libraries, WSU Ventures and various academic disciplines teach students high-level skills needed for successful interdisciplinary collaborations. Each student is responsible for working in an interdisciplinary group setting. Each team formulates a research question that encourages the involvement and knowledge-base of a collaborative team, composes a scientifically supported interdisciplinary research project, and presents a prospectus format of the final project during the semester. One-third of the grade is determined by participation in the class, including written assignments, presentations to the class and other work. The remainder of the grade is based on the collaborative research project completed. Course is meant to supplement, not replace, the research methods course found in many disciplines. Students who complete this course have an excellent grounding in the fundamentals of academic research, exposure to research practices in a variety of disciplines, and experience conducting interdisciplinary research. Students are therefore very well prepared for graduate school and/or careers that involve diverse research.

HNRS 491. Honors Thesis (1-3).
Independent study course for students undertaking the research and writing of an Honors thesis. An Honors thesis is a substantive piece of scholarship or creative work involving primary and/or secondary research, which serves to demonstrate mastery over the discourse, methods and content of at least one academic, creative or professional field. Requires students to synthesize knowledge and skills acquired over the course of the undergraduate career (including coursework, studies abroad, service learning, internships and undergraduate research, if applicable). All thesis projects must be designed and completed under the supervision of a faculty thesis supervisor and, at the supervisor's discretion, may be reviewed by additional faculty advisors. Repeatable for a total of 6 credit hours. Prerequisite(s): permission of the Cohen Honors College.

HP - Health Professions

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

HP 105. Introduction to Public Health (3).
General education math and natural sciences course. An undergraduate introduction intended to develop an informed appreciation for the immense impact of public health on society. Topics include basic public health principles, philosophical foundations, key terms and concepts, historical contributions from the field, ethical bases, system organization, and an overview of the social, behavioral, environmental and biological factors that contribute to community health outcomes. Focuses on applying concepts to understanding local, state, national and global health problems in the 21st century.

HP 150. Workshop in Health Professions (1-10).
Intensive study of special topics related to health professions practice, education and research.

HP 201. Exploring the Health Professions (3).
Designed to familiarize students with the various career opportunities in the medical, public health, and aging professions. Serves as a career exploration seminar for students planning a career in health care or health related field. Students are provided an overview of federal, state and local health care, and public health organizations, senior living communities, and programs and services concerned with planning, managing or directly delivering services to populations across the health care professions.

HP 203. Medical Terminology (2).
Provides the foundation of medical terminology for individuals who need a familiarity of the medical language. Ideal for preprofessional students preparing for one of the health professions or students currently enrolled in a health professions program. Also valuable for individuals such as medical records technicians, medical transcriptionists, medical secretaries, medical insurance personnel, administrators in health care and pharmaceutical representatives.

HP 303. Medical Terminology (3).
Provides the foundation of medical terminology and its application to the health care environment. Ideal for preprofessional students preparing for one of the health professions or a student currently in a health professions program. Emphasizes accurate interpretations and analysis of patient, hospital and other medical records. Students cannot receive credit for both HP 203 and HP 303.

HP 303BA. Medical Terminology Badge: Introduction to Medical Terminology (0.5).
Overview of medical terminology. Students learn how medical terms are formed, how to effectively translate medical terms, and how to apply those terms to the medical setting. Students also learn the terms used to describe the gross anatomy of the body and the position of the body, as well as the basic terms that related to diagnostic and laboratory procedures, and pharmacology. Graded Bg/NBg. Serves as the prerequisite for all future medical terminology badges.

HP 303BB. Medical Terminology Badge: Bones, Muscles and Skin (0.5).
Covers material over the integumentary (skin) system, the muscular system and the skeletal system. Includes the structure and function, pathology, diagnostic and treatment procedures, and abbreviations related to these systems. Emphasizes accurate interpretations and analysis of patient, hospital and other medical records. Graded Bg/NBg. Prerequisite(s): HP 303BA.

HP 303BC. Medical Terminology Badge: Heart, Lungs and Immune System (0.5).
Covers the cardiovascular system, the pulmonary (lung) system, and the immune and lymphatic systems. Includes the structure and function, pathology, diagnostic and treatment procedures, and abbreviations related to these systems. Emphasizes accurate interpretations and analysis of patient, hospital, and other medical records. Graded Bg/NBg. Prerequisite(s): HP 303BA.

HP 303BD. Medical Terminology Badge: The Nervous System and Senses (0.5).
Covers the nervous system and the special senses of vision and hearing. Includes the structure and function, pathology, diagnostic and treatment procedures, and abbreviations related to these systems. Emphasizes accurate interpretations and analysis of patient, hospital and the other medical records. Graded Bg/NBg. Prerequisite(s): HP 303BA.

HP 303BE. Medical Terminology Badge: The Gastrointestinal and Urinary Systems (0.5).
Covers the gastrointestinal and urinary systems. Includes the structure and functions, pathology, diagnostic and treatment procedures, and abbreviations related to these systems. Emphasizes accurate interpretations and analysis of patient, hospital and other medical records. Graded Bg/NBg. Prerequisite(s): HP 303BA.

HP 303BF. Medical Terminology Badge: The Endocrine and Reproductive Systems (0.5).
Covers the endocrine and reproductive systems. Includes the structure and function, pathology, diagnostic and treatment procedures, and abbreviations related to these systems. Emphasizes accurate interpretations and analysis of patient, hospital and other medical records. Graded Bg/NBg. Prerequisite(s): HP 303BA.

HP 310. Introduction to the U.S. Health Services System (3).
General education social and behavioral sciences course. Designed to provide students pursuing various health careers a common background in how the U.S. health services system is organized, how health services are delivered and the mechanisms by which health services are financed in the United States. Provides an overview of the U.S. health services system and its key components, including the organization and management of the system, resource development (health care work force, health facilities and biomedical technology), the economic support system and the delivery system.

HP 325. Selected Topics (1-4).
Lecture/discussion; focuses on a discrete area content relevant to the health disciplines. In-depth study of a particular topic or concept, including didactic and current research findings and technological advances relevant to the topic. Repeatable for a total of 6 credit hours with program consent, upper-division status.

HP 325BG. Badge: Anatomy and Physiology of Lactation (1).
Focuses on the anatomical and physiological basis of lactation and breastfeeding, and the biological components of human milk that make it the best nutrition for infants. Appropriate for any person who wants to support breastfeeding families, as well as individuals preparing for lactation certification. *Course includes diversity content*. Graded Bg/NBg.

HP 325BI. Badge: Breastfeeding Challenges (1).
Focuses on the complex physical and medical challenges of the breastfeeding dyad including: prematurity, jaundice, hypoglycemia, low milk supply, infection, medications, and others. Appropriate for any person who wants to support breastfeeding families, as well as individuals preparing for lactation certification. *Course includes diversity content*. Graded Bg/NBg.

HP 325BJ. Badge: Public Health and Policy to Support Breastfeeding (1).
Focuses on the sociocultural history, the health disparity, and the influence of policy on breastfeeding. Appropriate for any person who wants to support breastfeeding families, as well as individuals preparing for lactation certification. *Course includes diversity content*. Graded Bg/NBg.

HP 325BK. Badge: Research, Leadership and Evidence-Based Practice to Support Breastfeeding (1).
Focuses on the review and interpretation of research to inform evidence-based practice to support breastfeeding families. Also focuses on leadership principles to promote breastfeeding. Appropriate for any person who wants to support breastfeeding families, as well as individuals preparing for lactation certification. *Course includes diversity content*. Graded Bg/NBg.

HP 325BL. Badge: Transition to Practice: Professional Responsibilities for Breastfeeding Support (1).
Focuses on the professional role acquisition to provide support to breastfeeding families. Appropriate for any person who wants to support breastfeeding families, as well as individuals preparing for lactation certification. *Course includes diversity content*. Graded Bg/NBg.

HP 325BM. Badge: Prenatal; Intrapartum; and Postpartum Care of the Breastfeeding Dyad (1).
Focuses on the prenatal, intrapartum and postpartum education, and support of breastfeeding families. Clinical assessment and management of the breastfeeding dyad, integration of baby-friendly practice, and navigation of basic challenges in lactation are emphasized. Appropriate for any person who wants to support breastfeeding families, as well as individuals preparing for lactation certification. *Course includes diversity content*. Graded Bg/NBg.

HP 325F. Intro to Health Care Ethics (1).
The purpose of this course is to provide an intellectual grounding through critical readings, for various approaches to identifying and analyzing contemporary ethical issues in health care. Current health care ethics issues will be considered against a background of classical and contemporary readings in applied ethical theory.

HP 326. Emerging Health Care Issues of the 21st Century (3).
General education social and behavioral sciences course. An in-depth study of emerging health care issues in a rapidly changing health care environment. There are many emerging illnesses in the United States, not to mention numerous other clinical, ethical, and health care delivery issues. Addresses current and critical health care issues facing the community locally, nationally and abroad. Presents historical coverage

of medical issues of the 20th century as a means of understanding contemporary issues.

HP 330. Cancer: Perspectives and Controversies (3).
General education math and natural sciences course. Historical and contemporary information regarding trends, distribution and causes of cancer. Discusses pertinent issues and controversies about cancer from the perspectives of cancer prevention and treatment, economics, sociology, psychology and politics.

HP 408. Leadership in Self and Society (3).
General education social and behavioral sciences course. Cross-listed as PSY 413. Examines principles and competencies of adaptive leadership. Uses experiential methods so that the classroom serves as a learning laboratory where students practice leadership. Helps those students who care about making a difference in this world discover how they can become more effective in personal, community and professional settings.

HP 408H. Leadership in Self and Society Honors (3).
General education social and behavioral sciences course. Cross-listed as PSY 413H. Examines principles and competencies of adaptive leadership. Uses experiential methods so that the classroom serves as a learning laboratory where students practice leadership. Helps those students who care about making a difference in this world discover how they can become more effective in personal, community and professional settings.

HP 430. Impact of Disease Upon Global Events (3).
General education math and natural sciences course. Designed to provide a background for discussions of pathological determinants/ trends that influence events in history including those involving emerging and re-emerging diseases.

HP 570. Selected Topics (0.5-4).
Lecture/discussion; focuses on a discrete area content relevant to the health disciplines. In-depth study of a particular topic or concept, including didactic and current research findings and technological advances relevant to the topic. Repeatable for a total of 6 credit hours with program consent, upper-division status.

HP 570BA. Care of Populations Badge: Public Health Science (0.5).
Introduces students to the tools of public health. Students will explore the history of the U.S. Public Health system and learn how public health practitioners integrate core competencies, essential services, and retrieval of evidence for the goal of improving the health of populations. Graded Bg/NBg.

HP 570BB. Care of Populations Badge: Care Leadership & Systems Thinking (0.5).
Leadership skills consistent with collaborative approaches are essential and need to be part of organizations that interest with the larger public health system. This badge will introduce six key practices of collaborative leadership: Assessing the Environment, Creating Clarity, Sharing Power and Influence, Building Trust, Self Reflection, and Developing People. Course activities will build collaborative and team-oriented leadership capacity among public health professionals as well as diverse state and local community partners. Graded Bg/NBg.

HP 570BC. Care of Populations Badge: Financial Planning & Management (0.5).
Financial Planning and Management principals are key for all organizations. Understanding these elements are crucial for professionals to assist in keeping organizations financially stable. This badge introduces students to various management concepts, as well as the basic principles of financial planning. Students will be exposed to financial and management tools to learn how they are utilized in all areas of decision making. Graded Bg/NBg.

HP 570BD. Care of Populations Badge: Community Dimensions of Practice (0.5).
Introduces students to the tools of public health. Students will explore the history of the U.S. Public Health system and learn how public health practitioners integrate core competencies,essential services, and retrieval of evidence for the goal of improving the health of populations. Graded Bg/NBg.

HP 570BE. Care of Populations Badge: Cultural Competency (0.5).
Introduces students to the concepts of health and health care disparity and the importance of learning how individuals define, react to, and treat illness and other health risks. Graded Bg/NBg.

HP 570BF. Care of Populations Badge: Policy Development & Program Planning (0.5).
Focuses on developing Policy Development & Program Planning Skills, based on the Core Competencies for Public Health professionals, Tier 1. Policy development is a core public health function. Program planning to implement policies or to support policy development is foundational to understanding public health work. Course activities will help student build awareness, understanding and capacities related health improvement planning, developing program goals and objectives, strategic planning, public health policy, and quality improvement. Graded Bg/NBg.

HP 740. Advanced Health Professions Badges (0.5-2).
An umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 306A, 306B, etc.). Students should enroll in the lettered courses with specific topics in the titles.

HP 740BB. School Health Badge: Advocacy, Legal and Ethical Issues (1).
Examines legal responsibilities in the school setting as set by nurse practice acts and other professional guidelines. Review of school policies and ethical boundaries while advocating for children. Graded Bg/NBg.

HP 740BC. School Health Badge: Evidence Based Practice, Research and Collaboration (1).
An update and application of research evidence to support and facilitate best practices in the school environment. Explores opportunities for collaboration. Graded Bg/NBg.

HP 750. Workshop in Health Professions (1-4).
An opportunity for intensive study of special topics related to health profession practice, education or research.

HPS - Human Performance Studies

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

HPS 101G. Cricket (1).
An activity course that involves the playing of cricket as well as instruction on the skills, rules and strategies of play. Repeatable for credit.

HPS 101R. Rock Climbing (1).
An activity course that provides students with an understanding of the equipment, safety procedures, and skills of rock climbing. Repeatable for credit.

HPS 101S. Advanced Pool/Billiards (1).
Instruction in advanced shots and strategy, and more active participation than is available in the basic-level class. Repeatable for credit.

HPS 101V. Pool-Billiards (1).
An activity course that involves playing pool-billiards as well as instruction on the rules, shots, and strategies of play. Repeatable for credit.

HPS 102A. Archery (1).
An activity course that involves target shooting and instruction on skills, safety procedures, and equipment of archery. Repeatable for credit.

HPS 102C. Bowling (1).
An activity course that involves bowling as well as instruction on skills, equipment, rules, and etiquette. Repeatable for credit.

HPS 102M. Horsemanship (1).
An activity course that involves riding horses and instruction on equipment and proper riding technique. Repeatable for credit.

HPS 102O. Ice Skating (1).
An activity course that involves ice skating and instruction on equipment, and proper technique. Repeatable for credit.

HPS 103B. Tai Chi (1).
An activity course that involves instruction and participation in a slow-moving form of Chinese meditation. Repeatable for credit.

HPS 103G. Jiu Jitsu (1).
An activity course that involves instruction and participation in a grappling-style martial art that is similar to judo. Repeatable for credit.

HPS 103J. Tae-Kwon-Do (1).
An activity course that involves instruction and participation in a fast-kicking style of martial arts. Repeatable for credit.

HPS 103O. Meditation (1).
An activity course that involves instruction and participation in mental techniques that produce calmness and a sense of well-being. Repeatable for credit.

HPS 103T. Pilates (1).
An activity course that involves instruction and participation in a form of physical fitness that emphasizes body alignment, controlled movements, and balance. Repeatable for credit.

HPS 103Y. Yoga (1).
An activity course that involves participation and instruction in various physical yoga poses and meditation. Repeatable for credit.

HPS 106AB. Circuit Training (1).
An activity course that involves participation and instruction in weight training on a circuit of weight machines. Repeatable for credit.

HPS 106AC. Cycle/Circuit (1).
Instruction and active participation in a combination of stationary bike training and circuit weight training. Repeatable for credit.

HPS 106D. Core Fitness (1).
An activity course that involves participation and instruction in exercises that concentrate on the core of the body. Repeatable for credit.

HPS 106E. Weight Training (1).
An activity course that involves participation and instruction in lifting free weights and utilizing weight machines. Repeatable for credit.

HPS 106M. Running (1).
An activity course that involves participation and instruction in running. Repeatable for credit.

HPS 106N. Step Aerobics (1).
An activity course that involves participation and instruction in aerobic exercises done to music and utilizing steps of various height. Repeatable for credit.

HPS 106O. Zumba (1).
An activity course that involves participation and instruction in aerobic dance routines set to fast-paced music. Repeatable for credit.

HPS 106Q. Exercise and Weight Control (2).
Designed to help students realize the importance of healthy diet and exercise behaviors in permanent weight control. Behavior modification techniques are used to help students achieve a healthy lifestyle that will result in either a gradual reduction in body weight, and/or the maintenance of a health body weight. Repeatable for credit.

HPS 106R. Weight Trng For Women (1).
This is a women-only activity class that involves participation and instruction in lifting free weights and utilizing weight machines. Repeatable for credit.

HPS 106Z. Cardio Kickboxing (1).
An activity course that involves participation and instruction in kicking exercises set to music. Repeatable for credit.

HPS 107A. Swimming 1 (1).
An activity course that involves participation and instruction in various swimming strokes. Repeatable for credit.

HPS 107E. Scuba (1).
An activity course that involves participation and instruction in SCUBA diving. Repeatable for credit.

HPS 110. Varsity Athletics (1).
An elective course for WSU students who are NCAA Division I athletes.

HPS 110D. Bowling (1).
An elective course for members of the WSU bowling team.

HPS 110E. Crew (1).
An elective course for members of the WSU crew team.

HPS 110T. Spirit Squad (1).
An elective course for members of the WSU Spirit Squad.

HPS 111. Foundations in Physical Education (3).
Introduction to the history, principles, philosophy and foundations of physical education with concomitant outgrowths for modern society.

HPS 113. Introduction Exercise Science (3).
An overview of the basic physiological, neurological and biomechanical processes associated with physical activity and human movement.

HPS 114. Introduction to Athletic Training (3).
2 Classroom hours; 2 Lab hours. Covers introductory techniques, applications and theories for the beginning athletic training student. Includes basic skills of fitness program design, emergency procedures, immediate injury care, pharmacology interactions, modality application and environmental conditions. Corequisite(s): HPS 114L.

HPS 114L. Intro Athletic Training Lab (0).
A laboratory course for introductory techniques and applications for the beginning athletic training student. The student will learn demonstrate basic skills of emergency/immediate care, health history, modality application, and environmental conditions.

HPS 117. Community First Aid and Community CPR (2).
Community first aid and community cardiopulmonary resuscitation with certification by the American Red Cross.

HPS 121. Professional Practicum (2).
Covers clinical skills and proficiencies relating to emergency/immediate care, health history, modality application and environmental conditions as well as various methods of athletic taping, bandaging, protective padding and bracing of anatomical regions. Prerequisite(s): admission to the ATP and instructor's consent.

HPS 130. Taping and Bandaging in Athletic Training (1).
Covers techniques used for the care and prevention of athletic injuries. Includes various methods of athletic taping, bandaging, protective padding and bracing of anatomical regions.

HPS 131. Instrumentation in Athletic Training (1).
Covers instrumentation use in the profession of athletic training consisting of, but not limited to: stethoscope, ophthalmoscope, goniometers, weight/height scale, percussion hammers, etc. Students learn, practice and become proficient in the use of athletic training instrumentation.

HPS 150P. Stress Management (1).
The purpose of this course is to teach students the basic principles, theories, and relaxation techniques to effectively manage personal stress. Students will gain a greater understanding of the mind-body relationship, learn to employ a holistic approach to stress and adopt effective cognitive techniques, coping skills, and relaxation techniques.

HPS 152A. Personal Fitness (1-3).
An activity course designed for older adults.

HPS 152B. Flex & Tone (1).
An activity course designed for older adults that focuses on strength and balance training.

HPS 152C. Water Fitness (1).
An activity course designed for older adults that involves exercising in a swimming pool.

HPS 202. Individual Sports (2).
Introduces basic skills and strategies of individual sports/activities. Prerequisite(s): K-12 physical education major.

HPS 203. Adventure Sports (2).
Introduces activities focusing on life adventures. Prerequisite(s): K-12 physical education major.

HPS 204. Movement Concepts (2).
Introduces fundamental motor patterns and movement education. Prerequisite(s): K-12 physical education major.

HPS 205. Team Sports (2).
Introduces basic skills and strategies of team sports. Prerequisite(s): K-12 physical education major.

HPS 220. Athletic Training Practicum (2).
Covers clinical skills and proficiencies relating to emergency care, basic treatment of injury, risk management, preventative procedures, equipment intensive and specific medical conditions. Prerequisite(s): admission to the athletic training education program and instructor's consent.

HPS 221. Athletic Training Practicum II (2).
Covers clinical skills and proficiencies relating to assessment and evaluation of the upper extremity, cervical spine, head and face. Prerequisite(s): HPS 220 and instructor's consent.

HPS 229. Applied Human Anatomy (3).
A study of the structure and function of the cardiovascular, skeletal and muscular systems of the human body with application to physical activity.

HPS 300. Rhythmic Activities in PreK-12 Physical Education (2).
Teaches the value, methodology and curricular content of rhythmic activities appropriate for PreK-12 physical education students. Prerequisite(s): admission to teacher education program.

HPS 302. Administration in Exercise Science (3).
Examines the various issues, policies and procedures involved with administration in exercise science. Emphasis is on facility organization and design, legal liability, personnel management, budgeting, equipment purchasing, and record keeping and promotions. Special topics are related to fitness and wellness center administration.

HPS 306. Water Safety Instructor (2).
1 Classroom hour; 2 Lab hours. Meets American Red Cross standards for certification in Emergency Water Safety and Water Safety Instructor Training. Students must show proficiency at the American Red Cross Swimmer skill level within three weeks after enrolling. Prerequisite(s): HPS 107A or departmental consent.

HPS 310. Organization and Administration of Physical Education Program (3).
Addresses the leadership and management skills and duties required of the physical educator in the public school system. Designed to provide students with the knowledge, skills and tools they will need to organize and administrate physical education, intramural and athletic programs, and to oversee the management of the physical plant and facilities. Ethics, human resources, budgeting, legal and safety issues, and community collaboration and resources are also studied. Prerequisite(s): HPS 201A, B, C, D, 460; admission to teacher education, completion of preprofessional block.

HPS 311. ISAM: Physical Education in Secondary Grades 6-12 (4).
Provides the skills and knowledge for teacher candidates to successfully teach secondary physical education grades 6-12. Instruction for teaching techniques, teaching progression, skill analysis and development are provided. Students learn effective, authentic assessment of student learning in physical education. Studies the adolescent and management techniques for both middle school and high school students. Learning styles are studied and a variety of learning strategies are studied and implemented. A grade of B- or higher must be attained to be recommended for student teaching. Prerequisite(s): admission to teacher education program. Corequisite(s): HPS 312.

HPS 312. ISAM: Preteaching Internship: Physical Education-Secondary (1-3).
Through systematic observation in a secondary school (middle or high school), students observe and examine the nature of teaching and the role of teachers in secondary school physical education classes. A grade of B- or higher must be attained to be recommended for teaching internship. Prerequisite(s): admission to teacher education program. Corequisite(s): HPS 311.

HPS 313. Exercise & Sport Nutrition (3).
Study of the role of nutrition as a means to enhance performance in exercise and sport. Topics include principles of healthful nutrition, energy metabolism and nutrients, regulation of metabolism by macro and micro nutrients, weight control and analysis of the validity and safety of proposed nutritional ergogenic aids. In addition, regulatory (FDA and FTC) aspects of sports nutrition are reviewed.

HPS 320. Athletic Training Practicum III (2).
Covers clinical skills and proficiencies relating to assessment and evaluation of the lower extremity, abdomen/ thorax, thoracic, lumbar and sacral spine. Prerequisite(s): HPS 221 and instructor's consent.

HPS 321. Athletic Training Practicum IV (2).
Covers clinical skills and proficiencies relating to therapeutic modalities and various treatment protocols involving electrotherapy, ultrasound, traction, joint mobilizations and massage to enhance the healing process. Prerequisite(s): HPS 320 and instructor's consent.

HPS 324. ISAM: Physical Education in Elementary Grades PreK–5 (4).
Provides the skills and knowledge for teacher candidates to successfully teach elementary physical education grades PreK-5. Instruction for teaching techniques, teaching progression, skills analysis and

development are provided. Students learn effective, authentic assessment of student learning in physical education. Studies primary and intermediate grades. Management techniques and age-appropriate activities are practiced. Learning styles are studied and a variety of learning strategies are studied and implemented. A grade of B- or higher must be attained to be recommended for student teaching. Prerequisite(s): admission to teacher education program. Corequisite(s): HPS 325.

HPS 325. ISAM: Preteaching Internship: Physical Education-Elementary (1).
Through systematic observation in an elementary school, students observe and examine the nature of teaching and the role of teachers in elementary physical education classes. A grade of B- or higher must be attained to be recommended for teaching internship. Prerequisite(s): admission to teacher education program. Corequisite(s): HPS 324.

HPS 328. Kinesiology (3).
Serves as a link between the general aspects of anatomy and biomechanics, and specific applications in the fields encompassing exercise science. Provides an indepth review of musculoskeletal anatomy as a foundation for learning components of simple and complex human movement. Emphasizes the qualitative analysis of human movement, while also incorporating quantitative analysis techniques. Prerequisite(s): HPS 229 or BIOL 223 or HS 290.

HPS 329. Health and Wellness Concepts for PreK-12 Teacher Education (2).
Designed for the physical education PreK-12 teacher candidate to gain the skills and knowledge to integrate health and wellness with physical activity. The health and wellness concepts are designed to promote living a positive, healthy lifestyle for a lifetime. Provides a foundation of information for students to learn to teach health and wellness in HPS 400. Prerequisite(s): admission to teacher education program.

HPS 331. Care and Prevention of Athletic Injuries (3).
2 Classroom hours; 2 Lab hours. The study of acute injury care, prevention and recognition methods for the coach, athletic trainer and physical educator to aid in the management of athletic related injuries. Prerequisite(s): HPS 229 or BIOL 223 or HS 290.

HPS 331L. Care Prevent Athlete Injry Lab (0).
A laboratory course for the acute injury care, prevention, and recognition methods for the coach, athletic trainer, physical educator management athletic related injuries as well as basic athletic injury assessment. Laboratory to be taken concurrently with HPS 331 lecture. Prerequisite(s): HPS 229 or equivalent.

HPS 334. Assessment and Technology for PreK-12 Physical Education (3).
Provides teacher candidates the skills and knowledge needed to learn effective, authentic assessment of student learning in physical education in addition to providing the skills and knowledge to effectively implement technology into PreK-12 health and physical education classes. A framework is provided that offers a process for designing curriculum, instruction and assessment so they are conceived, developed and implemented in a clear, thoughtful manner. Assessment is aligned with district, state and national content standards to demonstrate the value of individual student learning and to support a congruent process of both assessment of student learning and of program effectiveness. Technology skills associated with HPER disciplines are developed. Prerequisite(s): admission to teacher education program and completion of Block 1 of teacher education program.

HPS 350. Upper Extremity Assessment (4).
3 Classroom hours; 2 Lab hours. Covers clinical assessment related to injury/illness sustained by the competitive athlete specifically involving the upper extremity. Includes skills of health history, visual inspection, physical palpation and functional stress testing. Prerequisite(s): HPS 229 or equivalent, HPS 331. Corequisite(s): HPS 350L.

HPS 350L. Upper Extremity Assmt Lab (0).
A laboratory course for the clinical orthopedic examination and diagnosis of injuries for the upper extremity. This course is designed to introduce the athletic training student to techniques in assessment and evaluating athletic related injuries in the upper extremity, head & facial, ear, eye region. Laboratory to be taken concurrently with HPS 350 lecture. Prerequisite(s): HPS 229 or equivalent, and HPS 331. Corequisite(s): HPS 350.

HPS 351. Lower Extremity Assessment (4).
3 Classroom hours; 2 Lab hours. Covers clinical assessment related to injury/illness sustained by the competitive athlete specifically involving the lower extremity. Includes skills of health history, visual inspection, physical palpation and functional stress testing. Prerequisite(s): HPS 229 or equivalent, HPS 331.

HPS 352. General Medical Conditions in Athletics (3).
The study of diseases, disorders, illnesses and other general medical conditions affecting the health of the athlete. The student learns to recognize the signs, symptoms and predisposing conditions associated with the skin; eyes, ears, nose and throat; respiratory and cardiovascular system; endocrine system; gastrointestinal and genitourinary tract; gynecological disorders; viral syndromes; and neurological disorders. Prerequisite(s): HPS 229.

HPS 360. Adapted Physical Education (3).
Assists students in developing the necessary skills for the implementation of enjoyable physical activity into the lives of persons impaired, disabled or handicapped. In addition to classroom work, students participate in observations and physical activity with persons impaired, disabled or handicapped. Prerequisite(s): HPS 229 or equivalent, admission to teacher education and completion of preprofessional block.

HPS 402. Health Education for the Physical Educator (2).
Provides practical applications of theoretical models of health education for the physical education classroom. Discusses health problems, strategies for effecting change and outcome assessment. Develops selected instructional materials. The use of multiple intelligences, integration techniques, classroom management, health education standards, curriculum and technology support the goal of this course. *Course includes diversity content*. Prerequisite(s): HPS 329.

HPS 420. Athletic Training Practicum V (2).
Covers clinical skills and proficiencies relating to therapeutic exercise and various rehabilitation protocols involving flexibility, muscular strength, physical conditioning and functional progressions. Prerequisite(s): HPS 321 and instructor's consent.

HPS 421. Athletic Training Practicum VI (2).
Covers clinical skills and proficiencies relating to organizational, administrative and management skills that formulate the administrative aspects of athletic training. Prerequisite(s): HPS 420 and instructor's consent.

HPS 425. Health, Movement and Physical Activity (2).
Provides the prospective elementary teacher with the knowledge and techniques necessary to be able to integrate health, wellness and physical activity appropriate to elementary education classroom expectations and requirements aligned with Elementary Education Unified K-6 program standards. Content includes understanding the foundations of general, special and inclusive education, development and characteristics of all learners including those with disabilities. Course purpose is to develop a blending of curriculums and techniques

to support positive academic growth. Using multiple intelligences, integration techniques, classroom management, health standards, and curriculum and technology supports the goal of this course.

HPS 430BA. Badge: Mind and Movement (0.5).
Introduces the interaction between physical exercise and mental, emotional and spiritual well-being, including an overview of potential therapeutic uses in workplace wellness, and use as a complementary modality for serving people struggling to manage stress, anxiety, depression, addiction or PTSD. Movement as a strategy for maintaining and enhancing cognitive function and memory across the lifespan is addressed. Both scholarly literature and real-world examples of the application of physical activity are employed. Includes opportunities for personal application of the concepts and discussion of the possibilities for professional use. Graded Bg/NBg.

HPS 440. Concepts in the Prescription of Exercise (3).
An introduction of techniques appropriate for screening, health appraisal and fitness assessment as required for prescribing exercise programs for persons without disease or with controlled disease, and provision for practical experience in a supervised setting outside the class. Prerequisite(s): HPS 229 or BIOL 223 or HS 290.

HPS 442. Administration of Athletic Training (3).
The principles of administration components within the athletic training profession. The student plans, coordinates and supervises areas of health care services, financial expenditures, personnel management, public relations and athletic training facility development. Prerequisite(s): HPS 331, instructor's consent.

HPS 450. Therapeutic Modalities (3).
2 Classroom hours; 2 Lab hours. The study of theories, applications and methods of various modalities consisting of cryotherapy, electrotherapy, hydrotherapy and thermotherapy in addition to principles of manual therapy, intermittent compression and massage. Prerequisite(s): HPS 229 or equivalent, HPS 331. Corequisite(s): HPS 450L.

HPS 450L. Theraputic Modality Lab (0).
A laboratory course for the application of various therapeutic modalities utilized in the profession of athletic training which consist of cryotherapy, electrotherapy, hydrotherapy, thermotherapy and mechanical therapy. Laboratory to be taken concurrently with HPS 450 lecture. Prerequisite(s): HPS 229 or equivalent, HPS 331. Corequisite(s): 450.

HPS 451. Therapeutic Exercise (3).
2 Classroom hours; 2 Lab hours. The study of a comprehensive rehabilitation/reconditioning program involving techniques of flexibility, muscular strength, muscular endurance and cardiorespiratory training including anaerobic and aerobic principles. Prerequisite(s): HPS 229 or equivalent, HPS 331.

HPS 460. Motor Learning (3).
Designed to examine the principles of motor learning by examining the physiological, psychological and neuromotor factors that affect the acquisition of motor skills. Prerequisite(s): HPS 229, or BIOL 223, or HS 290. Corequisite(s): HPS 460L.

HPS 460L. Motor Learning Lab (0).
A laboratory course designed to introduce students to psychomotor testing and the evaluation of human motor learning, control, and development. Laboratory to be taken concurrently with HPS 460 lecture. Prerequisite(s): HPS 229, BIO 223, or HS 290. Corequisite(s): HPS 460.

HPS 461. Biomechanics of Human Movement (3).
Introduces students to concepts of mechanics as they apply to human movement, particularly those pertaining to exercise, sport and physical activity. Students should gain an understanding of the mechanical and anatomical principles that govern human motion and develop the ability to link the structure of the human body with its function from a mechanical perspective. Prerequisite(s): HPS 328 or departmental consent.

HPS 470. Experiential Fitness Practicum in Exercise Science (2-3).
Application of theory to practice by assisting in various activities associated with the field of exercise science (e.g., fitness instruction, weight management, weight training, athletic training, etc.). Minimum of 15 hours per week. Prerequisite(s): HPS 440 with grade of C or departmental consent.

HPS 471. Teaching Internship - Physical Education - Secondary (6).
Application for teaching internship must be made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for teaching internship begins with the opening of the public schools and the student is expected to follow the public school calendar for a semester. A grade of B- or higher must be attained to be recommended for licensure. Prerequisite(s): completion of all courses in the major field and Core II of the teacher education program. Corequisite(s): HPS 472, 473.

HPS 472. Teaching Internship - Physical Education - Elementary (6).
Application for teaching internship must be made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for teaching internship begins with the opening of the public schools, and the student is expected to follow the public school calendar for a semester. A grade of B- or higher must be attained to be recommended for licensure. Prerequisite(s): completion of all classes in the major field and Core II of the teacher education program. Corequisite(s): HPS 471, 473.

HPS 473. Teaching Internship Seminar - Physical Education (1).
Weekly seminar evaluates strategies for managing classrooms and assesses instructional strategies. Students also discuss the employment process and the requirements for teacher certification. A grade of B- or higher must be attained to be recommended for licensure. Corequisite(s): HPS 471, 472.

HPS 481. Cooperative Education (1-8).
Allows students to participate in the cooperative education program. Prerequisite(s): 2.500 GPA and admission to College of Applied Studies.

HPS 490. Physiology of Exercise (3).
2 Classroom hours; 2 Lab hours. Provides a working knowledge of human physiology as it relates to exercise. Prerequisite(s): HPS 229 or BIOL 223 or HS 290. Corequisite(s): HPS 490L.

HPS 490L. Physiol of Exercise Lab (0).
A laboratory course designed to provide students the opportunity to learn basic skills relevant to an exercise physiologist. The student learns these skills through observation as well as through hands-on opportunities to perform as the technician and/or the client during the structured weekly activities. Students will experience, first hand, the neuromuscular, metabolic, and cardiorespiratory responses to acute exercise. Laboratory to be taken concurrently with HPS 490 lecture. Prerequisite(s): HPS 229, BIO 223, or HS 290. Corequisite(s): HPS 490.

HPS 495. Internship in Exercise Science (8).
Culminating activity for students completing the BA in exercise science. Students spend the equivalent of full-time employment in an appropriate agency for one full semester. Prerequisite(s): senior

standing, departmental consent, HPS 470, 2.500 minimum GPA overall and for major, admission to College of Applied Studies.

HPS 510. Coaching Principles (3).
Provides the skills and knowledge necessary for individuals to successfully coach and officiate both elementary and secondary school interscholastic and intramural athletics. Instruction for coaching and officiating techniques, coaching progression, skill analysis and skill development is provided. Management techniques for interscholastic and intramural athletics are included. A variety of coaching strategies as well as discipline and motivation techniques are discussed. Prerequisite(s): completion of Core I of teacher education program if undergraduate standing, graduate standing at WSU, or instructor's consent.

HPS 541. Seminar in Strength and Conditioning (3).
Helps prepare students for the National Strength and Conditioning Association (NSCA) Certification Commission's Certified Strength and Conditioning Specialist (CSCS) examination and/or the NSCA-Certified Personal Trainer certification examination. Anatomy, biochemistry, biomechanics, endocrinology, nutrition, exercise physiology, psychology and the other sciences that relate to the principles of designing safe and effective training programs are covered. Prerequisite(s): junior classification or graduate student status.

HPS 590. Independent Study (1-3).
Arranged individual independent study in specialized content areas under the supervision of a faculty member. Prerequisite(s): departmental consent.

HPS 595. Human Performance Research (3).
Experiential learning course provides opportunities to engage in research activities conducted in the Human Performance Laboratory. Repeatable for a total of 6 credit hours. Prerequisite(s): departmental consent.

HPS 715. Body Composition and Weight Management (3).
A comprehensive coverage of the theoretical and scientific aspects of body composition assessment and current strategies for effective weight management. The limitations and usefulness of reference and field methods for assessing body composition in research, clinical and health/fitness settings are addressed. The overall intent of this course is not only to provide classroom-based theory regarding body composition assessment, but also hands-on experience and training in applying the different assessment techniques.

HPS 716. Psychosocial Aspects of Sports Injury, Illness and Rehabilitation (3).
Cross-listed as CLES 750AF. Explores the psychosocial factors related to sport injury and illness and their effects on the rehabilitation process, mostly connected to sports and physical culture. Offers an opportunity to develop critical thinking and applicable skills as students consider the place of injury, illness and pain within the social and psychological worlds of sport. Explores the mechanisms through which psychosocial factors influence sports injury, illness, understanding, prevention, treatment and rehabilitation outcomes.

HPS 732. Pathophysiology of Cardiovascular Disease (3).
Introduces the pathophysiology of multiple cardiovascular conditions and the developing industry of cardiac rehabilitation. Introduces assessment techniques in electrocardiography (ECG) to assist in the diagnosis of cardiovascular disease. Includes an introduction to ECG leads, rate and rhythm, ECG complexes and intervals, conduction disturbances, arrhythmia, ECG identification of myocardial infarction location and drug effects on an ECG. Prerequisite(s): HPS 490.

HPS 740. Endocrinology and Metabolism of Exercise (3).
Provides students an in-depth examination of the energy metabolism during exercise and the role of the endocrine system in regulating acute and chronic metabolic responses to exercise. Special endocrine issues related to exercise physiology are discussed.

HPS 750L. Motivation (3).
This course is designed to provide the skills and knowledge necessary to properly motivate individuals, groups and teams in a leadership role. Focus is placed on enhancing, creating or maintaining intrinsic motivation through the comprehension of motivation theory, primarily Self-Determination Theory, Achievement Goal Theory and The Progressive Motivation Cycle. In addition, techniques will be developed to apply concepts learned from theory and research to real situations. The knowledge and skills gained from this course will help students excel as leaders in sport, education, business or any chosen career.

HPS 750P. ACE Group Fitness Instructor Course (1).
Designed to give students the knowledge and understanding necessary to prepare for the ACE group fitness instructor exam. In addition, students become more effective education fitness instructors. Students can take the exam for an additional $249.

HPS 750Q. ACE Personal Training Course (1-2).
Gives students the knowledge and understanding necessary to prepare for the ACE personal training certification exam. Students learn a comprehensive system for designing individualized programs based on the unique health and fitness goals of clients. Students can take the exam for an additional $249.

HPS 750T. Human Performance Research - PTRM I (3).
Provides students with opportunities to engage in research activities in the Human Performance Laboratory.

HPS 762. Statistical Concepts in Human Performance Studies (3).
Covers descriptive statistics, elementary probability, distributional properties, one- and two-population mean and variance comparisons, ANOVA, linear regression and correlations. In addition, more advanced principles in parametric and nonparametric statistics are emphasized. Prerequisite(s): junior classification or graduate student status.

HPS 780. Physical Dimensions of Aging (3).
Cross-listed as AGE 780. Develops an understanding of the complex physiological changes that accompany advancing age and the effects of physical activity on these factors. Also develops an appreciation for how functional consequences affect mental and social dimensions of life. Attention is given to sensory, motor, cognitive and psychological changes. Emphasizes factors associated with the preparation, implementation and evaluation of research projects involving older adult populations.

HPS 781. Cooperative Education (1-3).
Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with appropriate graduate faculty. The plan of study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education graduate credit. Repeatable for credit. A maximum of 3 hours (for nonthesis option) or 6 hours (for thesis option) may count toward the graduate degree.

HPS 790. Applied Exercise Physiology (3).
Focuses on the applied aspect of exercise physiology. Includes the areas of environmental influences on performance; optimizing performance through training, nutrition and ergogenic aids; training and performance of the adolescent athlete and the differences in performance and training between genders. Prerequisite(s): HPS 490 or 830.

HPS 795. Physiology of Athletic Performance (3).
Explores the physiological responses involved with various athletic performances, including sports requiring endurance, speed and power. Includes such areas of physiological study as metabolic energy systems, cardiovascular and skeletal muscle adaptation, muscle fiber type differentiation and responses to extreme environmental conditions. Discovers parameters for performance and establishes guidelines for training at high levels of performance.

HPS 797. Exercise in Health and Disease (3).
Introduction to the physiology of disease and the effects of short- and long-term exercise on specific conditions. Understanding the guidelines for exercise testing and prescription in high risk populations. Prerequisite(s): HPS 490.

HRM - Human Resource Management

Department of Management

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

HRM 390. Special Group Studies in Business (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): junior standing, advanced standing.

HRM 460BA. Human Resource Management Badge: Designing Jobs (0.5).
Students learn about job design, common approaches to job design, and job analysis. Course materials provide new approaches to designing job characteristics that support organizations' strategic objectives and employees' work-life balance. Activities engage students in creating job descriptions as an effective way to communicate employees' roles. *Course includes diversity content*. Graded Bg/NBg.

HRM 460BB. Human Resource Management Badge: Effective Employee Recruitment (0.5).
Students learn about effective approaches to attracting potential employees and generating a large pool of applicants. Includes core concepts of employee recruitment, internal and external sources of recruitment, and various methods to reach potential employees. Emphasizes online recruitment and effective use of social media. Activities engage students in designing recruitment strategies. *Course includes diversity content*. Graded Bg/NBg.

HRM 460BC. Human Resource Management Badge: Selecting the Right Employee (0.5).
Covers key decision-making concepts in hiring employees and team members. Exposes students to core legal requirements in hiring employees. Students also learn about selection tests and practices. Activities allow students to explore decision-making techniques and potential biases in identifying the right employees for a job. *Course includes diversity content*. Graded Bg/NBg.

HRM 460BD. Human Resource Management Badge: Managing Employee Performance (0.5).
Provides students with essential information about employee performance management. Exposes students to ways to appraise performance. Students also learn about performance appraisal, 360-appraisal, appraisers, evaluation biases, ways to evaluate employee behaviors, competencies, and contributions on the job. Activities allow students to practice performance feedback and learn ways to improve its effectiveness. *Course includes diversity content*. Graded Bg/NBg.

HRM 460BE. Human Resource Management Badge: Mentoring Employees (0.5).
Provides students with core knowledge about mentoring and its importance for both employees and the employing organization. Students learn about designing successful mentoring programs, contrasting formal and informal mentoring, and differentiating coaching from mentoring. Special attention given to mentor-protégé relationships, the use of technology in mentoring, and mentoring at different career stages. *Course includes diversity content*. Graded Bg/NBg.

HRM 462BA. Human Resource Management Badge: Ability at Work (0.5).
Provides students with essential information about disability discrimination, workplace design to allow any ability employees to succeed in their jobs, biases and misconceptions associated with disabilities, workplace adjustments for employees on the high and low spectrum of abilities, and emerging challenges associated with mental disabilities and disorders. Course activities allow students to experience the challenges for employees with various abilities. In addition, students become aware of best practices in providing opportunities for all employees. Graded Bg/NBg.

HRM 462BB. Human Resource Management Badge: Age at Work (0.5).
Provides students with essential information about ageism, age perceptions, differences across generations, challenges for organizations to attract and retain the new generations talent, and systematic adjustment needed for the aging workforce. Course activities allow students to experience the challenges for employees with different generations. In addition, students become aware of best practices in providing opportunities for all employees. Graded Bg/NBg.

HRM 462BC. Human Resource Management Badge: Gender at Work (0.5).
Provides students with essential information about gender issues in the workplace. Students will also learn differences between men and women, issues of masculinity and femininity, challenges for women in the workplace, legal and ethical issues related to gender identity, and organizational responses to gender issues. Course activities allow students to experience the cultural differences stemming from gender and gender identity. Graded Bg/NBg.

HRM 462BD. Human Resource Management Badge: Origin at Work (0.5).
Provides students with essential information focused on race, ethnic origin, and socio-economic status of employees and potential employees; biases and prejudice associated with race, ethnicity, national origin and socio-economic status, and the impact of origin on career advances. In addition, students become aware of best practices in improving opportunities for all employees. Graded Bg/NBg.

HRM 462BE. Human Resource Management Badge: Religion at Work (0.5).
Provides students with essential information about core beliefs and traditions of various religions, biases associated with religion, legal and ethical issues, and ways religious values and practices can influence functioning in the workplace. Course activities allow students to experience best practices and cultures across religions. Graded Bg/NBg.

HRM 462BF. Human Resource Management Badge: Shape at Work (0.5).
Provides students with essential information about biases and misconceptions associated with the size and shape of employees, legal and ethical issues, and experiences of employees. Course activities allow students to experience the challenges for employees with different sizes, shapes, looks and expressions. In addition, students become aware of best practices in improving opportunities for all employees. Graded Bg/NBg.

HRM 466. Fundamentals of Human Resource Management (3).
An analysis of the functions of human resource management, including human resource planning, recruiting, selection, appraisal

of performance, training, compensation systems, employee/labor relations, and workplace health, safety and security. Ethical issues in these functions are included. Covers relevant economic, regulatory and global influences on human resource management. Prerequisite(s): junior standing. Business students should have advanced standing.

HRM 481. Cooperative Education (1-3).
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): junior standing, advanced standing, 2.250 GPA.

HRM 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

HRM 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

HRM 665. Employment Law (3).
Legal issues involved in hiring and employment, including lawful hiring practices, discrimination and harassment law, performance reviews, termination, labor laws, labor relations and other legal issues. Prerequisite(s): junior standing.

HRM 666. Human Resource Staffing (3).
Analysis of all phases of the selection process as implemented in private and public sector organizations. Includes an analysis of the impact of federal and state anti-discrimination legislation on selection practices as well as human resource planning, recruiting, job analysis, and selection techniques including testing and interviewing. Validation of selection techniques is covered. Prerequisite(s): HRM 466, junior standing. Business students should have advanced standing.

HRM 668. Compensation (3).
Approaches to compensation processes in organizations. Discusses job evaluation techniques, wage level and wage structure determination, individual performance analysis, individual wage rate decisions, incentive plans and benefits. Considers the legal constraints on compensation practices. Prerequisite(s): HRM 466, junior standing. Business students should have advanced standing.

HRM 669. Training and Development (3).
Analyzes the training and development function as applied in private and public sector organizations. Considers the role of training and development in today's business environment, needs assessment, learning objectives, learning theory, instructional methods and techniques, and evaluation of training effectiveness. Prerequisite(s): HRM 466, junior standing. Business students should have advanced standing.

HRM 690. Seminar in Selected Topics (1-5).
Repeatable for credit with departmental consent. Prerequisite(s): HRM 466 or instructor's consent, junior standing, advanced standing.

HRM 750. Workshop in Human Resources (1-4).
Prerequisite(s): junior standing.

HS - Health Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

HS 290. Foundational Human Anatomy and Physiology (5).
General education math and natural sciences course. Designed to give students a foundational understanding of the anatomy and physiology of the human body. Emphasizes the basic anatomy of each body system and develops an understanding of normal human physiologic processes of each system. Students are challenged to begin thinking clinically so as to prepare them for a future in health professions. In correlation with lectures, lab sessions are required weekly to provide a hands-on understanding of the content. Students may receive credit for only one of the following: HS 290 or BIOL 223.

HS 301. Clinical Pharmacology (3).
Surveys therapeutic terms, drug actions, dosage, toxicology and application of drugs in the clinical setting. Prerequisite(s): BIOL 223 or HS 290 or equivalent, and CHEM 103 or 211 or equivalent or instructor's consent.

HS 315. Head and Neck Anatomy (2).
An in-depth study of the landmarks, muscles, nerves and vascular supply of the head and neck region. Prerequisite(s): BIOL 223 or HS 290, and enrollment in dental hygiene program.

HS 331. Principles of Dietetics & Nutrition (3).
A study of human dietetic and nutritional needs in the clinical setting. Covers composition and classification of foods, vitamins and their function, food and public health laws, and nutrition under special conditions. Gives a detailed application of dietetic and nutritional knowledge applied to various clinical conditions.

HS 400. Introduction to Pathophysiology (4).
Focuses on the essential mechanisms of disordered function which produce common diseases. Discusses some common diseases, but as examples of the basic processes covered, not as a part of an exhaustive inventory. Presents health professionals with accessible, usable and practical information they can broadly and quickly apply in their clinical or laboratory experience, or use as a basic pathophysiology course before taking the more specific professionally related pathophysiology courses. Prerequisite(s): BIOL 223 or 534 or HS 290.

HS 550. Kidney Function and Disease for Health Professions: Glomerular Filtration and Renal Blood Flow (1).
First in a series of four courses developed for students preparing for health professional programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science) who have a desire to expand their background in kidney physiology before entering these fields. Prerequisite(s): BIOL 223 or HS 290.

HS 551. Kidney Function and Disease for Health Professionals: Tumular Processing of Glomerular Filtrate (1).
Second in a series of four courses developed for students preparing for health professional programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science) who have a desire to expand their background in kidney physiology before entering these fields. Prerequisite(s): HS 550.

HS 552. Kidney Function and Disease for Health Professionals: Regulation of Extracellular Fluid Osmolarity (1).
Third in a series of four courses developed for students preparing for health professional programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science) who have a desire to expand their background in kidney physiology before entering these fields. Prerequisite(s): HS 551.

HS 553. Kidney Function & Disease for Health Professionals: Potassium, Kidney Diseases & Diuretics (1).
Fourth in a series of four courses developed for students preparing for health professional programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science) who have a desire to expand their background in kidney physiology before entering these fields. Prerequisite(s): HS 552.

HS 560. Cranial Nerves I: Embryology (2).
First in a series of two courses developed for students who have a desire to expand their background on the cranial nerves before entering a health professional field (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degree in the sciences (e.g., biology, exercise science). Prerequisite(s): BIOL 223 or HS 290.

HS 561. Cranial Nerves II: Anatomy & Physiology (2).
Second in a series of two courses developed for students who have a desire to expand their background on the cranial nerves before entering a health professional field (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degree in the sciences (e.g., biology, exercise science). Prerequisite(s): BIOL 223 or HS 290.

HS 570. Neuroscience for Health Professionals: Peripheral Nervous System (1).
First in a series of four courses developed for students preparing for health professions programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science, biochemistry) who have a desire to expand their background in neuroscience before entering these fields. Prerequisite(s): instructor's consent.

HS 571. Neuroscience for Health Professionals: Ascending and Descending Pathways (1).
Second in a series of four courses developed for students preparing for health professions programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science, biochemistry) who have a desire to expand their background in neuroscience before entering these fields. Prerequisite(s): HS 570 or instructor's consent.

HS 572. Neuroscience for Health Professionals: Brainstem and Cerebellum (1).
Third in a series of four courses developed for students preparing for health professions programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science, biochemistry) who have a desire to expand their background in neuroscience before entering these fields. Prerequisite(s): HS 570, 571.

HS 573. Neuroscience for Health Professionals: Forebrain (1).
Fourth in a series of four courses developed for students preparing for health professions programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science, biochemistry) who have a desire to expand their background in neuroscience before entering these fields. Prerequisite(s): HS 570, 571, 572.

HS 600. Advanced Clinical Anatomy (5).
Structured to present the human body using a regional approach. Emphasis on learning gross anatomy with a clinical mindset. In addition to lectures, the students use prosected cadavers, skeletal specimens, radiographic films and anatomical models. Designed for those students who desire to pursue a degree within health professions and who would like to deepen their knowledge of human anatomy and its application to clinical scenarios. Prerequisite(s): BIOL 223 or HS 290.

HS 700. Gross Anatomy (6).
3 Classroom hours; 9 Lab hours. Study of the structure of the human body emphasizing integration of anatomical information with human functional abilities. Prerequisite(s): four semesters of biological sciences and instructor's consent.

HS 710. Applied Clinical Pharmacology (3).
Discusses clinical applications of selected drug classes commonly prescribed in the primary care setting as well as the follow-up management of common chronic diseases. Discusses pharmacological managements as to pharmacokinetics, dosages, mechanisms of action (at molecular and systemic levels), side effects, drug interactions, contraindications, therapeutic use and expected outcomes. Emphasizes the practical application of this knowledge in various patient populations of all ages as well as rational drug selection and monitoring. Methodology includes lecture presentations, group discussions, clinical case studies, assessment of recent literature, homework assignments, quizzes and exams. Prerequisite(s): HS 301, admission to graduate health professional program or PA professional program, or instructor's consent.

HS 711. Pharmacological Management of Acute and Chronic Diseases (3).
Discusses the clinical application of specific categories of drugs used in the treatment of several common acute and chronic diseases. Presents pharmacokinetics, mechanisms of action, dosages, side effects and monitoring parameters of medications as they are used in these diseases and in various patient populations. Facilitates clinical application of this knowledge through case studies, class discussions and reviews of the latest medical literature. Prerequisite(s): admission to graduate nursing program and department consent, or completion of HS 710 and admission to PA professional program.

IB - International Business

Department of Management

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

IB 301BA. International Business Badge: Globalization and Its Implications (0.5).
Students learn about globalization, its causes, and its impact on different stakeholders. Includes an analysis of the history of globalization, and its effects, both positive and negative, on different stakeholders in society. *Course includes diversity content*. Repeatable for credit. Graded Bg/NBg.

IB 301BB. International Business Badge: Managing Across Cultures (0.5).
Students learn about what culture is and how it affects businesses. Includes an overview of cultures, understanding cultural frameworks, and using these frameworks to understand how different aspects of culture affect businesses. Hofstede’s cultural framework is used to help analyze how cultural dimensions affect businesses and organizations. *Course includes diversity content*. Repeatable for credit. Graded Bg/NBg.

IB 301BC. International Business Badge: An Overview of Exporting (0.5).
Students learn the basics of exporting. Includes the importance of exports, potential barriers to exports, evaluating export markets and sources for export related market research. Graded Bg/NBg.

IB 301BD. International Business Badge: Modes of Entry into Foreign Markets (0.5).
Introduces students to the different possible methods of entering foreign markets and evaluates these in terms of different products and services. Describes ways in which foreign market partners can be identified and evaluated. Graded Bg/NBg.

IB 333. International Business (3).
General education social and behavioral sciences course. A comprehensive overview of the multifaceted issues in international business and globalization that impact all functional areas of business. Examines contemporary issues, perspectives and influences on American business, economy, government, labor, society, technology, public policy and competitiveness. Reviews international trade theories, foreign exchange, monetary systems, balance of payments, trade policies, trade agreements, global trading systems and foreign investment, including cultural diversity, human rights, ethics and social responsibility issues. Examines implications for small and large businesses, including case studies from Wichita firms engaged in international business. *Course includes diversity content*. Prerequisite(s): junior standing recommended.

IB 400. Principles of Global Supply Chain Management and Logistics (3).
Cross-listed as DS 400. Designed to provide an overview of supply chains and logistics focusing on issues related to supply, operations, logistics and integration in a global context. Current and relevant topics to discuss include purchasing management, supplier relationships, ethical and sustainable sourcing, resource planning, process management, global logistics and location decisions, process integration, and performance measures. Area multi-national companies (Koch, Cargill, Spirit, Cessna and other aviation companies, etc.) are featured as live cases/guest lectures. Prerequisite(s): junior standing, advanced standing.

IB 450. Negotiating Across Cultures (3).
Cross-listed as MGMT 450. Regardless of one's chosen career, industry, title, status or role in an organization, one continually negotiates. If one manages or is managed, leads or is led, sells or is sold, buys or is bought, hires or is hired, fires or is fired, empowers or is empowered, one negotiates. Any time one requests or is requested to do something, one negotiates. The quality and effectiveness of one's career and life will be strongly influenced by one's ability to effectively negotiate. The better one understands the person(s) with whom one negotiates, the more effective negotiator one will be. Understanding the other person(s) includes understanding his/her/their culture, expectations, objectives, motivations, decision-making processes, and rationale for behavior. Focuses on bargaining and negotiating in a wide variety of settings, from simple buyer/seller negotiations to multiple-issue/multiple-party negotiations. Touches on principal differences among cultures and how those differences may affect negotiations and outcomes. Prerequisite(s): IB 333, junior standing, advanced standing.

IB 481. Cooperative Education (1-3).
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): junior standing, advanced standing, 2.250 GPA.

IB 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

IB 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

IB 561. International Economics and Business (3).
Cross-listed as ECON 672. Surveys the economic foundations of international trade, finance and investment. Includes foreign exchange markets, regional integration, trade theories and instruments, U.S. trade policies and treaties, multinational companies, immigration, as well as differences in cultural, political and economic systems. Includes current events. *Course includes diversity content*. Prerequisite(s): ECON 201, 202, junior standing.

IB 600. International Management (3).
Overview of international business including strategy and organizational behavior. Equips students to manage effectively in an increasingly diverse global marketplace. Covers international strategy formulation, cross-border alliances, control and coordination systems in multinational organizations, social responsibility and ethics, culture and communication in global management, international negotiations, and management of global human resources. *Course includes diversity content*. Prerequisite(s): IB 333.

IB 601. International Marketing (3).
Cross-listed as MKT 601. Problems and procedures of marketing in foreign countries. Includes the effects of foreign cultures and marketing systems on the design of marketing programs. *Course includes diversity content*. Prerequisite(s): MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

IB 625. International Financial Management (3).
Cross-listed as ECON 674 and FIN 625. Studies the international financial and monetary system, emphasizing currency markets. Also examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing.

IB 690. Special Topics in International Business (3).
Covers emerging topics within the field of international business. Prerequisite(s): completion of or concurrent enrollment in all required IB courses, junior standing, advanced standing.

IB 690L. Study Abroad in France (3).
Establishes a foundation of international business fundamentals. Discusses the steps, principles and methods associated with international business.

ID - Innovative Design

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ID 300. Design Thinking & Innovation (3).
General education social and behavioral sciences course. Overview of design-thinking concepts with the specific intent of understanding the key principles of user-centered design, and how the design-thinking process can lead to new insights and innovations. Purpose of the course is to help learners better understand and appreciate the process of design thinking. Course focuses on the process of human-centric design by effectively defining a problem, and engaging in the creative process. Students observe and collaborate with multidisciplinary teams, generate ideas, create rapid prototypes, reflect and evaluate solutions. They develop empathy for the user, break down large problems into smaller pieces to solve, explore options and test their prototype. This process can be applied to product development, processes, systems, organizations and social concerns. This is an applied learning/action-oriented course that involves individual and team-based work to creatively solve issues.

ID 301. Leadership is Essential Seminar (3).
General education social and behavioral sciences course. Introduces students to leadership theories, history of leadership and concepts as practiced across different settings and disciplines with an emphasis on personal strengths and professional interests in a teamwork structure through a cultural strengths framework. After completing the seminar students should be able to recognize the main leadership theories, identify different leadership perspectives, recognize applications of leadership, and understand the benefits and challenges of leadership.

ID 310BA. Successful Grant Writing Badge: Narrative Writing and Budgets (0.5).
Comprehensive introduction to grantwriting. Topics include developing grant opportunities based on the organization's strategic plan, researching grantmakers (funders), using the Request for Proposals (RFP) for successful project and proposal planning, understanding persuasive narrative writing, preparing the project budget, and optimizing the proposal for resubmission if it is rejected. Graded Bg/NBg.

ID 310BB. Successful Grant Writing Badge: Theory and Practice (0.5).
Designed for two groups of students: either experienced grant writers or students who have completed the WSU badge, Successful Grantwriting: Narrative Text and Budgets. This badge, Successful Grantwriting: Theory and Practice, offers a big-picture approach, more theoretical than the first, hands-on introductory course. Students engage in discovery learning, focusing on online and library research. Assignments are designed to assist students as grant writers in developing a supportive theoretical structure for their project development and proposal writing processes. Graded Bg/NBg.

ID 400. Innovation in Practice (1-6).
Independent study course for students interested in complementing their degree with creative thinking, problem solving and design. Undergraduate students choosing to participate in entrepreneurial activities can enroll in this course to gain credit for this experience. Built around experiential enrichment related to the broad topic of innovation. Topics such as intellectual property, branding, pitching, wire-framing, prototyping and funding are discussed in a group setting and may include guest speakers and/or visits to local companies. Repeatable for credit.

ID 405. Seminar in Applied Innovation (1-6).
Focuses on a sample of innovation design and/or ventures problems through theory and application. Content changes as new problems attain prominence locally, nationally and internationally. Content is typically driven by project challenges that often revolve around prototyping and overcoming barriers. An example of course content might be solving a materials issue for a wearable technology, circuitry of an instrument, coding for a mobile application or website development, and can be as broad as a problem linked to innovation in third-world industrialization. Intellectual property and fund raising may be discussed in group settings and may include guest speakers and/or visits to local companies.

ID 500. Design Thinking Process (1).
Today organizations of all sizes are looking to be more innovative, deliver unique, high-quality user experiences and even disrupt their industry. This course looks at techniques and approaches to innovation design past and present, but focuses on the process of design thinking. Design thinking takes a human-centered approach to problem solving and can be applied to nearly any situation including new ways of looking at products and services, consumer markets, user wants and needs, team functions and building, company alignment, strategy, and more. Course purpose is to help students learn, understand and appreciate the process of design thinking. Focuses on techniques for developing empathy and understanding, effectively defining a problem, exploring ideas, rapid prototyping and testing. Students observe and collaborate with interdisciplinary teams to discover user insights, improve user experiences, innovate new products and services, create team alignment, and overall problem solving. Intended for students with diverse interests and nontechnical backgrounds.

ID 500H. Design Thinking Process Honors (1).
Today organizations of all sizes are looking to be more innovative, deliver unique, high-quality user experiences and even disrupt their industry. This course looks at techniques and approaches to innovation design past and present, but focuses on the process of design thinking. Design thinking takes a human-centered approach to problem solving and can be applied to nearly any situation including new ways of looking at products and services, consumer markets, user wants and needs, team functions and building, company alignment, strategy, and more. Course purpose is to help students learn, understand and appreciate the process of design thinking. Focuses on techniques for developing empathy and understanding, effectively defining a problem, exploring ideas, rapid prototyping and testing. Students observe and collaborate with interdisciplinary teams to discover user insights, improve user experiences, innovate new products and services, create team alignment, and overall problem solving. Intended for students with diverse interests and nontechnical backgrounds.

ID 501. Design Thinking Facilitation (1).
Looks at various techniques and approaches to facilitating teams in the design-thinking process, understanding stakeholders, dealing with a variety of personality types, and handling group dynamics and conflicts. Intended for students with diverse interests and nontechnical backgrounds.

ID 501H. Design Thinking Facilitation Honors (1).
Looks at various techniques and approaches to facilitating teams in the design-thinking process, understanding stakeholders, dealing with a variety of personality types, and handling group dynamics and conflicts. Intended for students with diverse interests and nontechnical backgrounds.

ID 502. Design Thinking Implementation: Design Challenges Level I (2).
Using design-thinking processes, students are assigned to teams to tackle one or more design challenges provided by a Fortune 100 company to innovate new ideas and solutions. (Design challenges vary by semester.) These challenges are more involved than those in ID 501. Each team works through the challenge, develops ideas, prototypes, evaluates and redesigns as needed to reach a final solution which is presented by the team. Intended for students with diverse interests and nontechnical backgrounds.

ID 503. Introduction to Branding (1).
Looks at companies that have developed successful brands and what can be learned from them. Topics include: what branding really is, how branding can impact sales short-term and long term, who really owns the brand, and how companies manage their brands. Intended for students with diverse interests and nontechnical backgrounds.

ID 504. Building a Brand Strategy (1).
Looks at how to position companies for long-term success by developing a well thought out brand strategy. Using the tools learned in ID 503, students work on developing a strategy for a new startup company. Students collaborate in teams, but ultimately turn in an individual company brand strategy. Intended for students with diverse interests and nontechnical backgrounds.

ID 505. Design Thinking Implementation: Design Challenges Level II (2).
Using design-thinking processes, students are assigned to teams to tackle one or more design challenges provided by a Fortune 100 company to innovate new ideas and solutions. (Design challenges vary by semester.) These challenges are more involved than those in ID 502. Each team works through the challenge, develops ideas, prototypes, evaluates and redesigns as needed to reach a final solution which is presented by the team. Intended for students with diverse interests and nontechnical backgrounds.

ID 506. Leadership Development for Innovation (3).
Examines what makes or breaks a great leader, not just in companies, but in life. Studies the six “C’s” of leadership: character, charisma, commitment, competence, communication and courage, and how each one can enhance or take away from leadership ability. Intended for students with diverse interests and nontechnical backgrounds.

ID 507. Tech Talent Development (1).
Prepares students for integration into the rapidly growing technology industry using applied problem solving exercises within the area of technology development. Students are exposed to a diverse array of real-world problems faced by technology startups and established companies, and taught how to facilitate successful outcomes while adapting to the culture. Focuses on team-building exercises, estimating solutions effort and cost, resolving conflicts, developing interpersonal skills, and identifying roles within teams. Intended for students with interests in the technology industry.

ID 508. Design Sprints (1).
As a method to quickly solve big problems and test new ideas, design sprints are a very efficient ideation and problem solving process. Attendees learn the collaborative sprint process and how to use it to develop new products and services, and to solve complex problems. Course is ideal for students who intend to work in the tech, product or service development industries, are UX designers, are looking to grow their collaboration and team leadership skills, or intend to run their own business.

ID 510. Introduction to Adaptive Leadership (3).
Introduces the concept of adaptive leadership, a practical leadership framework that helps individuals and organizations adapt and thrive in challenging environments in order to make progress on the difficult challenges facing society, organizations and individuals.

ID 555. Innovating for Social Justice (3).
Achieving sustainable globalization requires a rejuvenation of entrepreneurial and innovation based on a better understanding of the impact of social context. Course is intended for students with diverse interests and nontechnical backgrounds.

ID 705. Seminar in Applied Innovation (1-6).
Focuses on a sample of innovation design and/or ventures problems through theory and application. Content changes as new problems attain prominence locally, nationally and internationally. Content is typically driven by project challenges that often revolve around prototyping and overcoming barriers. Example of course content might be solving a materials issue for a wearable technology, circuitry of an instrument, coding for a mobile application, website development, and can be as broad as problems linked to innovation in third-world industrialization. Intellectual property and fund raising may be discussed in group settings and may include guest speakers and/or visits to local companies.

ID 705A. Practical Prototyping (1).
Exploration of concepts employed in realizing practical prototypes including form versus function, user/product interface, failure, and quality. Use of at-hand processes and equipment may be explored.

ID 705B. Kan-Fab; Modeling and Fabrication (1).
Develops the concepts, skills and methods needed to design, prototype and fabricate physical "things". Presents relevant techniques in sketching, 2D and 3D modeling and fabrication along with basic electronics and circuit design. Fabrication techniques may include laser-cutting, 3D printing, soldering, water jet, etc.

ID 705C. Gadgets (1).
Introduction to electronic product design elements. Expose students to interesting and surprising design features inside electronic device products. Reverse engineer an existing product, assess limitation of size and power, and undertake a mechanical design project.

ID 705D. Project Coding (2).
Don’t just learn to code, learn to develop products. Use critical thinking tactics to explore how to use your set of coding skills to fit into various real world applications.

ID 705E. Product Development Process (1-3).
Discusses how to launch viable, market-ready products. Practice the use of an outcome bases product roadmap.

ID 705F. Optimizing Design (1-3).
Designed for the nonprofessional graphic designer looking to explore methods and concepts to take ideas and designs to the next step indepdently.

ID 705G. Start Up (1-3).
Combines business strategy with design thinking. Discusses methods of addressing risk and capitalizing on opportunity to increase value. Innovative approaches to present revenue models and sales channels are explored.

ID 705I. Introduction to Blockchain 'Intro to Crypto-Currency' (1-3).
Course for the nontechnical audience. Introduces the key concepts behind blockchain technology, digital currency, hyperledger and other use cases.

ID 710. Service Design Thinking (2).
Teaches students how to tailor design-thinking processes to achieve intended outcomes and objectives associated with services, systems and processes using empathy maps, journey maps, storyboards, prioritization grids, and next steps. Additionally, students learn how vision, goals, activities, tasks and steps can help users complete an intended outcome in a way that supports the overall mission of the organization. Course is for anyone who works with or develops services, systems or processes including innovators, engineers, game designers, web designers, operations management, efficiency management and service-related industries such as restaurants, hotels and event centers.

ID 752. Product, Service, and Process Prototyping (3).
Provides an overview of prototyping concepts with the specific intent of help innovation design degree students identify various methods of successfully demonstrating the potential of their ideas. Intended for students with diverse interests and nontechnical backgrounds.

ID 753. Design: Intent vs Impact (3).
Explores the ethics behind companies with the least impact vs the companies who create the most negative impact. Addresses why "being less bad" is still not good enough, and tackles the 4R's — reduce, recycle, reuse and regulations. Students discuss and learn about ethically resourced materials, sustainability, carbon footprints, natural resources, outsource responsibility, product lifecycles, social responsibility, cutting waste, government concerns, respecting diversity and what potential new issues can arise from artificial intelligence. Course is for anyone planning to launch or run a company, innovate new products and services, looking to grow their leadership skills, or lead a team for a company that produces products and services. Intended for students with diverse interests and technical or nontechnical backgrounds. Completion of this course fulfills the Graduate School's professional/scholarly/integrity training requirement.

IME - Industrial and Manufacturing Engineering

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

IME 222. Engineering Graphics (2).
Provides an opportunity for the undergraduate student to learn the basics of engineering graphics as a tool for communicating design ideas. Covers basics of descriptive geometry, spatial relationships involving orthographic projections, auxiliary views, and pictorial projections. Aspects of design implementation such as dimensioning, tolerancing, sectional views, and working drawings are also included. Prerequisite(s): MATH 123. Corequisite(s): IME 222L or equivalent.

IME 222L. Graphics Lab (1).
3 Lab hours. Provides an opportunity for students to reinforce the basics of engineering graphics using a suitable CAD software. Includes the practice of using a CAD software to understand and produce basic spatial relationships involving orthographic projections, auxiliary views, sectional views, pictorial projections, dimensioning, tolerancing, working drawings, 3D assembly and implementing these on a suitable CAD software. Prerequisite(s): MATH 123. Corequisite(s): IME 222 or equivalent.

IME 254. Engineering Probability and Statistics I (3).
Studies the concepts of probability theory, random variables, distributions, moments, sample statistics and hypothesis testing. Prerequisite(s): MATH 243 or 252.

IME 255. Engineering Economy (3).
Economic comparisons of engineering alternatives considering the time value of money, taxes and depreciation; accounting and its relationship to economic analysis; replacement decisions. Pre- or corequisite(s): MATH 242 or 251.

IME 258. Manufacturing Methods and Materials I (3).
Provides a basic understanding of materials and processes used to manufacture products. Introduces material properties and metrology. Covers material removal, CNC machining, nontraditional machining, additive manufacturing, casting, forming, conditioning, joining, and plastics and composites manufacturing. Key process features such as energy sources and kinematics, as well as interrelationships between processing and properties are identified. Introduces process planning. In a companion course, IME 258L, that is required to be taken concurrently by some majors, students gain extensive hands-on experience in different manufacturing processes and in teamwork. Prerequisite(s): MATH 123 and IME 222.

IME 258L. Manufacturing Methods and Materials I Lab (1).
Companion course to IME 258, required to be taken concurrently by some majors. Students gain extensive hands-on experience in different manufacturing processes and in teamwork. Corequisite(s): IME 258.

IME 281P. Cooperative Education (1).
Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Repeatable for credit. Prerequisite(s): successful completion of 20 hours toward an engineering degree and approval by appropriate faculty sponsor.

IME 425. Kinematic and Dynamic Design (3).
Introduces students to the concepts of position, displacement, velocity, acceleration, and the equations of motion governing the kinematics and the dynamics of mechanisms, including linkage, cam and gear systems Engineering drawings of typical machine elements containing both parametric and geometric tolerancing are interpreted. The theory of mechanisms and tolerancing/fit design are applied through laboratory exercises and a team-term project conducted in a manufacturing laboratory equipped with CNC machines, welding and metrology equipment. Prerequisite(s): IME 222, 258 and PHYS 313.

IME 452. Work Systems (3).
The documentation, measurement and design of work systems. Includes work measurement systems, methods engineering, work sampling, predetermined time systems and economic justification. Prerequisite(s): IME 254. Pre- or corequisite(s): IME 255.

IME 480. Selected Topics in Industrial Engineering (1-3).
New or special course material presented upon sufficient student demand. Repeatable for credit. Prerequisite(s): departmental consent.

IME 481A. Cooperative Education (1).
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Repeatable for credit. Prerequisite(s): junior standing and approval by the appropriate faculty sponsor.

IME 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

IME 481N. Internship (1).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

IME 481P. Cooperative Education (1).
Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic

program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Repeatable for credit. Prerequisite(s): junior standing and approval by appropriate faculty sponsor.

IME 490. Independent Study (1-3).
Arranged individual independent study in specialized areas of industrial engineering under the supervision of a faculty member. Repeatable for creditt. Prerequisite(s): instructor's consent.

IME 524. Descriptive Analytics (3).
A study of confidence interval, regression analysis, analysis of variance, correlation analysis and design of experiments emphasizing applications to engineering. For undergraduate students only. Prerequisite(s): IME 254.

IME 549. Industrial Ergonomics (3).
A systematic approach to the optimization of the human-task-environment system. Includes work space design, manual materials handling, work related musculoskeletal disorders and environmental factors. Emphasizes applications in industry. Prerequisite(s): IME 254 or departmental consent.

IME 550. Operations Research I (3).
Covers deterministic models and methods in operations research including linear programming, integer programming, and network optimization to aid in the analysis and solution of complex, large-scale decision problems. Prerequisite(s): MATH 511.

IME 553. Production Systems (3).
Quantitative techniques used in the analysis and control of production systems. Includes forecasting, inventory models, operation planning and scheduling. Prerequisite(s): IME 254. Pre- or corequisite(s): IME 255.

IME 554. Statistical Quality Control (3).
A study of the measurement and control of product quality using statistical methods. Includes acceptance sampling, statistical process control and total quality management. Pre- or corequisite(s): IME 254.

IME 556. Information Systems (3).
Provides a basic understanding of information systems in a modern enterprise, including database design, information technology and ethics using hands-on activities and directed classroom discussion. For ISME undergraduates students only. Prerequisite(s): CS 211 or MIS 310 or MATH 451.

IME 557. Safety Engineering (3).
Environmental aspects of accident prevention, industrial compensation and safety legislation. Fundamental concepts of occupational health and hygiene. Prerequisite(s): IME 254.

IME 558. Manufacturing Methods and Materials II (4).
3 Classroom hours; 2 Lab hours. Covers theoretical and practical aspects of manufacturing processes, including material properties and behavior as influenced by the manufacturing process. In-depth study of such manufacturing processes as casting heat treatment, bulk forming, sheet metal forming, metal cutting, nontraditional machining and process monitoring through measurement of manufacturing process variables. Also includes laboratory experience and plant tours. Prerequisite(s): IME 258, ME 250. Corequisite(s): IME 558L.

IME 561. Applied Control Systems (3).
Covers the fundamentals of control systems and their applications. Topics include theory of control systems, Laplace transforms, Z transforms, stability analysis, state space methods, PID control, tuning, relay logic controllers, programmable logic controllers, supervisory control and data acquisition, and case studies. Prerequisite(s): MATH 555 with a C or better grade or instructor’s consent.

IME 563. Facilities Planning and Design (3).
Quantitative and qualitative approaches to problems in facilities planning and design, emphasizing activity relationships, space requirements, materials handling and storage, and plant layout. Quantitative and qualitative approaches to selection of material handling devices and design of storage systems, and introduction to concepts of supply chain. Prerequisite(s): IME 452, 550, 553.

IME 565. Systems Simulation (3).
The design of simulation models and techniques for use in designing and evaluating discrete systems, including manufacturing systems too complex to be solved analytically. Emphasizes general purpose computer simulation languages. Prerequisite(s): computer programming competency. For ISME undergraduate students only. Pre- or corequisite(s): IME 553, 524.

IME 590. Industrial Engineering Design I (3).
An industry-based team design project using industrial engineering and manufacturing engineering principles; performed under faculty supervision. May not be counted toward graduate credit. Prerequisite(s): IME 553; must be within two semesters of graduation or departmental consent.

IME 625. Product Performance Evaluation using CAE (3).
Covers the application of analysis and simulation methods and tools to evaluate product designs for strength, life and robustness. Includes a lab experience and a design project aimed at developing proficiency in virtual product evaluation. Prerequisite(s): AE 333 and IME 425.

IME 650. Operations Research II (3).
The second of a two-course sequence on models and solution approaches commonly used in the analysis of decision-making problems. Familiarizes students with nonlinear deterministic as well as probabilistic models in operations research and their applications. In particular, upon completion of this course, students develop an understanding of how to model and analyze systems that show nonlinear and probabilistic behavior. Moreover, students learn how to use state-of-the-art optimization solvers. Topics include nonlinear programming, decision making under uncertainty, game theory, Markov chains, queuing theory and dynamic programming. Prerequisite(s): IME 550 or instructor's consent.

IME 664. Engineering Management (3).
Introduction to the design and control of technologically-based projects. Considers both the theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development and personal skill assessment. Prerequisite(s): IME 255, (IME 254 or ENGT 354), all with a C or better.

IME 676. Aircraft Manufacturing and Assembly (3).
Covers key aspects of assembly design for aircraft structures. First module covers design of jigs and fixtures to locate parts and machine features to tolerance, and the effect of part and tool stiffness on the tolerances. Second module covers gage design and gage studies, and geometric dimensioning and tolerancing. Third module covers assembly planning and best practices for aircraft assembly. Laboratory experiments and case studies are used to understand issues related to aircraft assembly. For ISME undergraduate students only. Prerequisite(s): IME 258.

IME 690. Industrial Engineering Design II (3).
Continuation of the design project initiated in IME 590 or the performance of a second industrial engineering design project; an industry-based team design project using industrial and manufacturing

engineering principles; performed under faculty supervision. May not be counted toward graduate credit. Prerequisite(s): IME 590 and departmental consent.

IME 724. Statistical Methods for Engineers (3).
For graduate students majoring in engineering. Students study and model real-life engineering problems and draw reliable conclusions through applications of probability theory and statistical techniques. Not available for undergraduate credit. Prerequisite(s): MATH 243.

IME 734. Introduction to Data Mining and Analytics (3).
Introduces the theory and basic analysis methods for analyzing existing datasets. Topics include: data preprocessing, linear regression, logistic regression, classification (using linear regression, logistic regression, decision trees, rule-based classifiers, instance-based classifiers, Bayesian classifiers, support vector machine), association analysis and cluster analysis. Focuses on the data mining tasks that each method addresses, the assumptions of each method, the inputs needed, the outputs, interpretation of results, and evaluation of the quality of the analysis. Includes a term project based on the research/application interests of the students. The software package R is used to illustrate the implementation of the analysis. Prerequisite(s): IME 254 and MATH 511 or instructor's consent.

IME 740. Analysis of Decision Processes (3).
Decision analysis as it applies to capital equipment selection and replacement, process design and policy development. Explicit consideration of risk, uncertainty and multiple attributes is developed and applied using modern computer-aided analysis techniques. Prerequisite(s): IME 254, 255.

IME 749. Ergonomic Assessment Methods (3).
Covers current and commonly used risk and exposure assessment methods used for musculoskeletal disorders in the workplace. Students develop an understanding and working knowledge of how to evaluate and control the risk of work-related musculoskeletal disorders in the design of workplaces. Critical assessments and discussions of risk and exposure assessment techniques are performed relative to the strengths and weaknesses of each technique as well as the evidence for risk control and validity of the various methods. Prerequisite(s): IME 549 or instructor's consent.

IME 753. Advanced Linear Programming (3).
Linear and integer programming formulations, simplex method, geometry of the simplex method, sensitivity and duality, interior point methods. Prerequisite(s): IME 550 or instructor's consent.

IME 754. Reliability and Maintainability Engineering (3).
Studies problems of quantifying, assessing and verifying reliability. Presents various factors that determine the capabilities of components emphasizing practical applications. Examples and problems cover a broad range of engineering fields. Prerequisite(s): IME 524 or 724.

IME 755. Design of Experiments (3).
Application of analysis of variance and experimental design for engineering studies. Includes general design methodology, single-factor designs, randomized blocks, factorial designs, fractional replication and confounding. Prerequisite(s): IME 524 or 724.

IME 758. Analysis of Manufacturing Processes (3).
Introduces students to plasticity and builds upon their knowledge of mechanics and heat transfer in order to analyze various manufacturing processes. Numerical techniques (mainly finite element analysis) as well as theoretical methods are introduced and applied to analysis of processes such as open and closed die forging, superplastic forming, machining, grinding, laser welding, etc. The effect of friction, material properties and process parameters on the mechanics of the processes and process outputs is the main focus of study. Prerequisite(s): AE 333.

IME 759. Ergonomic Interventions (3).
Provides an understanding and working knowledge of how to evaluate and control the risk of musculoskeletal disorders in the design of workplaces and processes. Scientific aspects of intervention design and effectiveness assessment are discussed, including an assessment of the strengths and weaknesses of the intervention research literature. Prerequisite(s): IME 549 or instructor's consent.

IME 761. Robot Programming and Applications (3).
Covers broad interdisciplinary topics in industrial robotics. Topics include path planning and programming of robot manipulators, collaborative robots and mobile robots, as well as robot applications in conjunction with the industrial internet of things (IIoT), industrial automation, and smart manufacturing. Both theoretical and practical approaches are considered for smooth transitions from theories to applications. Practical applications are facilitated by lab activities that use robot simulation software. Prerequisite(s): IME 561 with a C or better grade or instructor's consent.

IME 764. Systems Engineering and Analysis (3).
Presentation of system design process from the identification of a need through conceptual design, preliminary design, detail design and development, and system test and evaluation. Studies operational feasibility, reliability, maintainability, supportability and economic feasibility. Prerequisite(s): IME 254, 255.

IME 767. Lean Manufacturing (3).
Introduces lean concepts as applied to the manufacturing environment. Deals with the concepts of value, value stream, flow, pull and perfection. Includes waste identification, value stream mapping, visual controls and lean metrics. Prerequisite(s): IME 553.

IME 775. Computer Integrated Manufacturing (3).
A study of the concepts, components and technologies of CIM systems; enterprise modeling for CIM, local area networks, CAD/CAM interfaces, information flow for CIM, shop floor control and justification of CIM systems. Prerequisite(s): knowledge of a programming language, IME 558.

IME 777. IME Colloquium (0).
Presentations and discussions of industrial engineering problems, research methods and case analyses for graduate students. Repeatable for credit.

IME 780. Topics in Industrial Engineering (3).
New or special courses are presented under this listing. Repeatable for credit when subject matter warrants.

IME 780AK. Advanced Industrial Information Systems (3).
Utilize database and analytical software to develop advanced industrial information systems. Topics include: advance Microsoft Access for end-users, Logic-based systems, Analytics in Microsoft Excel, data modeling, and data analytics.

IME 780AL. Energy Analytics & Management (3).
Covers topics on energy auditing, rate structures, economic evaluation techniques, analysis of opportunities in energy systems including but not limited to lighting, compressed air, process heating, steam, and other process-based energy systems. Also covers multiple software programs used by energy auditing professionals. Prerequisite(s): EE 282 or instructor's approval.

IME 780AM. Advanced Cyber-Physical Systems (3).
A cyber-physical system is a set of interconnected digital computing devices that interact with physical world through sensors and actuators in a feedback control loop. The course outlines the basic principles of design, modeling, and analysis of cyber-physical systems with the use of mathematical abstractions, control theories, data communication, and distributed algorithms. The course also explains some of the

Industry-4.0 technologies, such as cognitive robotics and Industrial Internet of Things (IIoT), with some hands-on lab activities.

IME 780AN. Big Data Analytics in Engineering (3).
Provides a graduate-level introduction to methods in data science and big data analytics with engineering applications. Specifically, examines some widely used statistical methods and machine learning tools for big data (data with high volume, velocity and variety). A variety of up-to-date industrial engineering topics are covered as application examples. Prerequisite(s): basic engineering statistics and programming skills.

IME 780AO. Robot Programming and Application (3).
Covers the broad interdisciplinary topic of industrial robotics. Discusses path planning and programming of robot manipulators, collaborative robots and mobile robots. Also covers the use of feedback sensors. Both theoretical and practical approaches are discussed to facilitate a smooth transition from theories to applications. Practical applications are facilitated by robot simulation software. Upon successful completion of the course, the student is able to use advanced methods for robot programming and gains basic familiarization with robot simulation software.

IME 780AP. Neural Networks and Machine Learning (3).
Introduces the theory and practical applications of artificial neural networks and machine learning. Covers several network paradigms, emphasizing the use of neural networks as a solution tool for industrial problems which require pattern recognition, predictive and interpretive models, pattern classification, optimization and clustering. Covers machine learning. Presents examples and discusses them from a variety of areas including quality detection, process monitoring, robotics, simulation metamodeling, diagnostic models, combinatorial optimization and machine vision. For students from a variety of disciplines.

IME 781. Cooperative Education (1-8).
A work-related placement with a supervised professional experience to complement and enhance the student's academic program. Intended for master's level or doctoral students in IME. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite(s): departmental consent, graduate GPA of 3.000 or above.

IME 781P. Cooperative Education (1).
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. Repeatable for credit. For graduate students.

IME 783. Supply Chain Management (3).
Quantitative and qualitative techniques used in the design and management of the supply chain. Includes distribution management, multi-plant coordination, optimal design of the logistics network, adequate safety stock levels and the risk pooling concept, and integrating decision support systems (DDS) in the management of the supply chain. Prerequisite(s): IME 553 or DS 350 or DS 850 or instructor's consent.

IME 788. Rapid Prototyping and 3D Printing (3).
Provides engineering students with knowledge about all available rapid prototyping and rapid tooling techniques. Topics include fundamentals of rapid prototyping and additive manufacturing, reverse engineering, CAD modeling, and current 3D printing technologies. Additional concepts important to product development in aviation industry and medical applications are addressed and exercised during term projects. Prerequisite(s): IME 775 or instructor's consent.

ITAL - Italian

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ITAL 111. Elementary Italian I (5).
Emphasizes the four fundamental skills in language learning: listening, speaking, reading and writing. Requires daily classroom and language laboratory work.

ITAL 112. Elementary Italian II (5).
A continuation of ITAL 111 further emphasizing the four fundamental skills in language learning and a complete presentation of elementary Italian grammar. Requires daily classroom and language laboratory work. Prerequisite(s): ITAL 111 or equivalent.

ITAL 223. Intermediate Italian (3).
Grammar review, composition, conversation and cultural readings. Prerequisite(s): ITAL 112 or instructor's consent.

JAPN - Japanese

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

JAPN 101. Travel Japanese (3).
Designed to teach basic conversational skills in a variety of situations that are commonly faced by travelers. Includes information about culture, expectations, and taboos that helps travelers better navigate in a country with different societal norms. *Course includes diversity content*. Repeatable for credit.

JAPN 111. Elementary Japanese I (5).
Introduces fundamentals of pronunciation, vocabulary building, practice in understanding and speaking phrases, reading, and writing. Also includes cultural material.

JAPN 112. Elementary Japanese II (5).
A continuation of JAPN 111, completing the basic course in Japanese. Prerequisite(s): JAPN 111 or equivalent.

JAPN 223. Intermediate Japanese I (3).
Includes fundamentals of pronunciation, vocabulary building, practice in understanding and speaking phrases, reading, and writing. Draws examples from Japanese culture, politics and society. Prerequisite(s): JAPN 112 or equivalent.

JAPN 224. Intermediate Studies in Japanese Language (1-3).
May deal with one of the following topics in Japanese language as announced by the instructor: (1) continuing intermediate Japanese grammar; (2) Japanese business terminology; (3) intermediate Japanese readings; (4) other topics as approved by the department. Repeatable for credit with a change of content. Prerequisite(s): JAPN 223 or instructor's consent.

JAPN 224A. Intermediate Japanese Grammar (1).
Topics in Japanese language as announced by the instructor. Repeatable for credit with a change of content.

JAPN 224C. Intermediate Japanese III (2).
A continuation of JAPN224A: further enrichment of listening comprehension and speaking, reading and writing skills. Prerequisite(s): JAPN 224a or instructor's consent.

JAPN 225. Japanese Conversation (2).
Develops oral fluency. Pre- or corequisite(s): JAPN 112.

JAPN 300. Special Studies (1-3).
Topic announced by instructor. Repeatable for credit. Prerequisite(s): instructor's consent.

JAPN 300E. Japanese Anime and Manga (3).
Analyzes the cultural and historical significance of animation and manga (Japanese comics) in Japan. Looks at the ways in which animation and manga are influenced by Japanese culture, and how Japanese culture has been influenced by these forms of media. Discusses the worldwide popularity of anime/manga and how it has influenced world views of Japan.

JAPN 315. Study Abroad Transfer Credit (1-6).
Transfer of credit from sister institution in Japan through study abroad.

JAPN 325. Japanese Conversation II (2).
Develops oral fluency through listening, vocabulary building, culturally-appropriate communication strategies, and pronunciation. *Course includes diversity content*. Prerequisite(s): JAPN 225 or JAPN 315 or instructor's consent.

JAPN 515. Advanced Studies in Japanese Language and Culture (1-4).
Transfer of credit for advanced level study in Japanese language and culture from sister institution in Japan through study abroad. For undergraduate credit only.

LASI - LAS Interdisciplinary

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

LASI 100. Pass Program (2).
PASS, Personal and Academic Success Seminar, studies the university as a resource for personal development and the development of an individual master plan for study and self-development in the university. Created specifically for the first-time WSU student-athlete, the course assists students in developing and refining personal and academic success skills. Also provides opportunities for one-on-one interaction with other students as well as WSU faculty and staff. Course is required for NCAA student-athletes new to campus.

LASI 100A. Returning Adults (1).
A special class for adults who have been out of school one year or more. Helps adults learn more about themselves and about Wichita State University. Covers career information, interest testing and interpretation, educational planning and other activities.

LASI 101. Introduction to the University (1-3).
Designed especially for first-year students. A gateway to WSU faculty, staff and resources and a toolkit for academic success at WSU. Students learn skills in critical thinking, university-level reading, studying, test taking, and library research. They gain insight into issues of teaching and learning styles, diversity of thought and culture, personal finances, health, and the benefits of engagement in student organizations. Students learn to use online and printed resources as tools to find important information about academic policies and procedures, and WSU campus resources such as advising, counseling services, and career exploration. Students learn to use the WSU computer system for tasks such as enrollment, dropping and adding courses, and checking financial aid status. Students also learn to value and to participate in a collaborative advising process where students and advisers share responsibilities, and they begin to establish long- and short-term academic goals, leading to a realistic individual plan for graduation. Students who actively participate in this course have a proven record of academic success and an improved graduation rate. Offered in a variety of formats, including online. Students earn a letter grade in this course.

LASI 102. Career Exploration (2).
Involves students in the career/life, educational planning and decision-making process based on career development theories. Uses various assessments and exercises to explore values, interests and skills as they relate to career choice. Students research occupations and gain knowledge of labor market trends. Course content assists in exploration of college major and career path choice or change. Addresses current workplace issues.

LASI 150D. Major/Career Path (1).
A workshop that helps students choose or confirm directions for college majors and careers. Through group activities, personal exploration, and computer research, it allows students to form an action plan for their major and career choices.

LASI 150E. An Introduction to Pharmacy (1).
Provides WSU freshman and sophomore students considering pharmacy as a career with an introduction to the profession of pharmacy and guidance on fulfilling requirements for gaining entry into pharmacy school. Introduces students to the pharmacy profession, the role of pharmacy in today's U.S. health care system, current hot topics in pharmacy practice, and numerous career pathways within the profession. Students are also introduced to progressive practice concepts such as medication reconciliation, medication therapy management and collaborative practice, and obtain important insight into the pharmacy school application and admissions process, the PCAT exam, and pharmacy school admissions requirements. Taught by the associate dean and faculty from the KU School of Pharmacy-Wichita and other clinical practitioner guest speakers.

LASI 150P. Intro to Premed Professions (1).
A workshop that assists students in making informed career choices. Instructors and guest speakers representing various health professions present information in a lecture format. Students explore how personal values and goals relate to selecting the appropriate professional path. Grade is based on class attendance.

LASI 170. Introduction to Library Research (1).
Students learn to locate and retrieve information in both print and electronic formats, including the Internet, and learn to distinguish between scholarly research and nonscholarly publications. Students learn how to develop and carry out research strategies on any topic.

LASI 170BA. Library Research Badge: Introduction (0.5).
Students learn to recognize when scholarly resources are needed, how to locate these resources, and how to evaluate the authority of these resources in order to prepare for college-level research. It is recommended that students take both LASI 170BA and LASI 170BB to better prepare for college-level research. Concepts introduced in this class advance in LASI 170BB — Library Research Badge: Resource Use, Citations and Plagiarism. Repeatable for credit. Graded Bg/NBg.

LASI 170BB. Library Research Badge: Resource Use, Citations and Plagiarism (0.5).
Students learn to ethically access, evaluate and use information sources to accomplish a specific purpose such as preparation of a research paper or project in order to prepare for college-level research. It is recommended that students take both LASI 170BA and LASI 170BB to better prepare for college-level research. Concepts introduced in this class continue the concepts from LASI 170BA — Library Research Badge: Introduction. Repeatable for credit. Graded Bg/NBg.

LASI 170BC. Library Research Badge: Plagiarism and APA Citations (0.5).
Students learn about various types of plagiarism, how to avoid plagiarism, and how to cite a variety of types of sources using APA 6th edition citation style. Graded Bg/NBg.

LASI 170BD. Library Research Badge: Plagiarism and MLA Citations (0.5).
Students learn about various types of plagiarism, how to avoid plagiarism, and how to cite a variety of types of sources using MLA 8th edition citation style. Graded Bg/NBg.

LASI 300. Global Issues (3).
General education humanities course. Taught by faculty from many colleges and disciplines. Emphasizes challenges in the global village. May include peace and war, energy, social equality, the arts and technology, poetry and power, cultural differences, genetics, economic strategies, the environment, and health and education. May be applied to any of the disciplines of the humanities, social sciences and natural sciences. *Course includes diversity content*.

LASI 350. Workshop (1-3).
Meets identified needs of specific audiences.

LASI 398. Travel Seminar (4).
An interdisciplinary travel seminar which allows a student traveling abroad to gain credit for the study of culture, art, literature, architecture; and political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of a faculty member in any department in Fairmount College.

LASI 479. International Student Exchange (3-18).
The International Student Exchange Program encourages undergraduate students to attend a university outside the U.S. while retaining full-time student status and paying regular tuition at WSU. A student who wishes to enter this program must apply. Application forms may be obtained from the WSU Office of International Education; next, the student meets with his or her assigned program adviser to request academic and course equivalent approval to attend the proposed university. Upon approval from the student's WSU program, application may be completed. The enrollment designation above documents the status and the tuition payment of the student enrolled in ISEP for the duration of the residence at the collaborating university. At the end of the exchange semester, all coursework from the international university will be transferred to WSU. At that time, the transfer course(s) will replace the LASI hours of enrollment with only the International Student Exchange Program designation remaining on the transcript. Repeatable for two enrollment periods or a maximum of 30 credit hours.

LASI 480. National Student Exchange (1-18).
The National Student Exchange program encourages students to attend another university for a semester while retaining full-time student status and paying regular tuition at WSU. All coursework from the selected university is transferred to Wichita State at the end of the exchange semester. At that time, the transfer courses replace the WSU hours, with only the National Student Exchange designation remaining on the transcript. This enrollment designation documents the full-time status and the tuition payment of the student enrolled in the NSE program for the duration of the residence at the collaborating university. Repeatable for credit one time.

LASI 481. Cooperative Education (1-4).
Provides employment opportunities or approves current employment, when appropriate, to integrate academic theory with planned professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. May be repeated.

LASI 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

LASI 481N. Internship (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

LASI 501. Great Plains Experience (1-3).
Offered during fall and spring semesters as a 1-hour field experience and in the summer session as a 3-hour field experience. For students in the Great Plains Studies certificate program. Visit museums, anthropological and archeological sites, nature preserves, and other places of significance in Great Plains Studies. Prerequisite(s): LASI 201 or 800 or instructor's consent.

LASI 750. Workshop in LASI (1-3).
Meets identified needs of specific audiences.

LATN - Latin

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

LATN 111. Elementary Latin I (5).
Presents the basic grammar of Latin and emphasizes early reading.

LATN 112. Elementary Latin II (5).
Continues the presentation of the basic grammar of LATN 111 and emphasizes early reading. Prerequisite(s): one unit of high school Latin, LATN 111, or departmental consent.

LATN 223. Intermediate Latin (3).
General education humanities course. General review of grammar with selected readings of prose and poetry. Prerequisite(s): LATN 112, two years of high school Latin, or departmental consent.

LATN 224. Intermediate Latin (3).
General education humanities course. Selected readings of prose and poetry. May be repeated for credit when the readings vary. Prerequisite(s): LATN 223 or departmental consent.

LATN 325. Classical Mythology (3).
Cross-listed as GREK 325 and HIST 352. Studies the most important myths of the Greeks and Romans. Includes the stories of creation, the gods and goddesses, the major heroes and important sagas such as Achilles, Odysseus and the Trojan War. Sources are mainly literary, e.g., Homer, Hesiod, Virgil and Ovid, but the course also includes Greek art. All readings in English; requires no previous knowledge of Latin or Greek.

LATN 525. Medieval Latin (3).
Introduction to medieval Latin language and culture. Samples the range of Latin literature from the fifth to the 12th centuries through readings of religious and secular (including philosophical, political, historical and linguistic) texts in prose as well as the Latin poetry and drama of various medieval writers. Prerequisite(s): LATN 224 or departmental consent.

LATN 526. Advanced Grammar and Composition (3).
Intensive study of the grammar and style of classical Latin prose of the Golden Age, especially of Cicero and Caesar. Required capstone course for the MCLL major with specialization in Latin.

LATN 651. Roman Historians (3).
A study of the development of Roman historiography. Readings from Sallust, Caesar, Livy and Tacitus.

LING - Linguistics

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

LING 151. Nature of Language (3).
General education humanities course. Overview of the important facts about what language is, how it works and of the ways in which researchers in linguistics and in other disciplines, such as psychology, philosophy and anthropology, explain and make use of language. Prerequisite(s): ENGL 101.

LING 152. Language of Food (3).
General education humanities course. Cross-listed as ENGL 152. Examines how the way we talk about food offers a window into history, psychology, culture and economics. Students are asked to think critically about language and taste as well as to explore the hidden meanings and influence of the language that surrounds us. Analyzes the language of food through menus, recipes, Yelp reviews, TV food shows, as well as the history and etymology of food words. Examples are drawn from American, African, Asian food and culture and beyond. *Course includes diversity content*.

LING 270. American Sign Language I (3).
Cross-listed as CSD 270. Focuses on the use of American Sign Language as used by the American deaf community. Development of basic communication skills leads to basic conversational skills in ASL. *Course includes diversity content*.

LING 304. Early Language Development (3).
Cross-listed as CSD 304. Development of language traced from birth to early school age. Evaluates various acquisition theories in light of current psychological and linguistic thought. Emphasizes the development of linguistic categories: phonology, morphology, syntax, semantics and pragmatics. Lab required for reflective observation and analysis of various linguistic categories of typically developing children.

LING 306. Applied Phonetics (3).
Cross-listed as CSD 306. Identification, production and categorization of phonemes. Practice in phonemic and phonetic transcriptions of words using the International Phonetic Alphabet (IPA). Introduction to typical phonological acquisition and variations in speech production related to connected speech, cultural/linguistic diversity, and children's speech sound disorders. Lab required for reflective observation and analysis of developmental phonetics and variance due to disorders and linguistic differences.

LING 306L. Applied Phonetics Lab (0).
Identification, production, and categorization of phonemes. Practice in phonemic and phonetic transcriptions of words using the International Phonetic Alphabet (IPA). Introduction to typical phonological acquisition and variations in speech production related to connected speech, cultural/linguistic diversity, and children's speech sound disorders. Lab required for reflective observation and analysis of developmental phonetics and variance due to disorders and linguistic differences. Corequisite(s): LING 306.

LING 315. Introduction to English Linguistics (3).
General education humanities course. Cross-listed as ENGL 315. Introduces linguistic principles, including phonological and grammatical concepts.

LING 316. English Sentence Structure (3).
Cross-listed as ENGL 316. The basic rules of English syntax, specifically designed for prospective teachers of English but open to all students interested in English sentence structure.

LING 317. History of the English Language (3).
Cross-listed as ENGL 317. Linguistic and cultural investigation of the development of English. Prerequisite(s): LING 315/ENGL 315 or departmental consent.

LING 318. Dialectology (3).
Cross-listed as ENGL 318. Introduces the study of regional and social dialects of English. The relationship between language and factors such as socioeconomic class, social networks, sex, nationalism and geography. *Course includes diversity content*.

LING 351. Linguistics and Foreign Languages (3).
Cross-listed as MCLL 351. Introduces general linguistic principles with an emphasis on foreign languages. Covers areas of linguistic structure (e.g. phonetics, phonology, morphology and syntax), as well as social aspects of language (pragmatics, language variation, language contact, language endangerment, and the relationship between language and identity). Prerequisite(s): LING 151 or any third-semester foreign language course.

LING 505A. Advanced French Phonetics (2).
2 Classroom hours; 2 Lab hours. Cross-listed as FREN 505. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future French teachers. Prerequisite(s): any 200-level FREN course or departmental consent.

LING 505B. Russian Phonology (2).
Cross-listed as RUSS 505. Corrective pronunciation and auditory perception for non-native speakers of Russian. Includes articulatory phonetics, phonemics and morphophonemics, as well as the study and production of intonation contours (intonatsionnye konstruktsii). Prerequisite(s): any 200-level course or instructor's consent.

LING 505C. Spanish Phonetics (3).
Cross-listed as SPAN 505. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future Spanish teachers. Prerequisite(s): any 200-level SPAN course or departmental consent.

LING 506. Acoustic and Perceptual Phonetics (3).
Cross-listed as CSD 506. Studies the physical patterns (acoustic) of speech sounds and the importance of these acoustic patterns to speech recognition (perception). Focuses on segmental phonemes (vowels and consonants) and on suprasegmental characteristics such as stress and intonation. Introduces different types of speech analysis techniques and discusses how they may be used to study the acoustic patterns of speech sounds. Studies how different aspects of the speech signal relate to listener perception. Note: The CSD 506 or 506H sections must be taken in order for this course to count toward the CSD undergraduate major. Prerequisite(s): CSD 301.

LING 520. ASL: Nonverbal Communication (3).
Cross-listed as CSD 520. Nonverbal way of communication which forms an integral base for communication in American Sign Language. Emphasizes the use and understanding of facial expression, gestures, pantomime and body language. Role play and acting out are required as part of this class. Pre- or corequisite(s): CSD 370 or instructor's consent.

LING 546. Spanish Language Learning (3).
Cross-listed as SPAN 546. Introduces language learning from an applied linguistics perspective: the processes of first and second language acquisition, elements of Spanish grammar that are often difficult for English speakers, and social aspects of language learning. Appropriate for advanced undergraduate students and graduate students. Taught in Spanish. *Course includes diversity content*. Prerequisite(s): SPAN 526 or departmental consent.

LING 547. Spanish in the U.S. (3).
Cross-listed as SPAN 547. Explores the structural and social aspects of Spanish in the United States. Examines the history and social context of the use of Spanish in the U.S. as well as dialectical and contact phenomena in U.S. Spanish. Also covers Spanish in education, in the

media and in other aspects of public life in the U.S. Appropriate for advanced undergraduate students and graduate students. Taught in Spanish. *Course includes diversity content*. Prerequisite(s): SPAN 526 or departmental consent.

LING 590. Special Studies in Linguistics (1-3).
Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. Repeatable for credit when content varies.

LING 590M. Languages and Language Attitudes in the U.S. (3).
Cross-listed as ENGL 580AF. Community-based research seminar examines the social, economic and educational ramifications of various languages and attitudes to these languages in the U.S. Topics include the linguistic intersection of race, gender and social class; comparisons of standardized and Standard English to other dialects such as African American Vernacular English (AAVE); and the role of linguistics in the formation of language policy. Course takes a hands-on approach and students are involved in research design and data analysis. Students also have opportunities to participate in service learning, in organizations such as International Rescue Committee and AmeriCorps.

LING 595. Directed Readings (1-3).
Credit assigned to Group A, B or C depending on content. Repeatable for credit.

LING 635. Introduction to Romance Linguistics (3).
Cross-listed as FREN 635 and SPAN 635. Provides a contrastive examination of the phonology, morphology and syntax of the major contemporary Romance languages (French, Spanish, Italian, Portuguese, Catalan and Romanian). Introduces students to the sound and writing system and basic grammar of Latin, and contrasts the phonological and grammatical systems of the contemporary Romance languages (French and Spanish in particular) with those of Latin. It compares specific features of the modern Romance languages synchronically (i.e., apart from Latin) as well. Students are advised to have a solid grounding in at least one Romance language (preferably French or Spanish) and a familiarity with at least one other (French, Spanish, Latin, Italian or Portuguese). Prerequisite(s): departmental or instructor's consent.

LING 651. Language and Culture (3).
Cross-listed as ANTH 651 and MCLL 651. An introduction to the major themes in the interactions of language and society, and language and culture, including ethnography of communication, linguistic relativity and determinism; types of language contact, the linguistic repertoire, and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite(s): 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

LING 663. Languages and Language Attitudes in USA (3).
Cross-listed as ENGL 663. In this community-based research seminar, students examine the social, economic and educational ramifications of various languages and attitudes to these languages in the USA. Covers the linguistic intersection of race, gender and social class; compares standardized and Standard English to other dialects such as African American Vernacular English; and the role of linguistics in forming language policy. Takes a hands-on approach and involves students in research design and data analysis. *Course includes diversity content.*

LING 664. Quantitative Methods for Literary and Linguistic Studies (3).
Cross-listed as ENGL 664. Introduces the basic concepts of data analysis and statistical computing as used in literary and linguistic studies. Students get a better understanding of applying quantitative reasoning, visualization and data analysis to several problems in a wide range of fields in the humanities, such as linguistics, literature, and by extension, psychology and cognitive science. Students also consider practical applications of quantitative analysis in the humanities, including bibliometric and attribution study. *Course includes diversity content*.

LING 665. History of the English Language (3).
This course offers an in-depth historical study of the English language by tracing the history of how the language has changed across time. We will consider Old, Middle, Modern, American English, as well as newer World Englishes. We will address the nature and mechanisms of language change over time and the social, political, and other historical conditions related to such changes. The course will focus on the particular phonological, morphological, syntactic, lexical, and semantic changes that have happened diachronically, while touching upon the literature and culture of the different historical periods. Prerequisite(s): ENGL/LING 315.

LING 667. English Syntax (3).
Cross-listed as ENGL 667. Studies the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite(s): ENGL 315/LING 315 or equivalent, or departmental consent.

LING 668. Field Methods of Linguistics (3).
Cross-listed as ENGL 668. Students learn how to collect and analyze data from a language unknown to them by interacting with a native speaker – course language consultant. Students gain some familiarity with the phonetics, phonology, morphology and syntax of the language, while developing techniques for studying an unfamiliar language more generally and for managing the data collected. *Course includes diversity content*. Repeatable three times for a total of 9 credit hours. Prerequisite(s): ENGL 315/LING 315.

LING 672. Dialectology (3).
Cross-listed as ENGL 672. Introduces the study of language variety, emphasizing regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite(s): LING 315/ENGL 315 or departmental consent.

LING 720. Seminar in Old English (3).
Cross-listed as ENGL 720. Advanced course in Old English language and literature. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf and the elegiac poems in the original. Some literature, including all of Beowulf, is read in translation. Particular attention is given to close reading and interpretation of the text, and to important literary and cultural features of the period and its Norse heritage. Repeatable once for credit with a change of content and departmental consent.

LING 740. Graduate Studies in Linguistics (3).
Selected topics in theories of language and methods of linguistic study. Repeatable for credit with departmental consent.

MART - Media Arts

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MART 101. Introduction to Media Arts (3).
Introduction to media arts and the interconnectedness of audio, film, animation and gaming. Introduces fundamental concepts in analyzing and interpreting popular media delivery. Employs lectures, guest speakers, collaborative projects and experimental modes of learning. Covers resources available on the main campus and in the community. Written assignments encourage students to think about how various media and entertainment influence culture and its response to these influences. Attendance at outside events, lectures and festivals may be required.

MART 102. Introduction to Media Aesthetics and Analysis (3).
Provides the basic skills necessary to read film and videogames critically. Concentrates on formal analysis, emphasizing the aesthetic, historical and ideological elements that comprise the multiple languages of world cinema and electronic games. Introduces various genres of narrative cinema as well as different practices of cinema such as experimental, documentary, animation and hybrid forms, as well as using the lens of art and independent-based design to examine alternative approaches to aesthetics, gender, and race expressions in electronic games. Provides an introduction to cinema and videogames as artistic practices that span the globe in their contemporary as well as historical modes.

MART 110. Introduction to Music Technology and Industry (2).
Introduction to concepts, techniques and terminologies related to computing through musical applications. Students become familiar with major notation software, recording and audio editing software, live sound support, home and concert recording techniques, and music related web pages and pod casts.

MART 111. Intro to Music Business (2).
Gain a broad overview of the music business and learn how the various segments of the industry operate on a day-to-day basis.

MART 220. Computer Modeling (3).
Introduces the terminology and basic concepts of computer modeling graphics as it is used in animation, VFX and game industries. Exposes students to the entire process of computer modeling, including detailed surfaces, good topology, basic character rigging, construction of different types of geometry (poly, nurbs, subdivision) and using reference images as modeling aids.

MART 222. Digital Animation I (3).
Examines concepts, characters and storyboards for basic animation production. Introduces traditional animation. Course includes design, storyboarding, stop-motion and character animation. Gives students a working knowledge of animation techniques necessary to design animation sequences and teaches how to animate using computer software.

MART 232. Game Design I (3).
Introduces software for game development and design. Students learn the tools and techniques that allow them to develop their game creation skills. Students also learn about pivotal, successful games that changed the gaming industry over the years. Prerequisite(s): MART 260 and 360.

MART 260. Game Design Concepts (3).
Introduces electronic game development and game development careers. Examines the history of games and design, the game design and production process, and current issues and practices in the game development industry.

MART 270. Figure Drawing for Animators (3).
Orientation to visualization of the human body. Helps students learn the proper structure of the figure, which enables the drawer to convincingly visualize, manipulate or distort the figure. Also allows students to understand how important structure is in character development. As with all drawing knowledge, this takes much practice and hard work on the artist's part.

MART 299. Media Arts Practicum I (1).
Expands and enhances the students' technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degrees. Practical training in the organization, presentation and technical aspects of production are the focus as students conceptualize, plan and implement a project related to the media arts.

MART 322. Digital Animation II (3).
Explores advanced animated techniques. Students learn advanced animation of a character and learn to understand the advanced animation process of blocking, in-between, refining and animation graph splines, and animation passes. By the end of the course, students animate realistic and convincing action with an animated character. Prerequisite(s): MART 222 or instructor's consent.

MART 325. Editing for Film (3).
Examines the role of the editor in the filmmaking process. It affords hands-on experience in the editing process. It provides an introduction to the theory, technique and art of editing. Students learn the basic tasks and vocabulary of the editing process. Editing work focuses on story-telling, visual and aural impact, as well as the dramatic build of a scene, the psychology of the characters, emotional beats, and the effect of sound and music, rhythm and pacing.

MART 332. Game Design II (3).
Students design and create a game that can run as a mobile app and on a desktop computer. Students work with touch screen input versus analog inputs from a mouse and a keyboard. Students work with sprites, images, sound and coding while creating the game.Prerequisite MART 232 or instructor consent.

MART 351. Principles of Video Production (3).
Introduction to single-camera video production. Through in-class demonstrations, lectures, readings and hands-on projects, students begin learning skills and techniques of HD video field production and postproduction. Students work on their own projects (individually and in groups) producing, directing, shooting and editing projects.

MART 352. Story Boarding (3).
Focuses on storyboarding techniques, the visual and auditory language of time-based media, design development, concept development, and story development. The principles and issues presented are relevant for animation, live-action, film and video. The application of these principles to short film projects is emphasized.

MART 353. Video Storytelling (3).
Production-oriented course teaches students how to tell stories using video. Focuses on storytelling elements (narrative, characters, plot, conflict, resolution) through the medium of video accompanied with audio. In addition, the history of video storytelling, major advancements in the medium, important directors and current trends are examined. Prerequisite(s): MART 351.

MART 354. Clay Modeling (3).
Offers a fundamental understanding of the human form via traditional clay sculpting techniques. Students are exposed to variations of the human figure in clay sculpting, and they develop their perception and understanding of the human form, its anatomy, mass, movement and dynamics. Emphasizes working techniques in clay. Class works with live models and with references from printed media.

MART 357. Rigging (3).
Examines 3D rigging. Students learn to use computer software to rig a fully constructed 3D model. The differences between character rigs and props rigging is also studied. Students learn how to setup the proper IK/HK splines and how to work with skeletal hierarchy and blend shapes. Prerequisite(s): MART 220 or instructor's consent.

MART 359. Cinematography I (3).
Introduces the fundamentals of motion picture cinematography. Includes both technical knowledge and artistic application. Focuses on the camera and lighting equipment throughout the course. Topics include camera operation, composition and framing, lens choice, camera movement, setting proper exposure, lighting, blocking, continuity and visual storytelling.

MART 360. Game Technology and Coding I (3).
Studies coding computer languages that are essential in animation, visual effects and the gaming industry. Students learn the fundamentals of coding and computer languages to understand their design elements as they apply to the media arts industries.

MART 361. Game Technology and Coding II (3).
Students learn coding language that is pertinent to the video game industry. The skills, knowledge and techniques are a continuation of Game Technology and Coding I. Provides a foundation in design, programming and creativity associated with video games. Prerequisite(s): MART 360 or instructor's consent.

MART 365. Props and Character Design (3).
Examines videogame story through production components of character, props and concept design. Students are exposed to the whole process of props and character design. Students begin with references and preliminary research to idealization. The process expands from rough sketches to rendering an orthographic sheet ready to be passed to the 3D modelers.

MART 379. Cinematography II (3).
Further explores the fundamentals of motion picture cinematography to include both technical knowledge and artistic application, covered in MART 359 Cinematography I. Students focus on their work on the camera and lighting equipment used throughout the duration of the course. Topics include camera operation, composition and framing, lens choice, camera movement, setting proper exposure, lighting, blocking, continuity and visual storytelling. Prerequisite(s): MART 359.

MART 385. Directing for Film (3).
Teaches directing for film to students who desire to lead a production team. Explores the skills and techniques of filmmaking. Topics include preproduction, framing and composition, camera work, directing actors, script analysis, and establishing mood, character and conflict. Prerequisite(s): MART 351.

MART 391. Professional Practices in Media Arts - Portfolio (1).
Research into and practical application of professional practices, resume development, cover letter development, portfolio development and career planning specific to the field of media arts. Requires attendance at professional design events and creation/maintenance of a professional portfolio and website.

MART 392. Professional Practices in Media Arts - Business Development (1).
Research into and practical application of professional practices. Examination of business practices to include invoicing, marketing, grant development and social media (artist page) development.

MART 393. Professional Practices in Media Arts - Legal Issues (1).
Research into and practical application of professional practices. Examination of media arts issues relating to copyright, fair use, piracy and other legal issues.

MART 399. Media Arts Practicum II (2).
Expands and enhances the student's technical and conceptual skills, and increase knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Practical training in the organization, presentation, and technical aspects of production are the focus as students conceptualize, plan and implement a project related to the media arts.

MART 399A. Media Arts Practicum II - Animation (2).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 399B. Media Arts Practicum II - Audio Production (2).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 399C. Media Arts Practicum II - Filmmaking (2).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 399D. Media Arts Practicum II - Game Design (2).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 399E. Media Arts Practicum II - Collaborative Design (2).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 422. Digital Animation III (3).
Direct continuation of MART 322. Students work as a collaborative team on a single project where the they animate a short project that is conceptualized, planned, structured and created. Each student works on a specific element for the project to reach completion. Prerequisite(s): MART 222, MART 322 or instructor's consent.

MART 424. Compositing and VFX I (3).
Provides instruction in digital compositing. Students are taught how to work with software for VFX compositing. Examines the basics of film compositing and software tools that create special effects in media.

MART 432. Game Design III (3).
Designed to further the concepts, techniques and skills learned in preceding game design courses. Students develop games from the class and work to improve the designs. The basics of programming are covered in order to advance student projects and their knowledge. Prerequisite(s): MART 232, MART 332 or instructor's consent.

MART 474. Compositing and VFX II (3).
Continues the study of the fundamental techniques of digital compositing. Design, plan and produce modern VFX projects through a VFX story. Use a variety of computer software for VFX production work. Prerequisite(s): MART 424.

MART 481N. Internship (1-3).
Gain applied knowlede working in the media industry.

MART 490. Special Topics (1-3).
An umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 490A, 490B, etc.). Students should enroll in the lettered courses with specific topics in the titles rather than in this root course. Generally, MART 490 courses involve supervised study and research into media arts, and require weekly consultation and

progress reports. For majors only. Repeatable for credit. Prerequisite(s): instructor's consent.

MART 490A. Special Topics in Media Arts (1-3).
Supervised study and research into media arts. Involves cross disciplinary studies in more than one media arts area. Requires weekly consultation and progress reports. For majors only. Repeatable for credit. Prerequisite(s): instructor's consent.

MART 490B. Special Topics in Animation (1-3).
Supervised study and research into animation. Content varies. Requires weekly consultation and progress reports. For majors only. Repeatable for credit. Prerequisite(s): instructor's consent.

MART 490C. Special Topics in Game Design (1-3).
Supervised study and research into game design. Content varies. Requires weekly consultation and progress reports. For majors only. Repeatable for credit. Prerequisite(s): instructor's consent.

MART 490D. Special Topics in Filmmaking (1-3).
Supervised study and research into filmmaking. Content varies. Requires weekly consultation and progress reports. For majors only. Repeatable for credit. Prerequisite(s): instructor's consent.

MART 490E. Special Topics in Audio Produc (1-3).
Supervised study and research into audio production. Content varies. Requires weekly consultation and progress reports. For majors only. Repeatable for credit. Prerequisite(s): instructor's consent.

MART 490G. Figure Studies for Animators (3).
Orientation to visualization of the human body. This class will help the student to learn the proper structure of the human figure, which enables the drawer to convincingly visualize, manipulate or distort the human figure. It also allows the student to understand how important structure is in character development.

MART 499. Media Arts Practicum III (3).
Expands and enhances the students' technical and conceptual skills, and increase knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Practical training in the organization, presentation, and technical aspects of production are the focus as students conceptualize, plan, and implement a project related to the Media Arts.

MART 499A. Media Arts Practicum III - Animation (3).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 499B. Media Arts Practicum III - Audio Production (3).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 499C. Media Arts Practicum III - Filmmaking (3).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 499D. Media Arts Practicum III - Game Design (3).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 499E. Media Arts Practicum III - Collaborative Design (3).
Expands and enhances the student's technical and conceptual skills, and increases knowledge in the various mediums supported by the Bachelor of Applied Arts degree. Focuses on practical training in the organization, presentation and technical aspects of production as students conceptualize, plan and implement a project related to the media arts.

MART 540. Advanced Editing and Mastering (3).
Explores editing, recording and production techniques at an advanced level. Students gain experience with industry standard digital audio workstations. Prerequisite(s): MART 110.

MART 570. Electronic Music Production (2).
Gain a working knowledge of composition and production of music made by computers. Covers techniques used in the electronic music genre ranging from EDM to music concrete.

MART 571. Live Sound Design (3).
Explores the acoustical, musical, and technical aspects of the live performance, in order to present the best possible sound to the audience.

MART 575. Seminar in Music Technology (3).
Covers developing trends in music technology and production.

MATH - Mathematics

Courses numbered 000–099 do not count toward any degree program.

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MATH 007. Arithmetic (3).
A review and study of the basic arithmetic operations for the mature student whose previous training in arithmetic is inadequate for completion of college mathematics courses.

MATH 011. Beginning Algebra (5).
Content consists of algebra topics usually covered in the first year of a standard high school algebra course. Not applicable to degree.

MATH 012. Intermediate Algebra (3-5).
Content consists of topics usually covered in the second year of a standard high school algebra course. Prerequisite(s): MATH 011 or one year of high school algebra, and qualifying score in recent department placement exam. Not applicable to degree.

MATH 013. College Algebra Supplement (2).
A supplement to MATH 111 to be taken concurrently with designated sections of MATH 111 to allow students 5 contact hours for mastering college algebra. Corequisite(s): MATH 111.

MATH 111. College Algebra (3).
General education foundation course. Surveys functions, theory of equations and inequalities, complex numbers, and exponential and logarithmic functions. High school geometry is a highly recommended preparatory course. Credit is allowed in only one of the two courses MATH 111 and 112. Prerequisite(s): MATH 012 or two years of high school algebra and qualifying score in recent department placement exam.

MATH 112. Precalculus Mathematics (5).
Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions, and other standard topics prerequisite to a beginning study of calculus. Course is not available for credit to students who have received a C or better in MATH 242 or its equivalent. Credit is allowed in only one of the two courses MATH 111 and 112. Prerequisite(s): MATH 012 or two years of high school algebra, one unit of high school geometry, and qualifying score in recent departmental placement exam.

MATH 121. Geometry for College Students (3).
A study of lines, angle relationships, parallel lines, triangles, quadrilaterals, similar triangles, circles, areas of polygons and circles, and some material on surface and solids, Prerequisite(s): MATH 111 or equivalent with a grade of C or better.

MATH 123. College Trigonometry (3).
Studies the trigonometric functions and their applications. Credit in both MATH 123 and 112 is not allowed. Prerequisite(s): MATH 111 with C or better or equivalent high school preparation and one unit of high school geometry.

MATH 131. Contemporary Mathematics (3).
General education foundation course. For students majoring in nontechnical areas. A collection of applications of mathematics illustrating how contemporary mathematical thinking is used in the decision-making process. Covers topics selected from such areas as the mathematics of social choice, management science, statistics, coding information, and the geometry of growth, shape and symmetry. Prerequisite(s): MATH 012 or two years of high school algebra and a qualifying score on a recent departmental placement examination.

MATH 144. Business Calculus (3).
General education math and natural sciences course. A brief but careful introduction to calculus for students of business and economics. Students may receive credit for one of these courses: MATH 144, 242 or 251. Prerequisite(s): MATH 111 or 112 with a C or better, or equivalent high school preparation.

MATH 150. Workshop in Mathematics (1).
Topics of interest to particular students and not elsewhere available in the curriculum. May be repeated for a total of 6 hours credit with departmental consent. Prerequisite(s): departmental consent.

MATH 211. Elementary Linear Algebra (1-3).
Covers topics in linear algebra together with elementary applications. Prerequisite(s): One and one-half units of high school algebra or MATH 011.

MATH 242. Calculus I (5).
General education math and natural sciences course. Analytic geometry and the calculus in an interrelated form. Students may receive credit for only one of these courses: MATH 144, 242 or 251. Prerequisite(s): MATH 112 with a C or better, or two units of high school algebra, one unit of high school geometry and one-half unit of high school trigonometry, or MATH 123 and 111 with a C or better in each.

MATH 242H. Calculus I Honors (5).
General education math and natural sciences course. Analytic geometry and the calculus in an interrelated form. Students may receive credit for only one of these courses: MATH 144, 242 or 251. Prerequisite(s): MATH 112 with a C or better, or two units of high school algebra, one unit of high school geometry and one-half unit of high school trigonometry, or MATH 123 and 111 with a C or better in each.

MATH 243. Calculus II (5).
General education math and natural sciences course. Continuation of MATH 242. Includes a study of integration and applications and an introduction to infinite series. Credit in both MATH 243 and 252 is not allowed. Prerequisite(s): MATH 242 with a C or better.

MATH 243H. Calculus II Honors (5).
General education math and natural sciences course. Continuation of MATH 242. Includes a study of integration and applications and an introduction to infinite series. Credit in both MATH 243 and 252 is not allowed. Prerequisite(s): MATH 242 with a C or better.

MATH 250. Applications of Calculus to Elements of Personal Finance (1).
Concepts of calculus are applied to elements of personal finance, including appreciation, risk and diversification. Exponential models are also applied to human population growth, with discussion of impacts on environment, political stability and human rights. Prerequisite(s): MATH 243, with grade of C or better, or departmental consent .

MATH 251. Technical Calculus I (3).
Standard topics in analytic geometry and calculus, including differentiation and integration, with applications to engineering technology. This course is intended for students in the engineering technology program. Students may receive credit only one of these courses: MATH 144, 242 or 251. Credit in Prerequisite(s): MATH 112 with a C or better, or MATH 111 and 123 with C or better in each, or equivalent preparation.

MATH 252. Technical Calculus II (3).
Standard topics in analytic geometry and calculus, including topics in multidimensional calculus and differential equations with applications to engineering technology. This course is intended for students in the engineering technology program. Credit in both MATH 252 and 243 is not allowed. Prerequisite(s): MATH 251 with a C or better, or MATH 242 with C or better, or equivalent preparation.

MATH 300. Evolution of Mathematics (3).
A study of mathematics and mathematicians from antiquity to the present, to see how mathematics has developed from human beings' efforts to understand the world and the extent to which mathematics has molded our civilization and culture. Since mathematics is what mathematicians do, the lives of mathematicians from various ages and countries are studied. Not a mathematical skills course.

MATH 311. Introduction to Linear Algebra (1).
A study of systems of linear equations, matrices, vectors, eigenvalues and eigenvectors. Credit not allowed in both MATH 211 and 311. Pre- or corequisite(s): MATH 344.

MATH 321. Discrete Structures I (3).
Cross-listed as CS 321. Provides a mathematical foundation essential to the entire computer science curriculum. Includes propositional and predicate logic, induction, recursion and counting techniques. Prerequisite(s): MATH 242 or equivalent with a grade of 2.000 or better.

MATH 322. Discrete Structures II (3).
Cross-listed as CS 322. Continuation of Discrete Structures I. Includes relations, graphs, trees, Boolean algebra and automata. Prerequisite(s): CS 321 or MATH 321.

MATH 344. Calculus III (3).
General education math and natural sciences course. Continuation of MATH 243. Includes a study of multiple integration and partial derivatives. Prerequisite(s): MATH 243 with a grade point of 2.000 or better.

MATH 344H. Calculus III Honors (3).
General education math and natural sciences course. Continuation of MATH 243. Includes a study of multiple integration and partial derivatives. Prerequisite(s): MATH 243 with a grade point of 2.000 or better.

MATH 415. An Introduction to Advanced Mathematics (3).
Develops the concept of proof in a setting of mathematical tools needed in advanced courses. Covers topics in number theory, algebra and analysis. Particular attention to equivalence relations, functions, induction and mathematical systems. Prerequisite(s): MATH 344 with a grade point of 2.000 or better.

MATH 451. Computational Mathematics Using MATLAB (3).
Introduces the use of MATLAB in computational algorithms. A bridge to upper-division courses in numerical methods and applied mathematics. Prerequisite(s): MATH 243 with a grade point of 2.000 or better.

MATH 480. Individual Projects (1-5).
Repeatable up to 10 hours. Prerequisite(s): departmental consent.

MATH 480F. Quantum Computing (3).
Theory and mathematics of quantum mechanics as applied to problems in quantum information; simulations of physical implementations and coding.

MATH 481. Cooperative Education (1-6).
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Prerequisite(s): departmental consent.

MATH 501. Elementary Mathematics (5).
A study of topics necessary to an understanding of the elementary school curriculum, such as set theory, real numbers and geometry. Not for major or minor credit. Prerequisite(s): elementary education major and MATH 111 or equivalent with a grade point of 2.000 or better, or departmental consent.

MATH 502. Mathematics for Middle School Teachers (5).
A study of the mathematical knowledge which forms the theoretical foundations of, the applications of, and extensions of middle school mathematics. This capstone course serves to reinforce mathematics skills learned in prerequisite courses and assists students in recognizing the unifying principles within their mathematical experiences. Prerequisite(s): MATH 111, 121, 123, 144, 501, and STAT 370 or equivalent with a grade point of 2.000 or better in each.

MATH 511. Linear Algebra (3).
An elementary study of linear algebra, including an examination of linear transformations and matrices over finite dimensional spaces. Prerequisite(s): MATH 243 with a grade point of 2.000 or better.

MATH 513. Fundamental Concepts of Algebra (3).
Defines group, ring and field, and studies their properties. Prerequisite(s): MATH 415 and 511 with a grade point of 2.000 or better, or departmental consent.

MATH 525. Elementary Topology (3).
Studies topological spaces, open and closed sets, bases for topology, continuous mappings, homeomorphisms, connectedness and compactness, Hausdorff and other spaces, with special emphasis on metric spaces. Prerequisite(s): MATH 415 with a grade point of 2.000 or better.

MATH 530. Applied Combinatorics (3).
Basic counting principles, occupancy problems, generating functions, recurrence relations, principles of inclusion and exclusion, the pigeonhole principle, Fibonacci sequences and elements of graph theory. Prerequisite(s): MATH 344 with a grade point of 2.000 or better.

MATH 531. Introduction to the History of Mathematics (3).
General education math and natural sciences course. Studies the development of mathematics from antiquity to modern times. Solves problems using the methods of the historical period in which they arose. Requires mathematical skills. Prerequisite(s): MATH 511 and two additional courses at the 500 level or above, with a grade point of 2.000 or better in each.

MATH 531H. Introduction to the History of Mathematics Honors (3).
General education math and natural sciences course. Studies the development of mathematics from antiquity to modern times. Solves problems using the methods of the historical period in which they arose. Requires mathematical skills. Prerequisite(s): MATH 511 and two additional courses at the 500 level or above, with a grade point of 2.000 or better in each.

MATH 545. Integration Techniques and Applications (3).
Studies the basic integration techniques used in applied mathematics. Includes the standard vector calculus treatment of line and surface integrals, Green's Theorem, Stokes's Theorem, and the Divergence Theorem. Also includes the study of improper integrals with application to special functions. Prerequisite(s): MATH 344 with a grade point of 2.000 or better.

MATH 547. Advanced Calculus I (3).
Covers the calculus of Euclidean space including the standard results concerning functions, sequences and limits. Prerequisite(s): MATH 344 and 415 with a grade point of 2.000 or better in each.

MATH 548. Introduction to Complex Variables (3).
Study of complex numbers, analytic functions, differentiation and integration of complex functions, line integrals, power series, residues and poles, and conformal mapping with applications. Prerequisite(s): MATH 344 with a grade point of 2.000 or better.

MATH 551. Numerical Methods (3).
Approximating roots of equations, interpolation and approximation, numerical differentiation and integration, and the numerical solution of first order ordinary differential equations. Some computer use. Prerequisite(s): MATH 344 and 451 with a grade point of 2.000 or better, or departmental consent.

MATH 553. Mathematical Models (3).
Covers case studies from the fields of engineering technology and the natural and social sciences. Emphasizes the mathematics involved. Each student completes a term project which is the solution of a particular problem approved by the instructor. Prerequisite(s): Math 344 with a grade point of 2.000 or better, or departmental consent.

MATH 555. Differential Equations I (3).
A study of first order equations including separation of variables and exact equations, second order equations including the general theory of initial value problems, constant coefficients, undetermined coefficients, variation of parameters and special methods of solution using power series and the Laplace transform methods. A standard course in differential equation for students in the sciences and engineering. Prerequisite(s): MATH 243 with a grade point of 2.000 or better, or departmental consent.

MATH 555H. Differential Equations I Honors (3).
A study of first order equations including separation of variables and exact equations, second order equations including the general theory of initial value problems, constant coefficients, undetermined coefficients, variation of parameters and special methods of solution using power series and the Laplace transform methods. A standard course in

differential equation for students in the sciences and engineering. Prerequisite(s): MATH 243 with a grade point of 2.000 or better, or departmental consent.

MATH 580. Selected Topics In Math (1-3).
Topic chosen from topics not otherwise represented in the curriculum. May be repeated up to a maximum of 6 hours credit with departmental consent. Prerequisite(s): departmental consent.

MATH 615. Elementary Number Theory (3).
Studies properties of the integers by elementary means. Prerequisite(s): MATH 344 with a grade point of 2.000 or better, or departmental consent.

MATH 621. Elementary Geometry (3).
Studies Euclidean geometry from an advanced point of view. Prerequisite(s): MATH 344 with a grade point of 2.000 or better, or departmental consent.

MATH 640. Advanced Calculus II (3).
A continuation of MATH 547. Prerequisite(s): MATH 511 and 547 with a grade point of 2.000 or better in each.

MATH 655. Differential Equations II (3).
A continuation of MATH 555 (but with more emphasis on theoretical issues) that covers higher order differential equations, systems of first order equations (including the basics of linear algebra), some numerical methods, and stability and behavior of solutions for large times. Prerequisite(s): MATH 555 with a grade point of 2.000 or better, or departmental consent.

MATH 657. Optimization Theory (3).
Introduces selected topics in linear and nonlinear optimization. Develops the revised simplex method along with a careful treatment of duality. Then extends the theory to solve parametric, integer and mixed integer linear programs. Prerequisite(s): MATH 511 with a grade point of 2.000 or better.

MATH 713. Abstract Algebra I (3).
Treats the standard basic topics of abstract algebra. Prerequisite(s): MATH 513 with a grade point of 2.000 or better, or departmental consent.

MATH 720. Modern Geometry (3).
Examines the fundamental concepts of geometry. Prerequisite(s): MATH 513 with a grade point of 2.000 or better, or departmental consent.

MATH 725. Topology I (3).
Studies the results of point set and algebraic topology. Prerequisite(s): MATH 547 with a grade point of 2.000 or better, or departmental consent.

MATH 743. Real Analysis I (3).
Includes a study of the foundations of analysis and the fundamental results of the subject. Prerequisite(s): MATH 640 with a grade point of 2.000 or better, or departmental consent.

MATH 745. Complex Analysis I (3).
Studies the theory of analytic functions. Prerequisite(s): MATH 640 with a grade point of 2.000 or better, or departmental consent.

MATH 746. Introduction to Data Analytics (3).
Covers basic mathematical techniques for analyzing data sets. Uses object oriented programming, like Python or R, to show how to organize, visualize and analyze large data. For students to be successful in this course, basic programming knowledge is needed prior to enrolling. Prerequisite(s): MATH 511, 571, or instructor's consent.

MATH 750Y. Smooth Manifolds (3).
Knowledge of differentiable manifolds has become very important in a large number of areas of mathematics and of its applications. In fact, much of advanced calculus and analysis is based on the study of differentiable manifolds. For example, topics such as line and surface integrals, divergence and curl of vector fields and Stokes' and Green's theorems are most naturally described using manifold theory. Course gives a careful introduction to differentiable manifolds, illustrating each new definition and theorem with the study of spheres, tori, real and complex projective spaces, and matrix groups. Talks about tangent spaces, vector fields, differential forms and integral curves. Concludes with Stokes' theorem on manifolds.

MATH 750Z. Data Analytics' (3).
Covers basic mathematical techniques for analyzing data sets. The course will use Python to show how to organize, visualize, and analyze large data. Prerequisite(s): MATH 511, STAT 571, basic programming knowledge.

MATH 751. Numerical Linear Algebra (3).
Includes analysis of direct and iterative methods for the solution of linear systems, linear least squares problems, Eigenvalue problems, error analysis, and reduction by orthogonal transformations. Prerequisite(s): MATH 511, 547, 551 with a grade point of 2.000 or better in each, or departmental consent.

MATH 753. Ordinary Differential Equations (3).
Covers existence, uniqueness, stability and other qualitative theories of ordinary differential equations. Prerequisite(s): MATH 545 or 547 with a grade point of 2.000 or better, or departmental consent.

MATH 755. Partial Differential Equations I (3).
Studies the existence and uniqueness theory for boundary value problems of partial differential equations of all types. Prerequisite(s): MATH 547 with a grade point of 2.000 or better, or departmental consent.

MATH 757. Partial Differential Equations for Engineers (3).
Includes Fourier series, the Fourier integral, boundary value problems for the partial differential equations of mathematical physics, Bessel and Legendre functions, and linear systems of ordinary differential equations. Prerequisite(s): MATH 555 with a grade point of 2.000 or better.

MATH 758. Complex and Vector Analysis for Engineers (3).
A survey of some of the mathematical techniques needed in engineering including an introduction to vector analysis, line and surface integrals, and complex analysis, contour integrals and the method of residues. Not applicable toward a graduate degree in mathematics. Prerequisite(s): MATH 555 with a grade point of 2.000 or better.

MATH 781. Cooperative Education (1-3).
Work-related placement with a supervised professional experience to complement and enhance the student's academic program. Intended for master's level or doctoral students in math. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite(s): departmental consent, graduate GPA of 3.000 or above.

MCLL - Modern and Classical Languages and Literatures

Courses numbered 100 to 299 = *lower-division;* 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MCLL 351. Linguistics and Foreign Languages (3).
Cross-listed as LING 351. Introduces general linguistic principles with an emphasis on foreign languages. Covers areas of linguistic structure (e.g. phonetics, phonology, morphology and syntax), as well as social aspects of language (pragmatics, language variation, language contact, language endangerment, and the relationship between language and

identity). Prerequisite(s): LING 151 or any third-semester foreign language course.

MCLL 351H. Linguistics and Foreign Languages Honors (3).
Cross-listed as LING 351. Introduces general linguistic principles with an emphasis on foreign languages. Covers areas of linguistic structure (e.g. phonetics, phonology, morphology and syntax), as well as social aspects of language (pragmatics, language variation, language contact, language endangerment, and the relationship between language and identity). Prerequisite(s): LING 151 or any third-semester foreign language course.

MCLL 411F. Preteaching Internship PreK-6 (1).
This field experience allows world language students to spend an extended length of time in a PreK-6 classroom working with a cooperating teacher. Students evaluate their own instruction and plan for improvement. Prerequisite(s): acceptance into teacher education and successful completion of Core I and Core II through the College of Applied Studies.

MCLL 413F. Preteaching Internship 6-12 (1).
This field experience allows world language students to spend an extended length of time in a 6-12-grade classroom working with a cooperating teacher. Students evaluate their own instruction and plan for improvement. Prerequisite(s): acceptance into teacher education and successful completion of Core I and Core II through the College of Applied Studies.

MCLL 454F. ISAM: PreK-12 World Languages (3).
Examines methods of instruction in relation to world languages and teaching in a variety of settings. Covers progress assessment, classroom management, and explores instructional approaches for guiding foreign language students. Minimum grade requirement to succeed in this course: B-. Prerequisite(s): acceptance into teacher education and successful completion of Core I and Core II courses through the College of Applied Studies.

MCLL 455F. Teaching Internship Seminar in World Languages (1).
Examines and discusses experiences emerging from the preteaching internship, including planning school programs and assuming the responsibilities of a teacher. Minimum grade requirement to succeed in this course: B-. Prerequisite(s): acceptance into teacher education, successful completion of Core I, Core II and Core III courses through the College of Applied Studies. Corequisite(s): Teaching Internship.

MCLL 466. Teaching Internship PreK-12 in World Languages (12).
Minimum grade requirement to succeed in this class: B-. Prerequisite(s): acceptance into teacher education, successful completion of Core I, Core II and Core III courses through the College of Applied Studies, 2.500 GPA in the major. Corequisite(s): Teaching Internship Seminar.

ME - Mechanical Engineering

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

ME 250. Materials Engineering (3).
Introduces the basic principles behind materials science and engineering. Structure and properties of materials relevant to practicing engineers are looked at along with crystal structure and imperfections in metals. Studies diffusion mechanical properties, failure mechanisms, phase equilibrium diagrams and heat treatment principles for steels, cast irons, and other metal alloys. Provides the scientific foundation for an understanding of the relationships among material properties, structure and performance for the classes of engineering solids (metals and alloys, polymers, ceramics, semiconductors, etc.). Includes study of corrosion, atomic structure, mechanical properties, failure theories, fatigue, creep, cold working, heat treating, alloying, and nondestructive and other material testing. Students are expected to gain an understanding of these materials, processing techniques, their properties, and how they are applied in the industry. Prerequisite(s): CHEM 211, MATH 242.

ME 251. Materials Engineering Laboratory (1).
Experimental study and macroscopic mechanical response of ceramics, metals, polymers and composite materials, with an introduction to the underlying microstructural processes during deformation and fracture. The laboratory is designed to introduce students to some of the most common materials testing and characterization methods. Topics include optical metallography, tensile and compression testing, hardness testing, impact testing, fatigue testing, heat treating, scanning electron microscopy, plastic injection molding, melting and casting. Pre- or corequisite(s): ME 250.

ME 281I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ME 320BA. Badge: Linear Systems for Engineers (0.5).
Provides the essential knowledge of linear systems, aimed at understanding, analyzing and designing various mechanical engineering systems. Students learn matrix definition, build, property and operation as basic engineering mathematical tools, and their practical applications to various mechanical engineering systems. May be "stacked" with ME 320BB, 320BC, 320BD, 320BE and 320BF for ME 325 credit. Graded Bg/NBg. Prerequisite(s): students must possess basic math skills in algebra before enrolling.

ME 320BB. Badge: Computer Programming for Engineers (0.5).
Provides basic computer programming skills using a user-friendly programing language, i.e., MATLAB. Students learn practical skills such as developing computer codes to numerically solve engineering problems. Includes data types, flow control, functions, plotting, simulation and numerical methods. May be "stacked" with ME 320BA, 320BC, 320BD, 320BE and 320BF for ME 325 credit. Graded Bg/NBg. Prerequisite(s): students must possess basic numerical analysis and interpreting skills before enrolling.

ME 320BC. Badge: Numerical Analysis for Engineers (0.5).
Provides the principles of evaluating numerical differentiation, integration, and interpolation. Students also practice how to estimate the numerical accuracy using relative error. May be "stacked" with ME 320BA, 320BB, 320BD, 320BE and 320BF for ME 325 credit. Graded Bg/NBg. Prerequisite(s): students must possess basic math skills in algebra and calculus, and a basic understanding of Newton’s second law before enrolling.

ME 320BD. Badge: Root Finding for Engineers (0.5).
Provides the basic principle of root finding method (solving nonlinear equations) to solve various mechanical engineering problems. Students practice how to implement the mathematical principles into user-friendly computer code, i.e., MATLAB, to numerically solve nonlinear equations. May be "stacked" with ME 320BA, 320BB, 320BC, 320BE and 320BF for ME 325 credit. Graded Bg/NBg. Prerequisite(s): students must possess basic math skills in algebra and calculus, and elementary computer programming skills before enrolling.

ME 320BE. Badge: Optimization for Engineers (0.5).
Provides the basic principles of optimization and practices to optimally design mechanical engineering systems. Students learn how to implement the mathematical principles into user-friendly computer

code, i.e., MATLAB, to numerically determine optimal engineering solutions. May be "stacked" with ME 320BA, 320BB, 320BC, 320BD and 320BF for ME 325 credit. Graded Bg/NBg. Prerequisite(s): students must possess basic math skills in algebra and calculus, and rudimentary computer programming skills before enrolling.

ME 320BF. Badge: Numerical Differential Equations for Engineers (0.5).
Provides the basic principles of solving differential equations using numerical methods to solve various mechanical engineering problems. Students practice how to implement the mathematical principles into user-friendly computer code, i.e., MATLAB, to numerically solve differential equations. May be "stacked" with ME 320BA, 320BB, 320BC, 320BD and 320BE for ME 325 credit. Graded Bg/NBg. Prerequisite(s): students must possess basic math skills in algebra and calculus, and elementary understanding of Newton's second law and physical properties such as temperature, pressure, displacement, velocity and acceleration before enrolling.

ME 325. Numerical Methods for Engineers (3).
Provides the basic numerical methods to understand, analyze and design the various engineering systems. Includes linear systems of equations, least square problems, eigenvalue problems, and singular value problems, and ordinary differential equations. Students learn not only basic principles of numerical analysis, but also practical applications to the various numerical problems through commercially available computer software, e.g., MS Excel and MATLAB. Prerequisite(s): MATH 243 and PHYS 313.

ME 335. Dynamics for Mechanical Engineers (3).
Kinematics and kinetics of particles in space and rigid bodies in plane motion. Applications of the principles of Newton's laws, work-energy, impulse-momentum, and conservation laws to solve mechanical systems with prismatic joints, revolute joints, cylindrical joints, and rolling joints. Lectures and projects on modeling and simulation of mechanical systems using multibody dynamic software. Prerequisite(s): AE 223 and MATH 344.

ME 339. Design of Machinery (3).
Introduces engineering design process; synthesis and analysis of machinery and machines. Kinematic (position, velocity and acceleration) and inverse dynamic analysis of planar mechanisms by analytical, graphical and computer methods. Design of linkages for motion, path and function generation; cam design. Computer-aided engineering approach in mechanical design; projects on practical engineering designs for machinery. Prerequisite(s): IME 222. Pre- or corequisite(s): ME 335.

ME 360. Selected Topics in Mechanical Engineering (1-3).
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite(s): as published or departmental consent.

ME 360D. Sustainability and Technology (3).
Introduces students to the concept of sustainability and sustainable practices in light of anthropogenic accelerated climate change. Explores life cycle analysis in engineering design and innovation. Specific topics include electricity generation for commercial, industrial and residential use as well as energy use in transportation; estimation of our carbon footprint; alternative resources for energy; generation and disposal as well as recycling of waste. Students work in groups on specific design projects and present their results to an open audience. Prerequisite(s): PHYS 313.

ME 398. Thermodynamics I (3).
An introduction to the terminology and analysis techniques specific to thermodynamics centered around a study of the first and second laws of thermodynamics. Prerequisite(s): MATH 243, PHYS 313.

ME 439. Mechanical Engineering Design I (3).
Provides students with an understanding of various design concepts related to failure and stress analysis of the most widely used machine elements and components. Covers the basics of machine design including the design process, engineering mechanics and materials, failure prevention under static and variable loading conditions, design of mechanical components, and selection of materials and mechanical components from standard tables, charts, catalogs and handbooks. Offers a practical approach to the design subject through a wide range of real-world applications and examples. Prerequisite(s): ME 250, ME 251, AE 333 and MATH 555.

ME 450. Selected Topics in Mechanical Engineering (1-3).
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite(s): departmental consent.

ME 469. Energy Conversion (3).
Energy conversion principles and their implementation in engineering devices including thermal, mechanical, nuclear and direct energy conversion processes. Prerequisite(s): ME 398.

ME 475. Integrated Design and Manufacturing (3).
Fundamentals of manufacturing processes including forming, machining, casting and welding with emphasis on design considerations in manufacturing. Mechanical behavior of metallic materials. Modern manufacturing practices. Integration of materials, design and manufacturing. Materials selection. The layout and design of tooling, jigs, fixtures, gages and equipment through computer-aided design techniques. Design for assembly and manufacturing (DFMA) to facilitate cost-effective manufacturing using material selection. Concepts and applications of micro/nanotechnology appropriate to the manufacturing field. An overview of micro/nano-fabrication techniques including mechanical, EDM, laser and lithography and MEMS device fabrication. Scaling laws. Top down and bottom up approaches of nanomanufacturing. Prerequisite(s): ME 250, ME 251, AE 333; all with a GPA of 2.000 or above. Pre- or corequisite(s): ME 439.

ME 481A. Cooperative Education (1-3).
Introduction to engineering practice by working in industry in an engineering-related job. Provides planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignments and need not be enrolled in any other course. Repeatable for credit. Prerequisite(s): junior standing and approval by the appropriate faculty sponsor.

ME 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ME 481N. Internship (1).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

ME 481P. Cooperative Education (1).
Introduction to engineering practice by working in industry in an engineering-related job. Provides planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working part time on their co-op assignments and be currently enrolled in courses leading to a mechanical engineering degree. Repeatable for credit. Prerequisite(s): junior standing and approval by the appropriate faculty sponsor.

ME 502. Thermodynamics II (3).
Continuation of ME 398, emphasizing cycle analysis, thermodynamic property relationships and psychrometrics, with an introduction to combustion processes and chemical thermodynamics. For undergraduate students only. Prerequisite(s): ME 398.

ME 521. Fluid Mechanics (3).
2 Classroom hours; 3 Lab hours. The definition of a fluid and the concept of a continuum. Stress and strain in a Newtonian fluid. Description and classification of fluid motions. Hydrostatic pressure and forces on submerged surfaces. Reynolds Transport Theorem and integral analysis of conservation laws. Introduction to differential analysis of fluid motion. Dimensional analysis and similitude. Study of flow in closed conduits: pressure drop in fully developed viscous flow. The boundary layer concept and lift and drag forces on immersed bodies. For undergraduate students only. Prerequisite(s): ME 335, 398, MATH 555; all with a minimum grade of C (2.000). Corequisite(s): ME 521L.

ME 522. Heat Transfer (3).
Introduction to the three modes of heat transfer in the context of the laws of thermodynamics; the heat equation and its application to steady conduction in one- and two-dimensions as well as to unsteady one-dimensional conduction; the thermal boundary layer, Reynolds Analogy, and the problem of convection; free and forced convection in internal and external flows; boiling and condensation; thermal radiation. Emphasizes problem solving using analytical methods approximate solutions, analogies, empirical correlations, and numerical methods. For undergraduate students only. Prerequisite(s): ME 325, ME 521 and PHYS 314; each with a minimum grade of C (2.000).

ME 533. Mechanical Engineering Laboratory (3).
2 Classroom hours; 3 Lab hours. Introduces the basics of engineering measurements. Discusses related theory, followed by applications in such areas as strain, sound, temperature and pressure measurements. Format includes lectures, recitation (presenting the concept of the experiment to be performed and the required data analysis), and laboratories. Analyzes the data obtained from measuring systems set up and operated in the laboratory to demonstrate and reinforce fundamental concepts of engineering mechanics. For undergraduate credit only. Prerequisite(s): EE 282, AE 333, ME 325, ENGL 102, COMM 111, PHYS 315. Pre- or corequisite(s): ME 522. Corequisite(s): 533L.

ME 541. Mechanical Engineering Design II (3).
Continues on the basis of applications of engineering design principles, engineering analytical skills and failure theories, to the creative design of mechanical assemblies and equipment. Using the basics of machine design (e.g., design process, engineering mechanics and materials, failure prevention under static and variable loading), students learn to examine the safety of the structure, leading to decision making and selection of mechanical components and standard parts (e.g., shafts, bearings, fasteners, gears, springs, sprockets, breaks and clutches), according to the available standards, codes, handbooks and catalogs. Problem definition, conceptual design, feasibility studies, design calculations to obtain creative solutions for current real engineering problems, introduction to human factors, economics and reliability theory are part of the experience through group and/or individual design projects. For undergraduate students only. Prerequisite(s): ME 339 and ME 439; both with a GPA of 2.000 or above. Pre- or corequisite(s): ME 475.

ME 581. Introduction to Corrosion (3).
Presents information about basic corrosion processes, underlying principles of corrosion formations, and general protection methods. Studies basic corrosion and corrosion mechanisms, importance of corrosion, coating systems, and how the materials are protected from the corrosion formations. Concerns fundamental theory of the thermodynamics and kinetics of the corrosion process of metals and alloys as well as polymer materials both in atmosphere and water solutions. Focuses on electrochemical aspects and the influences of the properties of the metals and their oxides on the corrosion behavior, which is exemplified by different corrosion types. Existing corrosion protection strategies, including surface treatments and coatings are described and choice of material is discussed from a corrosion point of view. Prerequisite(s): ME 250 and ME 398; or instructor’s consent.

ME 602. Engineering for the Environment (3).
Focuses on air and ground water pollution as well as remediation; briefly covers the major pollutants, their health effects, their sources, their transport, and attainment/remediation technologies. Design aspects are included in the term project activities centered on technologies for environmental pollution control. Satisfies the ME departmental criteria for ME elective or open technical elective course for graduation. Prerequisite(s): ME 325 (or MATH 551), ME 398 (or CHEM 212) and MATH 344, (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course), or the instructor’s consent.

ME 625. Applications in Thermal Engineering (3).
Application of energy concepts to thermal fluid applications. Open-ended problems in incompressible and compressible fluid flows, boundary layer modeling and analogies, LMTD, heat exchangers, pumps and turbines, modeling and prototype, and gas radiation. Theoretical analysis and report preparation. For undergraduate students only. Prerequisite(s): ME 521 and ME 522; both with a GPA of 2.000 or above. Pre- or corequisite(s): ME 533.

ME 633. Mechanical Engineering Systems Laboratory (3).
2 Classroom hours; 3 Lab hours. Selected experiments illustrate the methodology of experimentation as applied to mechanical and thermal systems. Experiments include the measurement of performance of typical systems and evaluation of physical properties and parameters of systems. Group design and construction of an experiment is an important part of the course. Team and individual efforts are stressed as are written and oral communication skills. For undergraduate students only. Prerequisite(s): ME 522, ME 533. Corequisite(s): ME 633L.

ME 637. Computer-Aided Engineering (3).
2 Classroom hours; 3 Lab hours. Integrates computer-aided design, finite element analysis, kinematics analysis, heat transfer analysis and other considerations for design of mechanical components and systems. Provides a blend of theory and practice. Prerequisite(s): ME 339 and ME 439, or equivalent. Corequisite(s): ME 637L.

ME 644. Design of HVAC Systems (3).
Analysis and design of heating, ventilating and air-conditioning systems based on psychometrics, thermodynamics and heat transfer fundamentals with focus on advanced duct design for composite building, cooling load calculations and thermal-issues based psychometric. Focuses on design procedures for space air-conditioning, and heating and cooling loads in buildings. Prerequisite(s): ME 521, 522; or instructor's consent.

ME 650. Selected Topics in Mechanical Engineering (1-3).
New or special topics are presented on sufficient demand. Repeatable for credit with a change of content. Prerequisite(s): departmental consent.

ME 651. Biomaterials (3).
Introduction to biomaterials and biotechnology for both undergraduate and graduate students focusing on biomaterials (e.g., metals and alloys, composites, polymers and ceramics), biodevices, basic fabrication and characterization techniques, and their general properties and applications. Prerequisite(s): ME 250, ME 251; or instructor's consent.

ME 659. Mechanical Control Systems (3).
Cross-listed as EE 684. Modeling and simulation of dynamic systems. Theory and analysis of the dynamic behavior of control systems, based on the laws of physics and linear mathematics. Concerns classical methods of feedback control systems and design. Prerequisite(s): (1) EE 282 and MATH 555, or (2) EE 383.

ME 660. Polymer Materials and Engineering (3).
Introduces the basic science and engineering of polymer materials. Provides the scientific foundation for an understanding of the relationships among material structures and properties of different types of polymer materials (thermoplastics, thermosets, synthetic fibers and rubbers, etc.) for various applications from consumer electronics to aviation industry. An understanding of these materials, processing techniques, their properties, and how they are applied in the industry. Prerequisite(s): ME 250 or CHEM 211.

ME 662. Senior Capstone Design (3).
1 Classroom hour; 6 Lab hours. Culminating course allows students nearing graduation to combine the knowledge and skills acquired in their program and apply them to a major project or assignment. Exercise in the practice of mechanical engineering for undergraduate students in their graduating semester; students engage in a comprehensive design project requiring the integration of knowledge gained in prerequisite engineering, science and design courses along with economic comparisons of engineering alternatives considering the time value of money, taxes and depreciation. Team effort and both oral and written presentations are a part of the experience. For undergraduate students only. Prerequisite(s): ME 522 and ME 541 with a GPA of 2.000 or better. Pre- or corequisite(s): ME 633 and ME 659.

ME 665. Selection of Materials for Design and Manufacturing (3).
Focuses on the selection of engineering materials to meet product and manufacturing requirements. Solution to various product and manufacturing problems by appropriate selection of materials is illustrated through the use of numerous examples and case studies. Prerequisite(s): ME 439.

ME 667. Mechanical Properties of Materials (3).
Major focus on deformation mechanisms and on crystal defects that significantly affect mechanical properties. Also covers plasticity theory, yield criteria for multi-axial states of stress, fracture mechanics and fracture toughness. Includes some review of basic mechanics of materials and elasticity as needed. Prerequisite(s): ME 439.

ME 670. Introduction to Nanotechnology (3).
Introduction to the underlying principles and applications of the field of nanotechnology and nanoscience. Covers basic principles of nanotechnology, nanomaterials and associated technologies and provides a background of the understanding, motivation, implementation, impact, future, and implications of nanotechnology. Focuses on processing techniques of nanoparticles, nanofibers/wires, nanotubes, nanofilms and nanocomposites using physical, chemical and physicochemical techniques, as well as their characterizations and potential commercial applications. An understanding of nanomaterials, fabrication and characterization techniques, and how they are applied in nanodevice fabrication. Material covered includes nanofabrication technology (how one achieves the nanometer length scale, from "bottom up" to "top down" technologies), the interdisciplinary nature of nanotechnology and nanoscience (including areas of chemistry, material science, physics and molecular biology), examples of nanoscience phenomena (the crossover from bulk to quantum mechanical properties), and applications (from integrated circuits, quantum computing, MEMS and bioengineering). Prerequisite(s): ME 250 and ME 398; or instructor's consent.

ME 672. Manufacturing of Composites (3).
2 classroom hours; 3 laboratory hours. Provides the basis for understanding and use of composite materials in various engineering applications such as space and aerospace structures. Different classes of composite materials, the characteristics of their constituents, an introduction to micromechanics of composites, commonly used composite manufacturing techniques in detail, along with their capabilities and limitations, characterization methods, degradation, joining, tooling, machining, and recycling of composites is discussed. Contains laboratory modules designed to provide hands-on experience to emphasize the practical aspects of the topics covered. Prerequisite(s): ME 250, ME 251, AE 333; or instructor's consent.

ME 673. Recovery of Engineering Materials (3).
Introduces basic standards in recycling and reusing processes of different materials and the importance of recycling for the economy, health and environment. Focuses on basic separation techniques of various recyclable materials, recycled products, reprocessing, as well as characterizations and potential commercial applications in different industries. Undergraduate and graduate students are expected to gain an understanding of recycling processes, recycled materials and applications. Prerequisite(s): ME 250 and ME 398 or instructor's consent.

ME 678. Studies in Mechanical Engineering (1-3).
Arranged individual, independent study in specialized content areas in mechanical engineering under the supervision of a faculty member. Requires written report or other suitable documentation of work for departmental records. Three (3) hours maximum technical elective credit. Not for graduate credit. Prerequisite(s): departmental consent.

ME 680. Laser Materials Processing and Design (3).
Studies laser science such as the methods, processes or products that make use of the spectrum of laser light. Covers laser processing to produce features and modify properties in metals, organic polymers, inorganic insulators, superconductors, semiconductors and biological materials on the meso/micro/nano scales. Research into laser nano/micro materials processing in electronic, opto-electronic, MEMS, medical-therapeutic and other applications. Finite volume-based software Flow 3D is part of the lab experience. Prerequisite(s): ME 398 or instructor's consent. Corequisite(s): ME 680L.

ME 680L. Laser Materials Processing and Design Lab (0).
Studies laser science such as the methods, processes or products that make use of the spectrum of laser light. Covers laser processing to produce features and modify properties in metals, organic polymers, inorganic insulators, superconductors, semiconductors and biological materials on the meso/micro/nano scales. Research into laser nano/micro materials processing in electronic, opto-electronic, MEMS, medical-therapeutic and other applications. Finite volume-based software Flow 3D is part of the lab experience. Corequisite: ME 680.

ME 702. Energy and Sustainability (3).
Cross-listed as PHYS 702. Introduces sustainability in a world of increasing population with more energy intensive lifestyles and diminishing resources; anthropogenic global climate change and the engineer's responsibilities; estimating our carbon footprint; surveys

alternative energy sources with special emphasis on wind and solar energy; life cycle analysis (LCA) of engineered products; the electric grid; emissions from various transportation modes, and alternatives. Consists of traditional lectures, seminars by invited experts, and case studies. Meets the ME undergraduate curricular requirement for thermal/fluids elective and/or a general ME elective. *Course includes diversity content*. Pre- or corequisite(s): ME 522 or PHYS 551; or instructor's consent.

ME 709. Injury Biomechanics (3).
Offers insight into the trauma problem and methods used to quantify and reduce it. Research methods used in injury biomechanics and their limitations are discussed including tests with human volunteers, cadavers, animals, mechanical crash test dummies and computer models. Provides a basic understanding of injury mechanisms and tolerances for the different body parts, including head, spine, thorax and extremities. Presents both automotive and aircraft impact safety regulations on occupant protection and related biomechanical limits. Students are exposed to and gain experience in using mathematical/ numerical/computer models for injury biomechanics. Prerequisite(s): instructor's consent.

ME 710. Six Sigma for Mechanical Engineers (3).
Introduces the basic principles behind six sigma engineering as applicable to mechanical engineering. Provides the scientific foundation for an understanding of the six sigma tools and principles and applications towards design and development of mechanical components, ensuring regulatory compliance through qualification and validation by identifying manufacturing issues, developing advanced manufacturing cost-effective solutions, and overseeing successful implementation into production, eliminating waste to reduce overhead motive, cost, etc. Uses a set of management methods, mainly empirical and statistical methods, and creates a special infrastructure of people within the organization who are experts in these methods. Students gain an understanding of how six sigma improves the quality of the output of a process by removing the causes of defects and minimizing variability in the various facets of mechanical engineering related to industry. Pre- or corequisite(s): ME 339 and MATH 555, both with a GPA of 2.000 or above; or graduate status.

ME 719. Basic Combustion Theory (3).
Introduces the fundamental principles of combustion processes. Examines the chemistry and physics of combustion phenomena, that is, detonation and flames, explosion and ignition processes. Prerequisite(s): CHEM 211, ME 522.

ME 725. Mechanical Vibrations and Acoustics (3).
Studies free and forced vibrations of damped and undamped single and multiple degrees of freedom discrete mechanical systems, vibration isolation, rotating imbalance, psychophysiological acoustics, noise emission assessment, types of sound waves and their sources, sound reflection/absorption/transmission/diffraction, sound propagation in porous materials and multilayered walls, sound propagation in ducts, silencer design, and mechanisms for acoustic radiation from a vibrating surface. Prerequisite(s): ME 325, ME 335, MATH 555; or instructor’s consent.

ME 728. Advanced Electronic Materials (3).
Focuses on electronic materials which are fundamental and critical to performances and applications of electronic devices. Structure-property and property-relationships of different types of electronic materials are discussed. Cutting edge technologies in development of advanced electronic materials and devices are introduced. High level knowledge of electronic material structures, properties and applications of electronic materials, and basic principles for material design for electronics. Prerequisite(s): ME 250 or PHYS 313; or instructor's consent.

ME 729. Computer-Aided Analysis of Mechanical Systems (3).
Modeling and analysis of planar motion for multibody mechanical systems including automatic generation of governing equations for kinematic and dynamic analysis, as well as computational methods and numerical solutions of governing equations. Computer applications. Open-ended student projects on engineering applications such as mechanisms design and vehicle dynamics. Technical elective course for mechanical engineering students. Prerequisite(s): ME 335, MATH 555 or instructor's consent. Pre- or corequisite(s): ME 339.

ME 730. Modeling of Engineering Systems (3).
Provides rigorous understanding of physics and engineering mathematics in order to model practical scientific and engineering problems in fluid mechanics, heat transfer, solid mechanic, and vibrations. Focuses on analytical approaches and introduces computational methods for modeling engineering systems using computer codes. Prerequisite(s): MATH 555 and ME 325, or departmental consent.

ME 731. Advanced Heat Exchanger Design (3).
Topics cover advanced design of fluidized bed, heat pipe, and high-temperature heat exchangers. Design experience through individual projects. Prerequisite(s): ME 521, ME 522.

ME 737. Robotics and Control (3).
Systems engineering approach to robotic science and technology. Fundamentals of manipulators, sensors, actuator, end-effectors and product design for automation. Includes kinematics, trajectory planning, control, programming of manipulator and simulation, along with introduction to artificial intelligence and computer vision. Prerequisite(s): EE 282, ME 335, ME 339, MATH 555 or graduate status.

ME 739. Advanced Machine Design (3).
A broad coverage of principles of mechanical analysis and design of machine elements. Emphasizes dynamic system modeling, prediction of natural frequencies and forced response, effect of support flexibility, failure theories used in design and fatigue life prediction. Typical mechanical systems studied are gears, bearings, shafts, rotating machinery and many types of spring-mass systems. Uses fundamentals learned in mechanics, strength of materials and thermal sciences to understand mechanical system modeling, analysis and design. Prerequisite(s): ME 541 or instructor's consent.

ME 745. Design of Thermal Systems (3).
Covers component design for a typical Rankine power cycle. Design of boilers, condensers, various types of turbine, pipe flow network, and power plant system integration are covered. Prerequisite(s): ME 521, ME 522.

ME 747. Microcomputer-Based Mechanical Systems (3).
2 Classroom hours; 3 Lab hours. Microcomputer-based real-time control of mechanical systems. Familiarizes students with design and methodology of software for real-time control. Includes an introduction to the C programming language which is most relevant to interfacing and implementation of control theory in computer-based systems. Laboratory sessions involve interfacing microcomputers to mechanical systems and software development for control methods such as PID. Prerequisite(s): ME 659 or instructor's consent.

ME 749. Applications of Finite Element Methods in Mechanical Engineering (3).
2 Classroom hours; 3 Lab hours. Introduces the finite element method (FEM) as a powerful and general tool for solving differential equations arising from modeling practical engineering problems. Finite element

solutions to one- and two-dimensional mechanical engineering problems in mechanical systems, heat transfer, fluid mechanics and vibrations. Includes Galerkin's and variational finite element models. Introduces commercial finite element computer tools such as ANSYS. Prerequisite(s): ME 325 and ME 439. Pre- or corequisite(s): ME 522 or graduate status. Corequisite(s): ME 749L.

ME 749L. Applications of Finite Element Methods in Mechanical Engineering Lab (0).
Lab for ME 749 (Applications of Finite Element Methods in Mechanical Engineering). Corequisite(s): ME 749.

ME 750. Selected Topics in Mechanical Engineering (1-3).
New or special topics are presented on sufficient demand. Repeatable for credit with a change of content. Prerequisite(s): departmental consent.

ME 750AE. Computational Modeling for Fluid Flow and Heat Transfer (3).
Reviews the basic laws of fluid flow and heat transfer including the Navier-Stokes equations. Applications include a CFD software emphasizing the finite volume method and introducing turbulence modeling. Additional topics include grid generation and benchmarking exercises as well as open-ended projects. Prerequisite(s): ME 325 (or AE 227) and ME 522 (or AE 424) with a minimum grade of C in each, or instructor's consent.

ME 750AF. Autonomous Vehicles (3).
Overview of the concepts required to create autonomous vehicles. Introduces topics such as sensing, localization, perception, deep learning for motion planning, decision making, object recognition, and intelligent control. Pre- or corequisite(s): ME 659 or equivalent.

ME 750AG. Indoor Air Pollution and Simulation (3).
Students learn about indoor air pollution and its impact on building occupants. Includes understanding indoor pollutant levels and experimental design, understanding strategies to combat the pollution using source control, control equipment and ventilation. Also includes understanding the dynamics of indoor pollution and energy conservation; and the effects of the pollution on occupants. Students learn models for predicting source emission rates. Prerequisite(s): ME 398, ME 521 with a C or better in both courses.

ME 750AI. Phase Transformations in Materials (3).
In-depth analysis of the thermodynamics and kinetics of phase transformation in materials. Topics include: phase equilibria and transformations, thermodynamics applied to processing of materials (metal and alloys, polymers, composites, ceramics, etc.), and kinetics in materials systems including diffusion, nucleation, growth, gas-solid and liquid-solid reactions. Highlights a number of commercially significant applications where phase transformations are important. Prerequisite(s): ME 250, ME 398; or graduate student status.

ME 751. Selected Topics in Mechanical Engineering (1-3).
New or special topics are presented on sufficient demand. Repeatable for credit with a change of content. Prerequisite(s): departmental consent.

ME 752. Failure Analysis Methods and Tools (3).
Introduces the fundamental concepts of the failure analysis of engineering components at various environmental and testing conditions, and provides general knowledge on the procedures and mechanisms involved in failure analysis. Topics include procedural approaches in failure analysis; metallographic and fractographic studies, analysis of broken components by macroscopic, microscopic and nanoscopic observations, reviews common experimental methods used in failure analysis, and specific descriptions of failures for metallic, ceramics, polymeric and composite materials at micro- and nanoscales. Students learn advanced materials characterization techniques including scanning electron microscopy (SEM), energy dispersive spectroscopy (EDS) and compositional dot mapping, x-ray diffraction (XRD), Fourier transform infrared spectroscopy (FTIR) optical microscopy, and fracture surface sample preparation. Undergraduate and graduate students are expected to gain an understanding of these subjects, and how they are applied in industrial applications. Prerequisite(s): ME 250, and ME 439; or instructor's consent.

ME 753. Advanced Materials for Energy Systems (3).
Introduces the advanced materials and fundamental principles behind the energy systems and devices. Focuses on advanced materials (e.g., metals and alloys, composites, polymers, ceramics and semiconductors) at micro- and nanosize, novel energy conversion systems and devices, fabrication and characterization techniques and their general properties and applications. Efficiencies of most energy systems are limited by materials engineering and reliability of these systems. Covers the application of scientific and engineering principles for materials used in energy systems. Equips students with knowledge and skills that enable them to solve a wide range of energy materials technology and engineering problems to minimize operational risks and maximize process reliability, and ensure a more sustainable future. Students gain an understanding of these advanced materials and devices, importance of them, and how they are applied in energy related technologies and future developments. Prerequisite(s): ME 250, ME 398, ME 469 or ME 522 (either one of ME 469 or ME 522); or instructor's consent.

ME 758. Nonlinear Controls of Electro-Mechanical Systems (3).
Cross-listed as ME 850AE. Standard first nonlinear controls course. Covers stability, feedback linearization (robotic, mechanical, electro-mechanical system applications), differentially-flat systems (with rotor-craft position tracking applications), back-stepping control-design methods (electro-mechanical, robotic and rotor-craft applications), MIMO systems, normal form, zero dynamics, and adaptive control of robotic systems. EE 792, Linear Systems, while not a prerequisite, is helpful. Prerequisite(s): ME 659 or EE 684; or equivalent.

ME 760. Fracture Mechanics (3).
Covers fracture mechanics in metals, ceramics, polymers and composites. Suitable for graduate and undergraduate study in metallurgy and materials, mechanical engineering, civil engineering and aerospace engineering where a combined materials-fracture mechanics approach is stressed. Prerequisite(s): ME 439 or instructor's consent.

ME 762. Polymeric Composite Materials (3).
Designed to provide students with an understanding and knowledge about polymeric composite materials. The characteristics of various reinforcements and polymeric matrices are presented and their processing techniques, capabilities and limitations are highlighted. In addition, various methods for manufacturing of polymeric composites along with their capabilities are discussed. Characterization techniques, test methods, assembly, and joining of polymeric composites are presented. Prerequisite(s): ME 250, ME 251, AE 333, ME 439, and MATH 555; or instructor's consent.

ME 775. Introduction to Microelectromechanical Systems (3).
Introduces the design and manufacture of microelectromechanical systems, including principles of MEMS sensing and actuation, microfabrication and packaging. Covers electrical, thermal and mechanical behavior of microsystems, the design of electromechanical and thermal sensors and actuators, MEMS microfabrication, and MEMS packaging techniques. Studies a variety of microscale sensors and actuators (e.g., electrical switches, pressure sensors, inertial sensors and optical MEMS). Devotes the last third of the semester largely to design. Prerequisite(s): ME 439, ME 533, and MATH 555 with a minimum of C or better; or graduate standing.

ME 777. Mechanical Engineering Seminar (0).
A mechanical engineering graduate seminar to develop critical thinking/ foundation for students' future professional careers with cutting-edge research activities in the area of mechanical engineering. Provides the necessary scientific and mechanical engineering knowledge for future successful professionals. Students are required to register and pass this course at least one semester during their entire graduate study. Course meets biweekly per semester.

ME 781A. Cooperative Education (1).
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. Repeatable for credit. Prerequisite for credit: approval by the appropriate faculty sponsor.

ME 781P. Cooperative Education (1).
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Graded Cr/ NCr unless student has received permission before enrolling for course to be used as an elective. Repeatable for credit. Prerequisite(s): approval by the appropriate faculty sponsor.

ME 782. Engineering Applications of Computational Fluid Dynamics and Heat Transfer (3).
Lectures review the basic laws of fluid flow and heat transfer including the Navier-Stokes equations. Laboratory activities include use of a CFD software emphasizing the finite volume method and introducing turbulence modelling. Additional topics include grid generation and benchmarking exercises as well as open-ended projects. Prerequisite(s): ME 325 (or MATH 551) and ME 522 (or AE 424) with a minimum grade of C in each, or the instructor’s consent, or graduate standing.

MGMT - Management

Department of Management

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MGMT 190B. Growing Rural Businesses (1-3).
This course is designed to help rural businesses grow. The course topics include market research, vendor relationships, financials, and advertising strategy.

MGMT 360. Principles of Management (3).
An overview of concepts, theories and practices that apply to the management of work organizations. Includes organizational goals, corporate strategy, structure, decision making, leadership, motivation, communication, group dynamics, organizational change and the international dimension of business. Prerequisite(s): junior standing.

MGMT 390. Special Group Studies in Management (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): advanced standing.

MGMT 430. Business, Government and Society (3).
An examination of the environments in which business operates: economic, political, social/cultural, technological, international, ecological and legal. Includes business-government relations, social responsibility, business ethics, government regulation, legal framework and international business. Prerequisite(s): MGMT 360, junior standing, advanced standing.

MGMT 450. Negotiating Across Cultures (3).
Cross-listed as IB 450. Regardless of one's chosen career, industry, title, status or role in an organization, one continually negotiates. If one manages or is managed, leads or is led, sells or is sold, buys or is bought, hires or is hired, fires or is fired, empowers or is empowered, one negotiates. Any time one requests or is requested to do something, one negotiates. The quality and effectiveness of one's career and life will be strongly influenced by one's ability to effectively negotiate. The better one understands the person(s) with whom one negotiates, the more effective negotiator one will be. Understanding the other person(s) includes understanding his/her/their culture, expectations, objectives, motivations, decision-making processes, and rationale for behavior. Focuses on bargaining and negotiating in a wide variety of settings, from simple buyer/seller negotiations to multiple-issue/multiple-party negotiations. Touches on principal differences among cultures and how those differences may affect negotiations and outcomes. Prerequisite(s): IB 333, junior standing, advanced standing.

MGMT 460. Designing Effective Organizations (3).
Studies how work and workers can be structured to best accomplish the goals of an organization. Explores the interplay of design, technology, strategy, environment, and discusses frameworks that promote growth, market responsiveness, innovation and global competitiveness. Emphasizes skills necessary for managing change for maximum effectiveness of individuals, work groups and the organization as a whole. Prerequisite(s): MGMT 360, junior standing, advanced standing.

MGMT 462. Leading and Motivating (3).
Studies theories of human motivation and adaptation of these theories to programs in organizations. Probes concepts of authority and delegation and analyzes leadership styles. Prerequisite(s): MGMT 360, junior standing, advanced standing.

MGMT 462H. Leading and Motivating Honors (3).
Studies theories of human motivation and adaptation of these theories to programs in organizations. Probes concepts of authority and delegation and analyzes leadership styles. Prerequisite(s): MGMT 360, junior standing, advanced standing.

MGMT 463. Building Effective Work Teams (3).
Significant changes in the business environment have motivated widespread support for the use of teams to accomplish work-related tasks. Course promotes an understanding of the organizational context of team culture through an analysis of how teams form, and group processes that enhance goal accomplishment. Emphasizes skills necessary to manage the organization's culture, improve group performance and increase collaboration among team members. Prerequisite(s): MGMT 360, junior standing, advanced standing.

MGMT 464. Communicating Effectively in Organizations (3).
Examination of the design of organizational communication systems. Includes an introduction to communication models and the analysis of the interpersonal communication process. Prerequisite(s): MGMT 360, junior standing, advanced standing.

MGMT 481. Cooperative Education (1-3).
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable

for credit. Prerequisite(s): junior standing, advanced standing, and 2.250 GPA.

MGMT 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

MGMT 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

MGMT 662. Managing in Diverse Organizations (3).
Modern organizations face the challenge of managing employees with diverse backgrounds and talents to provide products and services to diverse customers. Course examines workforce diversity from the perspective of maximizing its benefits to group and organizational effectiveness, including developing skills to facilitate the constructive resolution of conflict, encouraging cooperation and teamwork, and enhancing identification with the work unit. *Course includes diversity content*. Prerequisite(s): MGMT 360, junior standing, advanced standing.

MGMT 680. Making Effective Decisions (3).
Studies the theories of decision making with attention to the factors of rational decision making and application of quantitative methods, cognitive and motivational influences, intuition, political influences, ethics, and the process of negotiation and decision making in groups along with decision implementation and learning from past decisions. Prerequisite(s): MGMT 360, junior standing, advanced standing.

MGMT 681. Strategic Management (3).
An analysis of business problems from a strategic management perspective. A capstone course which integrates the functional areas of business, including management, marketing, finance, accounting and production. Discusses both domestic and international policy issues, large and small firms, and various sources of competitive advantage. Prerequisite(s): DS 350, FIN 340, MKT 300, MGMT 360, senior standing, advanced standing.

MGMT 690. Seminar in Selected Topics (1-5).
Repeatable for credit with departmental consent. Prerequisite(s): junior standing, advanced standing.

MGMT 750. Workshop in Management (1-4).
Prerequisite(s): junior standing.

MILS - Military Science

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MILS 101. Introduction to the Army (1).
Focuses on introduction to the Army and critical thinking. Introduces cadets to the Army and the profession of arms. Examines the Army profession and what it means to be a professional in the U.S. Army. Focuses on developing basic knowledge and comprehension of the Army Leadership Requirements Model while gaining a complete understanding of the Reserve Officers' Training Corps (ROTC) program, its purpose in the Army, and its advantages for the student. Cadets also learn how resiliency and fitness supports their development as Army leaders. Includes a weekly lab facilitated by military science labs III cadets and supervised by Cadre.

MILS 101L. Leadership Labs (0.5).
ROTC cadet training involves classroom instructions on leadership techniques, time management, ethics, critical thinking skills and military operations. Cadets are provided the opportunity to apply their knowledge and understanding in a field setting during weekly practical exercises called a lab. This provides the opportunity for the cadets to challenge themselves and learn in a safe environment. Labs range from topics covering drill and ceremony, land navigation, squad tactics to a final culminating event at the end of each semester called Leader Stakes. All labs are designed to develop the knowledge and leadership abilities of the cadets. Labs are run by cadre.

MILS 102. Foundations of Agile and Adaptive Leadership (1).
Introduces students (here referred to as "cadets") to the personal challenges and competencies critical for effective leadership. Cadets develop life skills such as critical thinking, time management, goal setting and communication. Cadets learn the basics of the communications process and the importance for leaders to develop the essential skills to effectively communicate in the Army. Cadets begin learning the basics of squad level tactics reinforced during a weekly lab (MILS 102L) facilitated by military science labs III cadets and supervised by cadre.

MILS 102L. Leadership Labs (0.5).
ROTC cadet training involves classroom instruction on leadership techniques, time management, ethics, critical thinking skills and military operations. Cadets are provided the opportunity to apply their knowledge and understanding in a field setting during weekly practical exercises called a lab. Provides an opportunity for the cadets to challenge themselves and learn in a safe environment. Labs range from topics covering drill and ceremony, land navigation and squad tactics, to a final culminating event at the end of each semester called Leader Stakes. All labs are designed to develop the knowledge and leadership abilities of the cadets. Labs are run by cadre.

MILS 109. Physical Fitness Training (1).
Focuses on enhancing the student's fitness level through the use of military-style physical training.

MILS 201. Leadership and Decision Making (3).
Focuses on leadership and decision making. Adds depth to the cadets' understanding of the Adaptability Army Learning Area. Outcomes are demonstrated through critical and creative thinking, and the ability to use troop leading procedures (TLP) to apply innovative solutions to problems. The Army profession is also stressed through leadership forums and a leadership self-assessment. Students are then required to apply their knowledge outside the classroom in a hands-on performance-oriented environment during a weekly lab facilitated by military science labs III cadets and supervised by cadre.

MILS 202. Army Doctrine and Team Development (3).
Focuses on Army doctrine and team development. Begins the journey to understand and demonstrate competencies as they relate to Army doctrine. Army values, teamwork and warrior ethos and their relationship to the Law of Land Warfare and philosophy of military service are also stressed. The ability to lead and follow is also covered through team building exercises at squad level. Students are required to apply their knowledge outside the classroom in a hands-on performance-oriented environment during an integrated weekly lab facilitated by military science labs III cadets and supervised by cadre.

MILS 301. Training Management and the Warfighting Function (3).
Academically challenging course where students analyze, test and relate the fundamentals of training management and how the Army operates through the warfighting functions. At the conclusion of this course, students are capable of planning, preparing and executing training for a squad conducting small unit tactics. Includes a lab per week using peer facilitation overseen by military science labs IVs, supervised by ROTC cadre.

MILS 302. Applied Leadership in Small Unit Operations (3).
Academically challenging course where students study, practice and apply the fundamentals of direct level leadership and small unit tactics at the platoon level. At the conclusion of this course, students are capable of planning, coordinating, navigating, motivating and leading a platoon in the execution of a mission. Includes a lab per week using peer facilitation overseen by military science labs IVs, supervised by ROTC cadre. Successful completion of this course helps prepare students for the Cadet Summer Training Advance Camp, which they attend in the summer at Fort Knox, KY. Prerequisite(s): MILS 301.

MILS 351. The U.S. Army Since the Vietnam War (3).
Cross-listed as HIST 551. Examines the history of the U.S. Army after the end of U.S. involvement in the Vietnam War. Examines how the U.S. Army was shaped by the Vietnam War and its aftermath, and how that Army responded to the loss of the United States' only near-peer competitor with the collapse of the Soviet Union and the end of the Cold War. Examines the competing strains of thought on the Army's future through the competing lenses of its 1990s low-intensity conflict military interventions and its struggle to modernize in an era of shrinking budgets. Concludes by examining how these events shaped the U.S. Army's performance in the ongoing wars in Afghanistan, Iraq and Syria.

MILS 401. The Army Officer (3).
Focuses on development of the Army officer. Academically challenging course where students develop the knowledge, skills and abilities to plan, resource and assess training at the small unit level. Students learn about Army programs that support counseling subordinates and evaluating performance, values and ethics, career planning, and legal responsibilities. At the conclusion of this course, students are familiar with how to plan, prepare, execute and continuously assess the conduct of training at the company or field grade officer level. Includes a lab per week overseeing military science labs III lesson facilitation and is supervised by ROTC cadre. Prerequisite(s): MILS 301 and MILS 302.

MILS 402. Company Grade Leadership (3).
Academically challenging course where students develop the knowledge, skills and abilities required of junior officers pertaining to the Army in unified land operations and company grade officer roles and responsibilities. Includes reading assignments, homework assignments, small group assignments, briefings, case studies, practical exercises, a mid-term exam and an oral practicum as the final exam. The oral practicum explores student knowledge of how they are prepared for the Army warfighting challenges (AWFC) covered throughout the ROTC advanced course. Successful completion of this course assists in preparing students for the BOLC B course and is a mandatory requirement for commissioning. Includes a lab per week overseeing military science labs III lesson facilitation and is supervised by ROTC cadre. Prerequisite(s): MILS 301, MILS 302 and MILS 401.

MIS - Management Information Systems

Department of Finance, Real Estate & Decision Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MIS 190. Selected Topics in MIS (1-3).
Repeatable for credit with departmental consent.

MIS 310. Fundamentals of Business Application Development (3).
Uses a contemporary business programming language to teach business application development concepts in a visual programming environment. Designed for learning how to solve business problems by using event-driven programming. Prerequisite(s): junior standing, advanced standing.

MIS 325. Data Communications and Computer Networks (3).
Takes a problem-solving approach to introducing data communication and computer networking concepts. Technical and managerial issues in supporting electronic commerce, business-to-business electronic data interchange, virtual teams, extranets, local area networks (LAN), remote access and internetworking LANs over a wide area network (WAN) provide the backdrop for introducing data communication concepts (OSI), standards, protocols and technologies. Prerequisite(s): BADM 161, 162 and 163, junior standing, advanced standing.

MIS 390. Special Topics in MIS (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): junior standing, advanced standing.

MIS 395. Management Information Systems (3).
Provides a broad overview of how businesses adopt and employ information systems to achieve and maintain their competitive edge. The integrated role of information technologies across business functions is examined. Explores emerging technologies and the implications of information technologies on individuals, businesses and societies. Prerequisite(s): BADM 161, 162 and 163, junior standing, advanced standing.

MIS 481. Cooperative Education (1-3).
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): 2.500 GPA in MIS, junior standing, advanced standing.

MIS 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

MIS 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

MIS 600. Database Management Systems (3).
Introduces various methodologies for conceptual data modeling including entity-relationship data modeling and logical database design. Covers relational database management systems, the SQL standard and data administration issues. Students obtain hands-on development with SQL servers in a client/server environment through a required

database programming project. Covers topics of data warehousing, data mining, distributed database management and emerging topics in database areas. Prerequisite(s): BADM 161, 162 and 163 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 605. Systems Analysis and Design (3).
Introduces various methodologies for systems analysis, design and implementation. Examines application development in the context of the overall MIS master planning effort; examines techniques related to business process engineering. Uses a real-life project as the vehicle to put into practice tools and techniques related to interviewing, cost/benefit analysis, computer-aided software engineering, software project management and system documentation. Prerequisite(s): junior standing, advanced standing.

MIS 610. Dynamic Web Programming (3).
Uses ASP.NET as the programming tool to teach Web application development. Includes HTML forms, server objects, and SQL-based data sources for developing interactive and dynamic Web applications within a server-based scripting environment. Covers advanced topics such a ADO and implementing security in Web environments. Prerequisite(s): MIS 310, 600 each with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 611. Topics in Computer Networking (3).
Selected data communications and networking topics are examined in greater detail and depth. Students study the design, configuration, implementation, maintenance, management, troubleshooting and evaluation of selected networking technologies and software. Time is devoted to both concepts and hands-on exercises. Prerequisite(s): junior standing, advanced standing.

MIS 615. Advanced Business Application Development (3).
Presents advanced concepts and techniques for business problem solving by developing software applications using a contemporary business programming language. Special emphasis is placed on object-oriented programming approach. Topics include developing classes, using a multi-tiered approach toward application development, establishing database connection, working with data tables, and database processing. Prerequisite(s): MIS 310 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 690. Seminar in Selected Topics (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): senior standing, departmental consent, advanced standing.

MIS 696. Management of the IS Function (3).
Addresses the issues of managing the information systems (IS) function. Includes the role of IS as a corporate entity, developing a strategic plan for IT investments, organizing the IS department, IS personnel management, IS project management, the role of IS as a user-support entity, auditing the IS function and emerging issues in managing the IS department. Pre- or corequisite(s): MIS 605, junior standing, advanced standing.

MIS 750. Business Intelligence and Analytics (3).
Introduces design and implementation of business intelligence systems for tactical, managerial and strategic level decision making. Addresses how organizational data and analytics support business performance management. Prepares managers for developing and implementing digital performance dashboards to monitor business processes and make informed decisions. Replaces MIS 650 effective fall 2013.

MKT - Marketing

Department of Marketing

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MKT 300. Marketing (3).
A description and analysis of the concepts and tools used by managers in planning and evaluating marketing decisions. Specific topics include product development, pricing, distribution, promotion, information processing, international marketing and marketing in contemporary society. Prerequisite(s): ENGL 102, COMM 111, MATH 111.

MKT 403. Marketing Research (3).
Cross-listed as ENTR 403. Studies the design and implementation of research procedures that support systematic and objective decision making for marketing planning and strategy development. Prerequisite(s): ECON 231, 232, MKT 300 with a minimum grade of C + (2.300), junior standing, advanced standing.

MKT 404. Retail Management (3).
An examination of the essential principles and practices of retail business management, including site selection, store design and department layout, merchandise management, sales promotion, and customer services. Also considers the broad issues of modern marketing and financial strategies as they affect retail distribution. Clarifies new influences at work in the retailing environment. Prerequisite(s): MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

MKT 405. Consumer Behavior (3).
Studies a variety of concepts in the behavioral sciences related to specific topics in consumer behavior, including consumer decision processes, reference groups, and sociological, psychological and economic aspects of consumer behavior. Prerequisite(s): MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

MKT 407. Marketing for Service and Nonprofit Organizations (3).
A study of the unique marketing challenges faced by service and nonprofit organizations. Evaluates marketing concepts and appropriate marketing programs from the perspective of service organizations. Prerequisite(s): MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

MKT 481. Cooperative Education (1-3).
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): junior standing, advanced standing, 2.250 GPA.

MKT 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

MKT 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

MKT 601. International Marketing (3).
Cross-listed as IB 601. Problems and procedures of marketing in foreign countries. Includes the effects of foreign cultures and marketing systems on the design of marketing programs. *Course includes diversity content*. Prerequisite(s): MKT 300 with a minimum grade of C+ (2.300) or better, and MKT 405.

MKT 607. Promotion Management (3).
An analysis of all issues involved with the promotion of an organization and its products or services. Students develop coordinated marketing strategies in the areas of advertising, personal sales, public relations and special promotional activities such as direct marketing, interactive media and sales promotions. Prerequisite(s): MKT 300 with a minimum grade of C+ (2.300), MKT 405.

MKT 608. Selling and Sales Force Management (3).
Cross-listed as ENTR 608. Analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisite(s): MKT 300 with a grade of C+ (2.300) or better, MKT 405.

MKT 609. Marketing Programs (3).
Studies all the aspects of the marketing mix that are integrated to make an effective and coordinated marketing program. Prerequisite(s): MKT 300 with a grade of C+ (2.300) or better, 6 additional hours of marketing, junior standing, advanced standing.

MKT 690. Seminar in Selected Topics (1-5).
Repeatable for credit with instructor's consent. Prerequisite(s): junior standing, advanced standing.

MKT 690G. Online Branding (3).
Provides students with a strategic overview of the digital environment and the role of digital within the overall marketing strategy of an organization. For undergraduate credit only.

MKT 706. Seminar in New Product and Technology Development (3).
Cross-listed as ENTR 706. Provides a form to the function of idea commercialization. Examines the product development practices of successful, innovative companies and focuses on how customer needs can be translated into products and innovations. Students explore idea generation, market validation, prototype development, product concept testing, product launch strategies, postlaunch product evaluation, and managing innovative teams. Students apply learning through developing and testing a product idea that solves a customer problem.

MLS - Medical Laboratory Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MLS 160. Introduction to the Clinical Laboratory (2).
Overview of a career as a medical laboratory scientist. Reviews the four major disciplines of the profession including interpretation of lab results and correlation with various diseases. Includes onsite demonstrations of a variety of lab tests. Designed to help those interested in health care have a clearer picture of the MLS profession.

MLS 281. Cooperative Education (1-8).
Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and the cooperative education coordinator. Repeatable for credit. Prerequisite(s): basic requirements for admission include successful completion of the freshman year and satisfactory academic standing prior to the first job assignment.

MLS 311. Biochemistry for Clinical Scientists (3).
3 Classroom hours. A discussion of the structure and metabolic pathways of carbohydrates, proteins, lipids and nucleic acids, with emphasis on metabolic control via enzymes, hormones and vitamins, and the biochemistry of clinical pathology. Prerequisite(s): two semesters of general chemistry with laboratory, at the major level.

MLS 400. Clinical Laboratory Management/Education (3).
A study of the principles and methodologies of laboratory management and supervision, and teaching techniques applicable to the clinical laboratory sciences. Prerequisite(s): program consent.

MLS 405. Medical Immunology (3).
An introduction to the study of immunological concepts as they apply to the study, prevention and causation of the disease process. Prerequisite(s): BIOL 223 or HS 290.

MLS 411. Special Topics (1-6).
Supervised intensive study of special topics and problems related to health professions. Repeatable to a total of 6 credit hours. Prerequisite(s): program director's consent.

MLS 453. Clinical Chemistry (8).
6 Classroom hours; 4 Lab hours. Includes the study of the principles, concepts and techniques used in the clinical chemistry laboratory for the analysis of serum, plasma and other body fluids. Correlation and analysis of chemical substances in the body and the assessment of health and disease is emphasized. Applicable practice in the analysis of body fluids is provided, including the physical, chemical and microscopic analysis of urine. Coursework includes the study of clinical laboratory regulation, general laboratory operations, safety, and instrumentation methodologies, as well as discussion regarding the assessment of normal physiological function and associated disease conditions for each of the major body systems to include assessment of carbohydrates, proteins and other nonprotein nitrogen-containing compounds, heme synthesis and derivatives, enzymes, electrolytes, acid-base balance, lipids and lipoproteins, cardiac biomarkers, hormones, tumor markers, therapeutic drug monitoring, and toxicology. Prerequisite(s): admission to the MLS program.

MLS 458. Advanced Clinical Chemistry (4).
The study of the principles, concepts and techniques of laboratory testing of body fluids, including the study of advanced instrumentation principles and techniques, acid-base balance, advanced enzymology, nutrition and digestive assessment, endocrinology and toxicology. Correlation of chemical substances of the body and assessment of health and disease is emphasized. Practice in procedures used for chemical analysis of body fluids is provided. This course is designed for certified medical laboratory technicians to assist them in reaching baccalaureate level practice in laboratory medicine. Prerequisite(s): admission to the MLS program.

MLS 463. Clinical Hematology (8).
6 Classroom hours; 4 Lab hours. Emphasizes the theory underlying basic and advanced procedures performed in the hematology laboratory and the relationship between these procedures and the diagnosis of hematological disorders. The clinical significance of laboratory data and its correlation with pathologic conditions are discussed, including in-depth discussions of anemias, polycythemias, leukemias, lymphomas and hemostasis abnormalities. The laboratory component of the course includes performance of basic and advanced hematology procedures including manual and automated complete blood counts, normal and abnormal differentials, cytochemical stains, and routine hemostasis testing. Prerequisite(s): admission to the MLS program.

MLS 468. Advanced Clinical Hematology (4).
Emphasizes the theories underlying procedures performed in the hematology, hemostasis and body fluids laboratories, and the

relationships between these procedures and the diagnosis of disease, including in-depth discussions of anemias and leukemias. Opportunity is given to practice specialized hematologic, hemostasis and body fluid procedures used in the clinical laboratory. Course is designed for certified medical laboratory technicians to assist them in reaching baccalaureate level practice in laboratory medicine. Prerequisite(s): admission to the MLS program.

MLS 473. Immunohematology (8).
6 Classroom hours; 4 Lab hours. The practices and procedures in the transfusion service and donor center are presented, including the application of genetics and immunology to blood group serology. Problem solving in transfusion medicine, including complex antibody identification techniques and resolution of serological incompatibilities encountered in blood typing. Hemolytic disease of the newborn and hemolytic anemia are explored. Practice is offered in the techniques relevant to the performance of blood bank testing by the medical laboratory scientist in both the donor center and transfusion center, including automated testing methods, collection, storage and processing of blood components for transfusion. Reagents, testing of blood products and quality principles in blood banking are summarized. Prerequisite(s): admission to the MLS program.

MLS 478. Advanced Immunohematology (4).
Emphasizes practice and problem solving in transfusion services and donor centers. Practice is offered in techniques relevant to the performance of blood bank testing. Designed for certified medical laboratory technicians to assist them in reaching baccalaureate level practice in laboratory medicine. Prerequisite(s): admission to the MLS program.

MLS 479. Applied Immunohematology (3).
Application of the theory and technical skill of immunohematology in a clinical laboratory with experiences in prenatal testing, antibody identification, direct antiglobulin evaluation, provision of safe blood or blood components for transfusion, and resolution of discrepancies encountered in performing any of the procedures. Prerequisite(s): MLS program consent.

MLS 482. Molecular Diagnostic Techniques (3).
2 Classroom hours; 1 Lab hour. An introduction to molecular diagnostic techniques performed in the clinical laboratory, including rationale of testing methodologies, comparison of test methods, performance of lab tests, interpretation of test results, and clinical correlations of testing to specific disease, as well as the molecular basis of various pathologic conditions.

MLS 488. Core Laboratory Practicum (8).
Application of theory and techniques of clinical analysis of body fluids for the assessment of health and disease. Prerequisite(s): MLS program consent.

MLS 495. Clinical Microbiology (8).
Theory and practice of isolation and identification of human pathogenic micro-organisms, including (a) procedures for specimen processing in the clinical laboratory; (b) normal flora of human body sites; (c) morphological, cultural and serologic characteristics of medically significant micro-organisms; and (d) antimicrobial principles and susceptibility testing techniques. Prerequisite(s): admission to the MLS program.

MLS 498. Applied Clinical Microbiology (3).
Application of theoretical and practical aspects of clinical microbiology in a commercial laboratory and operating hospital laboratory. Prerequisite(s): MLS program consent.

MLS 499. Advanced Clinical Microbiology (4).
The study of medically significant bacteria, viruses, fungi and parasites emphasizing their identification in the clinical laboratory. Designed for certified medical laboratory technicians to assist them to reach baccalaureate level practice in laboratory medicine. Prerequisite(s): admission to the MLS program.

MUSA - Applied Music

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MUSA 112. Applied Music Instruction for Nonmajors (2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112A. Applied Music Instruction for Nonmajors - Bassoon (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112B. Applied Music Instruction for Nonmajors - Cello (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112C. Applied Music Instruction for Nonmajors - Clarinet (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112D. Applied Music Instruction for Nonmajors - Euphonium (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112E. Applied Music Instruction for Nonmajors - Flute (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112F. Applied Music Instruction for Nonmajors - French Horn (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112G. Applied Music Instruction for Nonmajors - Classical Guitar (2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112J. Applied Music Instruction for Nonmajors - Guitar (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112K. Applied Music Instruction for Nonmajors - Harp (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112L. Applied Music Instruction for Nonmajors - Oboe (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112M. Applied Music Instruction for Nonmajors - Organ (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112N. Applied Music Instruction for Nonmajors - Percussion (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112P. Applied Music Instruction for Nonmajors - Piano (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112Q. Applied Music Instruction for Nonmajors - Viola De Gamba (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112R. Applied Music Instruction for Nonmajors - String Bass (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112S. Applied Music Instruction for Nonmajors - Trombone (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112T. Applied Music Instruction for Nonmajors - Trumpet (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112U. Applied Music Instruction for Nonmajors - Tuba (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112V. Applied Music Instruction for Nonmajors - Viola (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112W. Applied Music Instruction for Nonmajors - Violin (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112X. Applied Music Instruction for Nonmajors - Saxophone (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112Y. Voice - Nonmajors (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 112Z. Applied Music Instruction for Nonmajors - Electric Bass (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 113P. Piano Class Level I - Music Majors (1).
Nonpiano music majors. Class piano prepares the student to pass the piano proficiency exam. Required of all music majors. Repeatable for credit. Prerequisite(s): class placement interview.

MUSA 114P. Piano Class Level II - Music Majors (1).
Nonpiano music majors. Repeatable for credit. Prerequisite(s): class placement interview.

MUSA 115P. Piano Class Level III - Music Majors (1).
Nonpiano music majors. Repeatable for credit. Prerequisite(s): class placement interview.

MUSA 116P. Piano Class Level IV - Music Majors (1).
Nonpiano music majors. Repeatable for credit. Prerequisite(s): class placement interview.

MUSA 117J. Guitar - Beginners (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 119P. Piano Class - Piano Majors (1).
Piano majors. Prerequisite(s): class placement interview. Repeatable for credit.

MUSA 122J. Beginning Guitar (2).
Geared toward the bare beginner, this course teaches students how to hold and tune a guitar, as well as proper techniques in the areas of right/left hand posture, picking, strumming and fingerpicking. Other topics include basic guitar maintenance such as changing strings. *Course includes diversity content*.

MUSA 231A. Applied Music Instruction for Majors - Bassoon (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231B. Applied Music Instruction for Majors - Cello (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231C. Applied Music Instruction for Majors - Clarinet (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231D. Applied Music Instruction for Majors - Euphonium (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231E. Applied Music Instruction for Majors - Flute (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231F. Applied Music Instruction for Majors - French Horn (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231G. Applied Music Instruction for Majors - Classical Guitar (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231J. Applied Music Instruction for Majors - Guitar (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231K. Applied Music Instruction for Majors - Harp (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231L. Applied Music Instruction for Majors - Oboe (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231M. Applied Music Instruction for Majors - Organ (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231N. Applied Music Instruction for Majors - Percussion (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231P. Applied Music Instruction for Majors - Piano (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231Q. Applied Music Instruction for Majors - Viola da Gamba (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231R. Applied Music Instruction for Majors - String Bass (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231S. Applied Music Instruction for Majors - Trombone (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231T. Applied Music Instruction for Majors - Trumpet (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231U. Applied Music Instruction for Majors - Tuba (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231V. Applied Music Instruction for Majors - Viola (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231W. Applied Music Instruction for Majors - Violin (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231X. Applied Music Instruction for Majors - Saxophone (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231Y. Applied Music Instruction for Majors - Voice (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231Z. Applied Music Instruction for Majors - Electric Bass (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 232A. Applied Music Instruction for Majors - Bassoon (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232B. Applied Music Instruction for Majors - Cello (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232C. Applied Music Instruction for Majors - Clarinet (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232D. Applied Music Instruction for Majors - Euphonium (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232E. Applied Music Instruction for Majors - Flute (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232F. Applied Music Instruction for Majors - French Horn (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232G. Classical Guitar-Major (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232J. Applied Music Instruction for Majors - Guitar (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232K. Applied Music Instruction for Majors - Harp (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232L. Applied Music Instruction for Majors - Oboe (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232M. Applied Music Instruction for Majors - Organ (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232N. Applied Music Instruction for Majors - Percussion (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232O. Voice for Musical Theatre (2).
Applied voice instruction emphasizing musical theatre techniques. Repeatable for credit. Students work on repertoire from legit and belt repertoire.

MUSA 232P. Applied Music Instruction for Majors - Piano (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232R. Applied Music Instruction for Majors - String Bass (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232S. Applied Music Instruction for Majors - Trombone (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232T. Applied Music Instruction for Majors - Trumpet (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232U. Applied Music Instruction for Majors - Tuba (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232V. Applied Music Instruction for Majors - Viola (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232W. Applied Music Instruction for Majors - Violin (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232X. Applied Music Instruction for Majors - Saxophone (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232Y. Applied Music Instruction for Majors - Voice (2).
For majors only. Repeatable for credit. Lower division.

MUSA 232Z. Applied Music Instruction for Majors - Electric Bass (2).
For majors only. Repeatable for credit. Lower division.

MUSA 252J. Jazz Guitar (2).
For majors only. Repeatable for credit. Lower division.

MUSA 252N. Jazz Drum Kit (2).
For majors only. Repeatable for credit. Lower division.

MUSA 252P. Jazz Piano (2).
For majors only. Repeatable for credit. Lower division.

MUSA 252R. Jazz String Bass (2).
For majors only. Repeatable for credit. Lower division.

MUSA 252S. Jazz Trombone (2).
For majors only. Repeatable for credit. Lower division.

MUSA 252T. Jazz Trumpet (2).
For majors only. Repeatable for credit. Lower division.

MUSA 252X. Jazz Saxophone (2).
For majors only. Repeatable for credit. Lower division.

MUSA 252Z. Jazz Electric Bass (2).
For majors only. Repeatable for credit. Lower division.

MUSA 313J. Basic Jazz Piano (2).
Develops an understanding of jazz harmony at the keyboard. Emphasizes performance of chord progressions from jazz works. Repeatable for credit. Prerequisite(s): piano proficiency.

MUSA 431A. Applied Music Instruction for Majors - Bassoon (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431B. Applied Music Instruction for Majors - Cello (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431C. Applied Music Instruction for Majors - Clarinet (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431D. Applied Music Instruction for Majors - Euphonium (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431E. Applied Music Instruction for Majors - Flute (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431F. Applied Music Instruction for Majors - French Horn (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431G. Classical Guitar Majors (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431J. Applied Music Instruction for Majors - Guitar (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431K. Applied Music Instruction for Majors - Harp (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431L. Applied Music Instruction for Majors - Oboe (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431M. Applied Music Instruction for Majors - Organ (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431N. Applied Music Instruction for Majors - Percussion (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431P. Applied Music Instruction for Majors - Piano (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431Q. Applied Music Instruction for Majors - Viola da Gamba (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431R. Applied Music Instruction for Majors - String Bass (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431S. Applied Music Instruction for Majors - Trombone (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431T. Applied Music Instruction for Majors - Trumpet (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431U. Applied Music Instruction for Majors - Tuba (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431V. Applied Music Instruction for Majors - Viola (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431W. Applied Music Instruction for Majors - Violin (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431X. Applied Music Instruction for Majors - Saxophone (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431Y. Applied Music Instruction for Majors - Voice (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431Z. Applied Music Instruction for Majors - Electric Bass (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 432A. Applied Music Instruction for Majors - Bassoon (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432B. Applied Music Instruction for Majors - Cello (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432C. Applied Music Instruction for Majors - Clarinet (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432D. Applied Music Instruction for Majors - Euphonium (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432E. Applied Music Instruction for Majors - Flute (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432F. Applied Music Instruction for Majors - French Horn (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432J. Applied Music Instruction for Majors - Guitar (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432K. Applied Music Instruction for Majors - Harp (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432L. Applied Music Instruction for Majors - Oboe (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432M. Applied Music Instruction for Majors - Organ (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432N. Applied Music Instruction for Majors - Percussion (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432O. Applied Music Instruction for Majors - Voice for Musical Theatre (2).
Applied voice instruction emphasizing musical theatre techniques. Repeatable for credit. Students work on repertoire from legit and belt repertoire.

MUSA 432P. Applied Music Instruction for Majors - Piano (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432R. Applied Music Instruction for Majors - String Bass (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432S. Applied Music Instruction for Majors - Trombone (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432T. Applied Music Instruction for Majors - Trumpet (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432U. Applied Music Instruction for Majors - Tuba (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432V. Applied Music Instruction for Majors - Viola (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432W. Applied Music Instruction for Majors - Violin (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432X. Applied Music Instruction for Majors - Saxophone (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432Y. Applied Music Instruction for Majors - Voice (2).
For majors only. Repeatable for credit. Upper division.

MUSA 432Z. Applied Music Instruction for Majors - Electric Bass (2).
For majors only. Repeatable for credit. Upper division.

MUSA 434A. Applied Music Instruction for Majors - Bassoon (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434B. Applied Music Instruction for Majors - Cello (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434C. Applied Music Instruction for Majors - Clarinet (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434D. Applied Music Instruction for Majors - Euphonium (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434E. Applied Music Instruction for Majors - Flute (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434F. Applied Music Instruction for Majors - French Horn (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434J. Applied Music Instruction for Majors - Guitar (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434K. Applied Music Instruction for Majors - Harp (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434L. Applied Music Instruction for Majors - Oboe (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434M. Applied Music Instruction for Majors - Organ (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434N. Applied Music Instruction for Majors - Percussion (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434P. Applied Music Instruction for Majors - Piano (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434R. Applied Music Instruction for Majors - String Bass (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434S. Applied Music Instruction for Majors - Trombone (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434T. Applied Music Instruction for Majors - Trumpet (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434U. Applied Music Instruction for Majors - Tuba (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434V. Applied Music Instruction for Majors - Viola (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434W. Applied Music Instruction for Majors - Violin (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434X. Applied Music Instruction for Majors - Saxophone (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434Y. Applied Music Instruction for Majors - Voice (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434Z. Applied Music Instruction for Majors - Electric Bass (4).
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 452J. Jazz Guitar (2).
For majors only. Repeatable for credit. Upper division.

MUSA 452N. Jazz Drum Kit (2).
For majors only. Repeatable for credit. Upper division.

MUSA 452P. Jazz Piano (2).
For majors only. Repeatable for credit. Upper division.

MUSA 452R. Jazz String Bass (2).
For majors only. Repeatable for credit. Upper division.

MUSA 452S. Jazz Trombone (2).
For majors only. Repeatable for credit. Upper division.

MUSA 452T. Jazz Trumpet (2).
For majors only. Repeatable for credit. Upper division.

MUSA 452X. Jazz Saxophone (2).
For majors only. Repeatable for credit. Upper division.

MUSA 452Z. Applied Music Instruction for Majors - Jazz Electric Bass (2).
For majors only. Repeatable for credit. Upper division.

MUSA 454. Applied Lessons Jazz Performance (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454J. Jazz Guitar (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454N. Jazz Drum Kit (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454P. Jazz Piano (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454R. Jazz String Bass (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454S. Jazz Trombone (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454T. Jazz Trumpet (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454X. Jazz Saxophone (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454Z. Jazz Electric Bass (4).
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisite(s): MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 712. Applied Music Instruction for Nonmajors (2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712A. Applied Music Instruction for Nonmajors – Bassoon (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712B. Applied Music Instruction for Nonmajors – Cello (2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712C. Applied Music Instruction for Nonmajors – Clarinet (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712D. Applied Music Instruction for Nonmajors – Euphonium (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712E. Applied Music Instruction for Nonmajors – Flute (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712F. Applied Music Instruction for Nonmajors – French Horn (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712G. Applied Music Instruction for Nonmajors – Classical Guitar (2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712J. Applied Music Instruction for Nonmajors – Guitar (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712K. Applied Music Instruction for Nonmajors – Harp (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712L. Applied Music Instruction for Nonmajors – Oboe (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712M. Applied Music Instruction for Nonmajors – Organ (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712N. Applied Music Instruction for Nonmajors – Percussion (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712P. Applied Music Instruction for Nonmajors – Piano (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712Q. Applied Music Instruction for Nonmajors – Viola da Gamba (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712S. Applied Music Instruction for Nonmajors – Trombone (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712T. Applied Music Instruction for Nonmajors – Trumpet (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712U. Applied Music Instruction for Nonmajors – Tuba (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712V. Applied Music Instruction for Nonmajors – Viola (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712W. Applied Music Instruction for Nonmajors – Violin (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712X. Applied Music Instruction for Nonmajors – Saxophone (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712Y. Applied Music Instruction for Nonmajors – Voice (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712Z. Applied Music Instruction for Nonmajors – Electric Bass (1-2).
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 731A. Applied Music Instruction for Majors - Bassoon (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731B. Applied Music Instruction for Majors - Cello (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731C. Applied Music Instruction for Majors - Clarinet (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731D. Applied Music Instruction for Majors - Euphonium (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731E. Applied Music Instruction for Majors - Flute (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731F. Applied Music Instruction for Majors - French Horn (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731G. Applied Music Instruction for Majors - Classical Guitar (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731J. Applied Music Instruction for Majors - Guitar (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731K. Applied Music Instruction for Majors - Harp (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731L. Applied Music Instruction for Majors - Oboe (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731M. Applied Music Instruction for Majors - Organ (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731N. Applied Music Instruction for Majors - Percussion (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731P. Applied Music Instruction for Majors - Piano (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731R. Applied Music Instruction for Majors - String Bass (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731S. Applied Music Instruction for Majors - Trombone (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731T. Applied Music Instruction for Majors - Trumpet (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731U. Applied Music Instruction for Majors - Tuba (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731V. Applied Music Instruction for Majors - Viola (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731W. Applied Music Instruction for Majors - Violin (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731X. Applied Music Instruction for Majors - Saxophone (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731Y. Applied Music Instruction for Majors - Voice (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731Z. Applied Music Instruction for Majors - Electric Bass (1).
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 732A. Applied Music Instruction for Majors - Bassoon (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732B. Applied Music Instruction for Majors - Cello (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732C. Applied Music Instruction for Majors - Clarinet (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732D. Applied Music Instruction for Majors - Euphonium (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732E. Applied Music Instruction for Majors - Flute (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732F. Applied Music Instruction for Majors - French Horn (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732J. Applied Music Instruction for Majors - Guitar (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732K. Applied Music Instruction for Majors - Harp (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732L. Applied Music Instruction for Majors - Oboe (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732M. Applied Music Instruction for Majors - Organ (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732N. Applied Music Instruction for Majors - Percussion (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732P. Applied Music Instruction for Majors - Piano (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732R. Applied Music Instruction for Majors - String Bass (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732S. Applied Music Instruction for Majors - Trombone (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732T. Applied Music Instruction for Majors - Trumpet (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732U. Applied Music Instruction for Majors - Tuba (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732V. Applied Music Instruction for Majors - Viola (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732W. Applied Music Instruction for Majors - Violin (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732X. Applied Music Instruction for Majors - Saxophone (2).
For majors only. Repeatable for credit. Graduate.

MUSA 732Y. Applied Music Instruction for Majors - Voice (1-2).
For majors only. Repeatable for credit. Graduate.

MUSA 732Z. Applied Music Instruction for Majors - Electric Bass (2).
For majors only. Repeatable for credit. Graduate.

MUSA 734A. Applied Music Instruction for Majors - Bassoon (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734B. Applied Music Instruction for Majors - Cello (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734C. Applied Music Instruction for Majors - Clarinet (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734D. Applied Music Instruction for Majors - Euphonium (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734E. Applied Music Instruction for Majors - Flute (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734F. Applied Music Instruction for Majors - French Horn (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734J. Applied Music Instruction for Majors - Guitar (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734K. Applied Music Instruction for Majors - Harp (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734L. Applied Music Instruction for Majors - Oboe (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734M. Applied Music Instruction for Majors - Organ (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734N. Applied Music Instruction for Majors - Percussion (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734P. Applied Music Instruction for Majors - Piano (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734R. Applied Music Instruction for Majors - String Bass (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734S. Applied Music Instruction for Majors - Trombone (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734T. Applied Music Instruction for Majors - Trumpet (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734U. Applied Music Instruction for Majors - Tuba (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734V. Applied Music Instruction for Majors - Viola (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734W. Applied Music Instruction for Majors - Violin (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734X. Applied Music Instruction for Majors - Saxophone (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734Y. Applied Music Instruction for Majors - Voice (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734Z. Applied Music Instruction for Majors - Electric Bass (4).
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSC - Musicology Composition

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MUSC 060. Fundamentals of Music (1).
Intended for those who do not read music and/or who need additional help in the fundamentals of music. Includes staff, clefs, keys, meter, tempo, notes, rests and other basic knowledge.

MUSC 113. Music in Context (3).
General education fine arts course. Introduces critical thinking and research methods in music. Also explores diverse repertoires, including popular and non-Western musics as well as those belonging to the traditional "classical" canon. Required for music majors and minors. *Course includes diversity content*.

MUSC 120. Jazz Improv Level 1 (2).
Develops skills used in jazz improvisation, teaching students to memorize melody and harmony to pieces from jazz bebop repertoire. Prerequisite(s): MUSC 128.

MUSC 122BA. Beginning Jazz Improvisation: Introduction to Jazz Theory (0.5).
Provides a theoretical overview of the melodic and harmonic elements that make-up the jazz language. Concepts include intervals, triad and 7th chords, scales and modes, diatonic keys and harmonic function, and chord-scale theory. Repeatable for credit. Graded Bg/NBg.

MUSC 122BB. Beginning Jazz Improvisation: Improvising Using Modes (0.5).
Course uses several basic scales, harmonies, and chord progressions to provide an introduction to the application of chord-scale theory. Concepts include the major scale and the maj7 chord, the Dorian scale and the min7 chord, the Mixolydian scale and the dom7 chord, and the harmonic minor scale and the tonic minor chord. Repeatable for credit. Graded Bg/NBg.

MUSC 127. Theory I (2).
Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadences, phrase, period), basic acoustics, and simple harmonic background and contrapuntal relationships applied to literature from all periods of music. Pre- or corequisite(s): MUSC 129; instructor's consent required for honors credit.

MUSC 128. Theory II (2).
A continuation of Theory I, with emphasis on 4-part writing. Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures using figured bass and Roman numeral analysis. Prerequisite(s): MUSC 127; instructor's consent required for honors credit. Pre- or corequisite(s): MUSC 129, 130.

MUSC 129. Aural Skills I (2).
Recognition, singing and dictation of melodies from all periods of music. Emphasizes interval training. Instruction assisted by computer.

MUSC 130. Aural Skills II (2).
Continuation of melodic and rhythmic perception. Includes recognition and dictation of diatonic harmonic structures. Instruction assisted by computer. Prerequisite(s): MUSC 129.

MUSC 140. Music Theory for Commercial Musicians I (2).
Fundamentals of music emphasizing popular styles and applied music production skills. Rhythm and meter, writing and analysis using keys, scales, harmony and harmonic progression. Basics of sound and acoustics. Corequisite(s): MUSC 141.

MUSC 141. Aural Skills for Commercial Musicians I (2).
Recognition, singing, dictation and transcription of melodies and harmonies from all periods of music, with a particular emphasis on commercial music genres, including jazz, popular music and musical theatre. Pre- or corequisite: MUSC 140.

MUSC 142. Music Theory for Commercial Musicians II (2).
Continuation of MUSC 140 with added emphasis on application. Harmonizing a given melody, form in popular styles, extended and chromatic harmony, basic songwriting. Prerequisite(s): MUSC 140.

MUSC 143. Aural Skills for Commercial Musicians II (2).
Continuation of MUSC 141 adding more complex harmonic and rhythmic styles, as well as studying larger units of music. Recognition, singing, dictation and transcription of a variety of musical styles, with a particular emphasis on commercial music genres, including jazz, popular music and musical theatre. Prerequisite(s): MUSC 141.

MUSC 150C. A History of Noise: Music and Politics from Beethoven to Jimi Hendrix (0.5).
Explores the roles that noise has played in political discourse throughout the 19th and 20th centuries. From Beethoven to Jimi Hendrix, students think about supposed differences between “Art” and popular music and consider whether it is possible to distinguish “Art” from “noise” at all. A variety of case studies frame the discussions, including (among others) the bombast and nationalism of Beethoven’s ninth symphony; the Marxist-inspired “emancipation” of sound, as presented by Arnold Schoenberg; the race- and gender-bending rock n’ roll of Elvis; and the protest-by-distortion of Hendrix’s national anthem at Woodstock. Together, the class re-examines the ways the music around us sought and seeks to shape society.

MUSC 150D. African-American Music: From the Spiritual to Motown (0.5).
Explores historical and cultural influences and have numerous examples of the music. This will be an interactive presentation with opportunities for the participants to sing, chant, and move with the music. The topics will review the development of Gospel music and how the African-American church was both a musical and a political influence at the beginning of the 20th century. Gospel performance practice evolved from the Spiritual while adding instruments and the celebration of solo artists. The series will close with the music of Motown and review how popular music evolved from both Gospel and the Blues.

MUSC 150F. Science Sounds Like Fun (0.5).
Introduces students to creative ways to interact with sounds in nature and in performance. Activities emphasize both the physical production of sound and the description of sound in more scientific terms. Numerous activities incorporate simple household materials as well as an understanding of more sophisticated instruments. The goal is to foster an awareness of music across different parts of daily life.

MUSC 150G. The War of the Romantics (0.5).
Examines art, music and the rise of German Nationalism in the 19th century. Using the music of Brahms, Liszt, Wagner and other 19th German and Austrian composers, students investigate the role that art played in the daily discourse of nationalism and anti-Semitism. Further, students investigate how these events affected the way people have talked about music in the 20th and 21st century.

MUSC 160. What to Listen for in Music (3).
General education fine arts course. Acquaints nonmajors with the central traditions of music, including European concert music as well as some popular and world music. Develops listening techniques by which students may perceive and understand fundamental musical processes as they exist in various styles.

MUSC 161. Music Through the Ages (3).
General education fine arts course. Open to all students, particularly those involved in alternative schedules. Helps students develop the capacity for critical music listening and an appreciation for all musical styles. Telecourse.

MUSC 162. World Music (3).
General education fine arts course. A view of music as a global and cultural art form. For the general student to better understand the importance and significance of music in all world cultures. *Course includes diversity content*.

MUSC 227. Theory III (2).
Study of chromatic harmony, including secondary functions, mode mixture, Neapolitan and augmented sixth, and other 19th century harmonic practices such as enharmonic modulations and symmetrical octave divisions. Overview of sonata form. Prerequisite(s): MUSC 128; instructor's consent required for special honors credit.

MUSC 228. Theory IV (2).
Study of 20th century resources, including extended dominants, modes, symmetrical scales, added-tone chords, parallelism, chords built in 5ths, 4ths, or 2nds, advanced rhythmic devices, free atonality and serial technique, minimalism, avant-garde styles, and chance music. Prerequisite(s): MUSC 227; instructor's consent required for special honors credit.

MUSC 229. Aural Skills III (2).
Recognition, singing, and dictation of contrapuntal textures with continued harmonic practice emphasizing elementary chromaticism. Instruction assisted by computer. Prerequisite(s): MUSC 130.

MUSC 230. Aural Skills IV (2).
Summation and expansion of previous skills further emphasizing harmonic chromaticism and modern melodic and rhythmic resources. Instruction assisted by computer. Prerequisite(s): MUSC 229.

MUSC 230A. Aural Skills IV: Music Education (2).
Focuses on skills important to music education including sequence of instruction, start/stop cues, and solfege.

MUSC 240. Jazz Music Theory 3 (2).
Introduces jazz music theory with emphasis on chord progression, chord extensions and symbols, with practical knowledge of common practice theory. Prerequisite(s): MUSC 128.

MUSC 241. Jazz Aural Skills 3 (2).
Designed to help develop practical ear training for skills used in jazz performance, stressing the importance of the aural tradition. Prerequisite(s): MUSC 129.

MUSC 242. Jazz Music Theory 4 (2).
A continuation of MUSC 240, which is designed to have an emphasis on chord progression, chord extensions and symbols, with practical knowledge of common practice theory. Prerequisite(s): MUSC 240.

MUSC 243. Jazz Aural Skills 4 (2).
A continuation of MUSC 241, which is designed to help develop practical ear training for skills used in jazz performance, stressing the importance of the aural tradition. Prerequisite(s): MUSC 241.

MUSC 259. Introduction to Music Composition (2).
Intended for students who are interested in exploring contemporary art music composition. Students meet in a classroom setting focusing on different compositional techniques each week. Weekly composition etudes are assigned with performances of student etudes in class. Prerequisite(s): MUSC 127.

MUSC 260. Beginning Music Composition (2).
Intended for students who want continued study in contemporary art music composition. Students meet in small group lessons where work on small projects is done, and a concert is given at some point in the academic year. Repeatable for credit. Prerequisite(s): MUSC 259.

MUSC 334. History of Music I (3).
General education fine arts course. Survey of the evolution of musical styles and practices in the Western world through 1750. Includes lectures, reference readings and studies representative examples of music. Prerequisite(s): MUSC 113, 227, or instructor's consent.

MUSC 335. History of Music II (3).
General education fine arts course. Surveys the evolution of musical styles and practices in the Western world from 1750 to the present. Includes lectures, reference readings, and studies representative examples of music. Prerequisite(s): MUSC 113, 228, or instructor's consent.

MUSC 345. Jazz Arranging (2).
Arranging for small and large jazz ensembles emphasizing current big band styles. Prerequisite(s): MUSC 228, 230, or instructor's consent.

MUSC 346. Styles of Jazz (3).
General education fine arts course. Surveys all eras in the evolution of the many styles in the jazz idiom from the end of the l9th century to the present. Open to majors and nonmajors. *Course includes diversity content*.

MUSC 348A. History of Jazz (3).
A chronological survey of the major styles and artists of jazz, from African influences to the present. *Course includes diversity content*.

MUSC 493. American Popular Music (3).
General education fine arts course. Focuses on music of the popular culture in this country from Colonial times into the 20th century and representing a melding of social, political, artistic and historical elements of many diverse cultures. *Course includes diversity content*.

MUSC 523. Form And Analysis (2).
Extensive analysis of the forms and formal processes of musical literature. Prerequisite(s): MUSC 228.

MUSC 531. Introduction to Electronic Music (2).
Basic techniques of electronic music. Directed toward musicians who wish to use the electronic medium in teaching, performing or communicating through music in any way.

MUSC 560. Applied Composition (2).
Individual study in advanced musical composition emphasizing writing for small ensembles in the smaller forms. For theory-composition majors. Repeatable for credit. Prerequisite(s): MUSC 260 and consent of theory-composition area faculty and musicology-composition coordinator, to continue as a theory-composition major.

MUSC 561. 18th Century Counterpoint (2).
Contrapuntal devices of the 18th century as found in the works of J.S. Bach. Prerequisite(s): MUSC 228.

MUSC 587. Organ Literature & Design I (2).
Broad survey of the historical eras of organ literature and design. Open to non-organ majors. Prerequisite(s): minimum of two years applied organ study or departmental consent.

MUSC 588. Organ Literature & Design II (2).
Broad survey of the historical eras of organ literature and design. Open to non-organ majors. Prerequisite(s): minimum of two years applied organ study or departmental consent.

MUSC 616. Symphonic Literature (3).
An advanced course in orchestral literature covering the development of the symphonic music from Baroque to the present day. Designed primarily for music majors who have already had MUSC 334 and 335.

MUSC 623. Opera Literature (3).
A comprehensive survey of Italian, German, French, Russian, English and American opera literature from the 17th century to the present. MUSC 113 is strongly recommended before taking the course. For upper-division or graduate students. Not limited to music majors.

MUSC 641. Orchestration (2).
The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations with an approach to the problems of full orchestra and band scores. Prerequisite(s): MUSC 227.

MUSC 660. Applied Composition (2).
Individual study in musical composition emphasizing writing for both small ensembles and large groups in the larger forms. Repeatable for credit. Prerequisite(s): MUSC 560 and instructor's consent.

MUSC 671. Chromatic Harmony (2).
Advanced study of chromatic harmonic materials of all periods with special attention to the 19th century. Emphasizes analysis and creative writing. Prerequisite(s): MUSC 228.

MUSC 672. Contemporary Techniques (2).
Advanced study of music from impressionism to the present, emphasizing related literature and creative writing. Prerequisite(s): MUSC 228.

MUSC 685. String Literature & Materials (2).
A survey and stylistic analysis of music for solo strings and chamber combinations, beginning with the early Baroque period.

MUSC 726. Voice Literature (3).
A comprehensive survey of early Italian arias, French chansons, German lieder, contemporary English songs, and Russian and Spanish literature.

MUSC 750. Musicology-Composition Workshop (1-4).
Repeatable for credit. Prerequisite(s): instructor's consent.

MUSC 753. Choral Literature I (2).
A historical and stylistic survey of choral literature of the Renaissance and Baroque eras.

MUSC 754. Choral Literature II (2).
A historical and stylistic survey of choral literature of the Classical, Romantic and Contemporary eras.

MUSC 782. Piano Literature I (2).
Survey of the historical eras of professional piano repertory.

MUSC 783. Piano Literature II (2).
Survey of the historical eras of professional piano repertory.

MUSC 786. Chamber Music Literature I (2).
Survey of composers, styles and works of chamber music from Baroque to about 1828.

MUSC 787. Chamber Music Literature II (2).
Survey of composers, styles and works of chamber music from about 1828 to the present.

MUSC 790. Special Topics in Music (1-4).
For individual or group instruction. Repeatable for credit with departmental consent.

MUSE - Music Education

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MUSE 171. Orientation to Music Education (1).
Looks at the concepts of comprehensive musicianship and develops strategies for leading music activities in a variety of scenarios. Learn observation techniques appropriate for viewing a wide range of instrumental and vocal performances.

MUSE 238. Wind and Percussion Methods I - Woodwind Emphasis (1).
Woodwind Emphasis. Prepares the prospective instrumental music instructor to effectively teach band instruments in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials and the development of playing skills on at least two woodwind instruments. Students demonstrate proficiency on at least two woodwind instruments.

MUSE 239. Wind & Percussion Methods II- Brass Emphasis (1).
Brass Emphasis. Prepares the prospective instrumental music instructor to effectively teach band instruments in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials and the development of playing skills on at least two brass instruments. Students demonstrate proficiency on at least two brass instruments.

MUSE 240. Wind and Percussion Methods III - Percussion Emphasis (1).
Percussion Emphasis. Prepares the prospective instrumental music instructor to effectively teach band instruments in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials and the development of playing skills on at least two percussion instruments. Students demonstrate proficiency on at least two percussion instruments.

MUSE 241. String Rehearsal Methods (1).
Prepares the prospective instrumental music instructor to effectively teach band instruments in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials and the development of playing skills on at least two string instruments. Students demonstrate proficiency on at least two string instruments.

MUSE 242. Wind and Percussion Rehearsal Methods (1).
Wind and percussion techniques and materials for grades 4-12. Required of majors in choral/keyboard program and choral/keyboard majors in special music education program.

MUSE 243. Wind and Percussion Methods Lab - Rehearsal Emphasis (1).
Rehearsal Emphasis. Provides experience in teaching and rehearsing the beginning/intermediate band and orchestra. Includes experiences in teaching and assessing new concepts and skills. Using peer teaching, students have opportunities to develop tone, technique, balance, blend and tuning, while rehearsing pieces from method books and concert music. Corequisite(s): MUSE 240.

MUSE 271. Introduction to Music Education (2).
Demonstrate familiarity with the scope and program of K-12 music education. Articulate a current music education philosophy while developing leadership skills for a variety of music activities and teaching scenarios. Prerequisite(s): MUSE 171.

MUSE 303. Elementary and General Music Methods (2).
An overview of activities for elementary general music programs. Includes a study of objectives for elementary and general music with consideration of materials and methods. Focus is on program considerations for general music based on child and adolescent musical development. Includes conceptual and skill-based learning sequences, singing skills, use of classroom instruments, lesson planning, and music classroom management. Prerequisite(s): MUSE 271 or instructor's consent.

MUSE 305. Pre Student Teaching (1).
This field-based course allows the student to spend extended time in an appropriate music classroom working with a cooperating teacher. Provides opportunities for the student to plan and design instruction, implement instruction and reflect on the role of the practitioner. Prerequisite(s): acceptance into teacher education and instructor's consent; MUSE 311.

MUSE 309. Special Music Education Methods (2).
Presents methods for teaching music to special education students at the early childhood, elementary and secondary levels in public schools and related services settings. Includes music settings in regular and alternative schools and classes including identification, objectives, appropriate activities, materials, planning and implementation techniques. Addresses grades PK–12 and transitional settings. Students are provided with suggestions for volunteer applied and service learning opportunities that support the course content. *Course includes diversity content*.

MUSE 311. Introduction to Diversity Field Experience (1).
To support the coursework in Core I, this field experience provides students with opportunities to observe and interact with diverse populations in the context of classroom, community and family settings. *Course includes diversity content*. Prerequisite(s): admission to teacher education. Pre- or corequisite(s): MUSE 303 or MUSE 323 or MUSE 324.

MUSE 323. Fundamentals of Vocal Music for Secondary Schools (2).
The teaching of music in the secondary school, consideration of objectives and examination of materials. For students primarily interested in teaching music in secondary schools; includes observation in public schools. Grades 6-12. Prerequisite(s): MUSP 308 and music education major or instructor's consent.

MUSE 324. Fundamentals of Instrumental Music for Secondary Schools (2).
Covers techniques and materials for teaching instrumental music in middle schools and senior high schools. Emphasizes instrumental organization and administration, pedagogical practices, laboratory experiences, guiding student behavior, evaluation and professional responsibilities. Grades 6-12. Prerequisite(s): MUSP 307.

MUSE 342. Survey of Choral Techniques and Literature (2).
Studies basic techniques of ensembles and examines literature for large and small ensembles. Includes song leading. Required for all music education majors. Grades 6-12. Prerequisite(s): MUSP 307 or 308.

MUSE 351. Music Fundamentals for the Classroom Teacher (2-3).
For students planning to teach in the elementary school classroom. Includes basic fundamentals of music emphasizing development of student's music ability in singing, playing the piano and classroom instruments.

MUSE 403. Advanced Techniques of Vocal and General School Music (1).
Emphasizes special problems related to preparation for student teaching: consideration of the vocal and general music programs at all levels. Includes content area reading modules. To be taken during student teaching semester. Grades K-12. Prerequisite(s): MUSE 303 and 323; also 309 for special music education majors.

MUSE 405. Teaching Internship Seminar (1).
Emphasizes special problems related to preparation for student teaching; consideration of the vocal and general music programs at all levels. To be taken during student teaching semester. Grades K-12. Includes content area reading modules. Prerequisite(s): MUSE 303, 305 with a B- or better, and either 323 or 324.

MUSE 451. Teaching Internship Elementary School: Music (3).
Prerequisite(s): acceptance into teacher education, methods in the subject area, MUSE 305 with a B- or better, 2.500 GPA in the major. Pre- or corequisite(s): MUSE 405.

MUSE 453. Teaching Internship: Special and Elementary Music Education (3).
Fulfills the required internship teaching assignment for elementary music levels for the purposes of teacher licensure. Designed to provide students with an appropriate special music education setting by working with a cooperating teacher who has special music education training added to experience in elementary level music education. The student and cooperating teacher, with the approval of the university supervisor, devise a plan for the music education intern to assume full responsibility for the classroom(s) for a designated period of time during the semester. *Course includes diversity content.* Prerequisite(s): an appropriate ISAM course (MUSE 303 or 309), and Pre Student Teaching (MUSE 305). Pre- or corequisite(s): MUSE 405.

MUSE 469. Teaching Internship Secondary Music (3).
Prerequisite(s): acceptance into teacher education, methods in the subject area, MUSE 305 with a B- or better, 2.500 GPA in the major. Pre- or corequisite(s): MUSE 405.

MUSE 481. Cooperative Education (1-8).
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of 6 hours of coursework in addition to their co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Repeatable for credit. Prerequisite(s): successful completion of the freshman year and satisfactory academic standing prior to the first job assignment.

MUSE 481N. Internship (1).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

MUSE 511. Jazz Pedagogy (2).
For both music education and music performance majors interested in teaching improvisation, jazz history, and large and small jazz ensembles. Includes a review of current jazz methods and materials, rehearsal techniques for jazz ensembles, how to listen to jazz, lectures by visiting jazz performers, and effective jazz programming. Prerequisite(s): completion of MUSC 228 or instructor's consent.

MUSE 606. Music Methods for Early Childhood Education (2-3).
Methods and materials for teaching music in the preschool and kindergarten classroom. Includes the development of the child's musical growth through singing, listening, rhythmic and creative activities; a survey of available materials, and development of playing, singing and conducting skills.

MUSE 611. Music for Special Education (2).
Open to upper-division or graduate students and intended for the potential practicing music teacher, classroom teacher or special education teacher. Includes identification of dysfunctioning children and their problems and current theory and practices in special music education. Satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptional children. This provision applies to initial certification and recertification of music teachers only, grades K-12.

MUSE 617. Literacy Strategies for Content Areas: Music (2).
Covers principles and strategies used in effective instruction, including vocabulary development and comprehension skills needed to more fully read to learn in content areas. Students receive training to use the six-trait analytical rating guide for assessing writing, which is the method used to score the Kansas state writing assessment. Students develop lessons and assessments appropriate for a comprehensive literacy-based music program based on national and state music standards representing appropriate and varied music education philosophies. Prerequisite(s): instructor's consent.

MUSE 686. Marching Band Techniques (2).
A systematic approach to the marching band with regard to organization, show development, instrumentation, music adaptation, drill construction and script development. Teaches both traditional drill and corps-style marching using manual methods and computer generated graphics. Field observations, films, photographs, and live performances by marching bands complement the class syllabus. Required for all instrumental majors.

MUSE 732. Instructional Methods in Middle Level/Secondary Music (2).
Includes administrative structures, the curriculum, adolescent development, teaching as behavior and competencies needed for successful teaching of general, choral and instrumental music for adolescent learners.

MUSE 750. Music Education Workshop (1-4).
Repeatable for credit.

MUSE 750AJ. Technology for the Music Classroom (1).
Participants are introduced to current trends in educational technology for the music classroom. Teachers gain experience with sound reinforcement tools, recording equipment and software, composition software, and pedagogical tools.

MUSE 750AK. Instrument Repair for Teachers (1).
Provides teachers with the information and skills necessary for basic instrument repair in the instrumental classroom. Teachers learn how to identify problems with instruments and make simple repairs.

MUSE 761. Kodaly Methods Level One (3).
Kodály curriculum designed for grades K-1. Transcriptions of 50 folk songs with teaching activities appropriate for young learners. Introduction of music literacy components. Concurrent enrollment with MUSE 762 recommended.

MUSE 762. Kodaly Solfege Level One (2).
Includes one- and two-part materials in major and minor tonalities. Demonstrated ability to conduct folk song literature appropriate for

beginning singers. Prerequisite(s): prior or concurrent enrollment in MUSE 761.

MUSE 763. Kodaly Methods Level Two (3).
Kodály curriculum designed for grades 2-4. Song analysis for 50 additional folk songs and appropriate literacy activities for general music programs. Added emphasis on folk dance and listening lessons for masterworks. Prerequisite(s): MUSE 761, 762 or instructor's consent (concurrent enrollment with MUSE 764 recommended).

MUSE 764. Kodaly Solfege Level Two (2).
Adds chromatic, whole tone and modes. Demonstrated ability to conduct folk song literature up to four parts. Prerequisite(s): MUSE 762.

MUSE 765. Kodaly Methods Level Three (3).
Kodály curriculum designed for grades 4-12. Expansion of song repertoire with emphasis on activities which develop choral singing independence and music theory skills. Prerequisite(s): MUSE 763, 764 or instructor's consent (concurrent enrollment with MUSE 766 recommended).

MUSE 766. Kodaly Solfege Level Three (2).
Includes advanced materials from a variety of literature. Demonstrated ability to conduct expanded literature appropriate for public and private school choral programs. Prerequisite(s): MUSE 762, 764.

MUSE 767. Kodaly Applications (2).
Provides individually supervised research and application opportunities for the advanced student who has completed an OAKE endorsed Kodály certification program. Repeatable for credit. Prerequisite(s): MUSE 761, 762, 763, 764, 765, 766, or OAKE endorsed Kodály certification.

MUSE 781. Cooperative Education (1-3).
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Repeatable for credit. Note: a maximum of 4 S/U or Cr/NCr hours may be counted toward a graduate degree and must be taken in consultation with the graduate advisor for an approved graduate plan of study. Prerequisite(s): satisfactory academic standing prior to the first job assignment.

MUSE 790. Special Topics in Music (1-4).
For individual or group instruction. Individual study enrollment requires departmental consent. Repeatable for credit with departmental consent.

MUSE 790Z. Chamber Music Pedagogy (2).
Serves local and regional music communities through a structured chamber music experience led by WSU music performance and music education students. Students work with area band directors to develop a chamber music program appropriate for their students, then serve as coaches to develop the performance level of those students in various chamber music applications, culminating in performances at Solo and Ensemble festivals, school concerts, and other community functions. Future music educators explore skills for teaching chamber music, transferable teaching skills, develop relationships with local music educators, and develop a stronger base of skills for teaching chamber music.

MUSP - Music Performance

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

MUSP 105. Recital Attendance (0).
Recital attendance and performance. Laboratory observation of performance media, literature and recital techniques. Election is required for BA and BM majors according to the requirements of the degree check sheet at the time of enrollment. Repeatable.

MUSP 121. Italian Diction (1).
For the vocal performer. Includes a comprehensive study of Italian consonant and vowel sounds.

MUSP 122. English Diction (1).
For the vocal performer. Includes a comprehensive study of English consonant and vowel sounds.

MUSP 148. Double Reed Making and Adjusting (1).
Making and adjusting oboe, English horn and bassoon reeds. Repeatable for credit. Prerequisite(s): MUSE 238 or instructor's consent.

MUSP 149. Percussion Techniques and Section Playing (1).
Provides training in small instruments and development of the percussionist's understanding of section playing. Repeatable for credit.

MUSP 207. Piano Repertoire (1).
Gives performing and listening experience to piano majors. Repeatable for credit.

MUSP 210B. Wind Ensemble (1).
An auditioned ensemble comprising the top wind, brass and percussion students enrolled at Wichita State University. The ensemble performs the highest quality literature written for the wind band and often engages soloists and premieres new music. Repeatable for credit. Prerequisite(s): audition required.

MUSP 211A. Orchestra (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211D. ShockerChoir (1).
Bass-voiced chorus made up of both music and nonmusic majors. The ensemble performs an eclectic mix of classical, folk and popular music, reflecting the diverse musical interests of its members. ShockerChoir performs annual fall and spring concerts, participates in the Candlelight Christmas concert, and performs as part of athletic, academic and social functions throughout WSU's campus. ShockerChoir is open to singers campus-wide who desire a quality bass choir experience through meaningful repertoire, collegiality and excellent performance. Repeatable for credit.

MUSP 211E. Opera Lab (1).
Provides opportunities for students to perform staged arias, scenes and one act operas. Students who audition for Opera Theatre but are not cast should enroll in Opera Lab. Those interested in stage management, directing and backstage work may also enroll. Repeatable for credit. Audition is required.

MUSP 211F. Summer Choir (1).
A nonauditioned ensemble open to all university students and community members. The ensemble sings a wide variety of repertoire representative of composers from the past five centuries. Performs one major concert during their summer season. Repeatable for credit.

MUSP 211J. Piano Accompanying (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211K. Opera Theatre (1).
Provides the opportunity for students to gain performance experience as a chorus member in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite(s): audition required.

MUSP 211L. Madrigal Singers (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211M. Jazz Combo/Banda Hispanica (1).
Coached performing ensemble. Repeatable for credit.

MUSP 211N. Woodwind Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211O. Saxophone Quartet (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211P. Brass Chamber Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211R. Percussion Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211T. Jazz Arts Ensemble 1 (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211U. Musical Theatre Performance (1).
Cross-listed as DANC 320 and THEA 180E. An interdisciplinary practicum class for students cast in a musical theatre production. Admission is by audition. Gain rehearsal and performance experience in a Mainstage production with orchestra. Rehearsals are in the evenings for 6-10 weeks. Repeatable for credit.

MUSP 211V. Guitar Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 211X. New Music Ensemble (1).
Mixed instrumental chamber ensemble focusing on performing music of living composers and contemporary concert music from the last half century. Instrumentation is flexible, ranging from around three to 20 players, sometimes augmented by electronics, visualization or other performers. Repeatable for credit.

MUSP 212D. WuChoir (1).
Treble-voiced chorus made up of both music and nonmusic majors. The ensemble performs an eclectic mix of classical, folk and popular music, reflecting the diverse musical interests of its members. WuChoir performs annual fall and spring concerts, participates in the Candlelight Christmas concert, and performs as part of athletic, academic and social functions throughout WSU's campus. Repeatable for credit.

MUSP 212F. A Cappella Choir (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 212K. Opera Theatre (2).
Provides the opportunity for students to gain performance experience as a supporting cast member in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite(s): audition required.

MUSP 212L. Chamber Singers (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 212S. String Chamber Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 212T. Jazz Arts Ensemble 2 (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 213B. Symphonic Band (1).
An auditioned ensemble of approximately 60 musicians open to all university students. Performs full ensemble literature for wind bands ranging from traditional to contemporary styles. Provides playing experiences for both music and nonmusic majors. Repeatable for credit. Prerequisite(s): audition required.

MUSP 213F. Concert Chorale (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 221. German Diction (1).
For the vocal performer. Includes a comprehensive study of German consonant and vowel sounds.

MUSP 222. French Diction (1).
For the vocal performer. Includes a comprehensive study of French consonant and vowel sounds.

MUSP 223. Applied Piano Accompanying (2).
Individual private study of standard accompaniment literature. Prerequisite(s): successful completion of two semesters of piano study and sophomore standing.

MUSP 224. Applied Piano Accompanying (2).
Individual private study of standard accompaniment literature. Prerequisite(s): successful completion of two semesters of piano study and sophomore standing.

MUSP 250. Applied Piano Concerto (2).
Gives students concerto performance experience. Prerequisite(s): sophomore standing and admittance to the BM performance program.

MUSP 251. Applied Piano Concerto (2).
Gives students concerto performance experience. Prerequisite(s): sophomore standing and admittance to the BM performance program.

MUSP 300. Junior Recital (0).
Required for BM piano majors, performance or accompanying emphasis. Prerequisite(s): departmental consent.

MUSP 307. Instrumental Conducting (2).
Fundamentals of baton technique, elementary score reading and musical leadership. Practical experience in conducting laboratory and classroom groups. Prerequisite(s): MUSC 128, 130.

MUSP 308. Choral Conducting (2).
Fundamentals of conducting, score reading and rehearsal techniques. Practical experience conducting classroom groups. Prerequisite(s): MUSC 128, 130.

MUSP 340. Voice Coaching (1).
Vocal coaching offers intense focus on diction and the dramatic, musical and stylistic interpretation of musical theatre, art song and opera literature. Prerequisite(s): upper-class or graduate-level majors only, and instructor's consent.

MUSP 390. Badges in Music Performance (3-5).
For individual or group instruction. Repeatable with departmental consent. Graded Bg/NBg (for badge sections). Standard letter grading for other sections.

MUSP 390BA. International Phonetic Alphabet Badge: The International Phonetic Alphabet (0.5).
The International Phonetic Alphabet (IPA) is an alphabet, unlike English, in which a single symbol represents a sound. The alphabet was created as a standardization of representative sounds of oral language. This course has been developed to be of use to singers, voice teachers, choral conductors, linguists, speech pathologists and actors. The course can be used to apply the principles of clear speech in working with clients with speech problems, to demonstrate clear articulation of foreign languages, to demonstrate the ability to produce authentic sounds or accents in languages and to assist choir conductors with teaching choirs to sing consistent sounds in any language. It can also assist actors or singers to develop an accent for a particular role or character. Graded Bg/NBg.

MUSP 400. Senior Recital (0).
Prerequisite(s): departmental consent.

MUSP 407. Piano Repertoire (1).
Gives performing and listening experience to piano majors. Repeatable for credit.

MUSP 410B. Wind Ensemble (1).
An auditioned ensemble comprising the top wind, brass and percussion students enrolled at Wichita State University. The ensemble performs the highest quality literature written for the wind band and often engages soloists and premieres new music. Repeatable for credit. Prerequisite(s): audition required.

MUSP 411A. Orchestra (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411D. ShockerChoir (1).
Tenor/Bass voiced chorus made up of both music and nonmusic majors. The ensemble performs an eclectic mix of classical, folk and popular music, reflecting the diverse musical interests of its members. ShockerChoir performs annual fall and spring concerts, participates in the Candlelight Christmas concert, and performs as part of athletic, academic and social functions throughout WSU's campus. ShockerChoir is open to singers campus-wide who desire a quality bass choir experience through meaningful repertoire, collegiality and excellent performance. Repeatable for credit.

MUSP 411E. Opera Lab (1).
Provides opportunities for students to perform staged arias, scenes and one act operas. Students who audition for Opera Theatre but are not cast should enroll in Opera Lab. Those interested in stage management, directing and backstage work may also enroll. Repeatable for credit. Audition is required.

MUSP 411F. Summer Choir (1).
A nonauditioned ensemble open to all university students and community members. The ensemble sings a wide variety of repertoire representative of composers from the past five centuries. Performs one major concert during their summer season. Repeatable for credit.

MUSP 411J. Piano Accompanying (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411K. Opera Theatre (1).
Provides the opportunity for students to gain performance experience as a supporting cast member in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite(s): audition required.

MUSP 411L. Madrigal Singers (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411M. Jazz Combo/Banda Hispanica (1).
Coached performing ensemble.

MUSP 411N. Woodwind Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411O. Saxophone Quartet (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411P. Brass Chamber Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411R. Percussion Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411T. Jazz Arts Ensemble 1 (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411V. Guitar Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 411X. New Music Ensemble (1).
Mixed instrumental chamber ensemble focusing on performing music of living composers and contemporary concert music from the last half century. Instrumentation is flexible, ranging from around three to 20 players, sometimes augmented by electronics, visualization or other performers. Repeatable for credit.

MUSP 412D. Women's Glee Club (1).
Nonauditioned women's chorus made up of both music and nonmusic majors. The ensemble performs an eclectic mix of classical, folk and popular music, reflecting the diverse musical interests of its members. Women's Glee performs annual fall and spring concerts, participates in the Candlelight Christmas concert, and performs as part of athletic, academic, and social functions throughout WSU's campus. Repeatable for credit.

MUSP 412F. A Cappella Choir (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 412K. Opera Theatre (2).
Provides the opportunity for students to gain performance experience as a supporting cast member in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite(s): audition required.

MUSP 412L. Chamber Singers (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 412S. String Chamber Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 412T. Jazz Arts Ensemble 2 (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 413B. Symphonic Band (1).
An auditioned ensemble of approximately 60 musicians open to all university students. Performs full ensemble literature for wind bands ranging from traditional to contemporary styles. Provides playing experiences for both music and nonmusic majors. Repeatable for credit. Prerequisite(s): audition required.

MUSP 413F. Concert Chorale (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 414K. Opera Theatre (4).
Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite(s): audition required.

MUSP 416. Athletic Bands (1).
The athletic bands at WSU consist of the Shocker Sound Basketball Band and Shocker Sound Machine Marching Ensemble. These ensembles practice twice a week and perform for sporting activities and special events on and off campus.

MUSP 423. Applied Piano Accompanying (4).
Individual private study of standard accompaniment literature. Prerequisite(s): successful completion of solo recital.

MUSP 424. Applied Piano Accompanying (4).
Individual private study of standard accompaniment literature. Prerequisite(s): successful completion of solo recital.

MUSP 450. Accompanying Recital (1).
Required for BM piano majors, accompanying emphasis. Prerequisite(s): departmental consent.

MUSP 451. Accompanying Recital (1).
Required for BM piano majors, accompanying emphasis. Prerequisite(s): departmental consent.

MUSP 571. Essential Somatics for Singers (2).
Theoretical and practical exploration of somatic education using the teaching of Essential Somatics (based on Thomas Hanna and Moshe Feldenkrais). These teachings inform each individual of their sensory

motor amnesia and responses to stress reflexes. This, in turn, releases chronic muscle tensions and allows for freedom in movement and singing. These teachings also inform each individual of how the stress reflexes affect emotional and psychological well-being.

MUSP 580. Piano Pedagogy (2).
Primarily the art and science of teaching. Includes observations of master teachers in the university and community.

MUSP 581. Piano Teaching Materials (2).
A survey of teaching methods and materials from beginning through early advanced levels.

MUSP 596. Organ Pedagogy (2).
An approach to the art and practical aspect of teaching the organ. Includes a survey of teaching and learning methods and graded repertoire. *Course includes diversity content*. Repeatable for credit. Prerequisite(s): minimum of two years of applied organ study or departmental consent.

MUSP 599. Organ Keyboard Skills, Service Playing and Accompanying (2).
Refining keyboard, sight-reading and hymn-playing skills as pertaining to the church service. Accompanying with a review of organ literature for the church service, Gregorian chant, harmonization and improvisation. *Course includes diversity content*. Repeatable for credit. Prerequisite(s): minimum of two years of applied organ study or departmental consent.

MUSP 620. String Pedagogy: Violin and Viola (2).
Required for violin and viola performance majors. A study of tutorial techniques for violin and viola, including the teaching of mini-lessons for instructor and class critique. Prerequisite(s): violin or viola performance capability or instructor's consent.

MUSP 625. Voice Pedagogy (2).
Acquaints the voice major with vocal techniques, concepts and materials of private and class instruction.

MUSP 651. Advanced Conducting and Score Reading (2).
Baton technique, score reading and musicianship. Prerequisite(s): MUSP 307 or 308 or equivalent.

MUSP 680. Woodwind Pedagogy (2).
A comprehensive study of woodwind instrument techniques, concepts and materials of studio instruction for the advanced student. Includes the teaching of mini-lessons for instructor and class critique. Prerequisite(s): performance capability on a woodwind instrument or instructor's consent.

MUSP 681. Brass Pedagogy (2).
A comprehensive study of brass instrument techniques, concepts and materials of studio instruction for the advanced student. Includes the teaching of mini-lessons for instructor and class critique. Prerequisite(s): performance capability on a brass instrument or instructor's consent.

MUSP 682. Percussion Pedagogy (2).
A comprehensive study of percussion instrument techniques, concepts and materials of studio instruction for the advanced student. Includes the teaching of mini-lessons for instructor and class critique. Prerequisite(s): performance capability on percussion instruments or instructor's consent.

MUSP 691. Advanced Choral Conducting (2).
A comprehensive study of conducting and rehearsal techniques, analysis, ear training and types of choral composition for the advanced student. Prerequisite(s): MUSP 307 or 308 or equivalent.

MUSP 707. Piano Repertoire (1).
Performing and listening experience for piano performance majors. Repeatable for credit.

MUSP 710B. Wind Ensemble (1).
An auditioned ensemble comprising the top wind, brass and percussion students enrolled at Wichita State University. The ensemble performs the highest quality literature written for the wind band and often engages soloists and premieres new music. Repeatable for credit. Prerequisite(s): audition required.

MUSP 711A. Orchestra (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711E. Opera Lab (1).
Provides opportunities for students to perform staged arias, scenes and one act operas. Students who audition for Opera Theatre but are not cast should enroll in Opera Lab. Those interested in stage management, directing and backstage work may also enroll. Repeatable for credit. Audition is required.

MUSP 711F. Summer Choir (1).
A nonauditioned ensemble open to all university students and community members. The ensemble sings a wide variety of repertoire representative of composers from the past five centuries. Performs one major concert during their summer season. Repeatable for credit.

MUSP 711J. Piano Accompanying (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711K. Opera Theatre (1).
Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite(s): audition required.

MUSP 711L. Madrigal Singers (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711M. Jazz Combo/Banda Hispanica (1).
Coached performing ensemble. Repeatable for credit.

MUSP 711N. Woodwind Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711O. Saxophone Quartet (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711P. Brass Chamber Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711R. Percussion Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711T. Jazz Arts Ensemble 1 (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711V. Guitar Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 711X. New Music Ensemble (1).
Mixed instrumental chamber ensemble that focuses on performing music of living composers and contemporary concert music from the last half century. Instrumentation is flexible, ranging from around three to 20 players, sometimes augmented by electronics, visualization or other performers. Repeatable for credit.

MUSP 712D. Women's Glee Club (1).
Nonauditioned women's chorus made up of both music and nonmusic majors. The ensemble performs an eclectic mix of classical, folk and popular music, reflecting the diverse musical interests of its members. Women's Glee performs annual fall and spring concerts, participates in the Candlelight Christmas concert, and performs as part of athletic,

academic, and social functions throughout WSU's campus. Repeatable for credit.

MUSP 712F. A Cappella Choir (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 712K. Opera Theatre (2).
Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite(s): audition required.

MUSP 712L. Chamber Singers (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 712S. String Chamber Ensemble (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 712T. Jazz Arts Ensemble 2 (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 713B. Symphonic Band (1).
An auditioned ensemble of approximately 60 musicians open to all university students. Performs full ensemble literature for wind bands ranging from traditional to contemporary styles. Provides playing experiences for both music and nonmusic majors. Repeatable for credit. Prerequisite(s): audition required.

MUSP 713F. Concert Chorale (1).
Repeatable for credit. Prerequisite(s): audition required.

MUSP 714K. Opera Theatre (4).
Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite(s): audition required.

MUSP 723. Applied Piano Accompanying (4).
Individual private study of standard accompaniment literature with preparation of a terminal project recital (either vocal or instrumental). Prerequisite(s): successful completion of two semesters of graduate piano study.

MUSP 724. Applied Piano Accompanying (4).
Individual private study of standard accompaniment literature with preparation of a terminal project recital (either vocal or instrumental). Prerequisite(s): successful completion of two semesters of graduate piano study.

MUSP 725. Voice Pedagogy II (2).
Builds on the basics explored in Voice Pedagogy, giving particular attention to a deeper understanding of voice science, vocal literature, pedagogical techniques and materials which prepare students to teach advanced and collegiate students. Prerequisite(s): MUSP 625 or instructor’s consent.

MUSP 760. Group Piano Practicum (2).
Supervised group piano teaching for graduate students. Prerequisite(s): MUSP 580, 581, or instructor's consent.

MUSP 761. Studio Piano Practicum (2).
Supervised studio teaching for graduate students. Prerequisite(s): MUSP 580, 581, or instructor's consent.

MUSP 762. Opera Styles (2).
A comprehensive study of the performance styles and practices in operatic singing, ranging from the 17th century to the present. Prerequisite(s): instructor's consent.

MUSP 773. Acting For Singers (3).
Studies the external and internal techniques of acting for the singer, emphasizing characterization and development of a role, to ensure that students have the necessary understanding and skills to integrate the acting process while singing. Prerequisite(s): instructor's consent.

MUSP 781. Cooperative Education (1-4).
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Repeatable for credit.

MUSP 781I. Noncredit Internship (0).
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Repeatable for credit.

MUSP 790. Special Topics in Music (1-2).
For individual or group instruction. Repeatable for credit with departmental consent.

MUSP 790AA. Cultivating Excellent Performances (2).
Through weekly exercises, reading and class participation we will explore techniques to strengthen your focus and creative energy for performances. Students will perform frequently in class and be given opportunities to practice methods that potentially enhance practicing, preparation, productivity and the quality of live performance.

MUSP 790AE. Orchestral Excerpts for Viola (1-2).
This course will introduce and prepare cellists for professional orchestral auditions. Students will study, prepare and perform standard cello orchestral excerpts. Two Mock Juries will provide an opportunity for students to experience an actual audition with detailed and immediate feedback from multiple performance area faculty.

MUSP 790AF. Orchestral Excerpts for Cello (2).
This course will introduce and prepare cellists for professional orchestral auditions. Students will study, prepare and perform standard cello orchestral excerpts. Two Mock Juries will provide an opportunity for students to experience an actual audition with detailed and immediate feedback from multiple performance area faculty.

MUSP 790AG. Graduate Aural Skills Concepts and Practical Applications for the Performer (2).
Intensive independent study in aural skills/theory meant to broaden the comprehension of the graduate (MM or MME) music major. Class has three main components: (1) a graduate review of all basic aural skills concepts such as singing-at-site — in solfeggio — the Robert W. Ottman (9th Ed. Pearson) melodies from later chapters, as well as the professor's own composed melodies, (2) defining harmonic contexts by singing chord structures as they relate to vertical intervals (i.e., V7 chord, ii6 chords, in a harmonic context related to one’s melodic instrument). Voice-leading is examined in this section, as well. Vertical and horizontal application of harmony is critical to developing one's ear as a performer and as an ensemble member. Finally, (3) the examination of rhythmic structures, rhythmic solmization to better integrate one’s playing with one’s ear. This may also include an examination of formal structures in music (e.g., sonata form, etc.) that can be identified aurally.

MUSP 790AI. Essential Somatics for Singers (1).
This course is a theoretical and practical exploration of somatic education using the teachings of Essential Somatics (based on Thomas Hanna and Moshe Feldenkrais). These teachings will inform each individual of their sensory motor amnesia and responses to stress reflexes. This will, in turn, release chronic muscle tensions and allow for freedom in movement and singing.

MUSP 790E. Musical Theatre and Opera Audition (3).
Cross-listed as THEA 630. Practicum course develops techniques and audition repertory singers need to gain professional employment and/or successfully compete for placement in advanced training programs. Also covers the business skills necessary to a professional career, and

brings students into contact with professional guest artists who can provide additional insight and contacts. Prerequisite(s): instructor's consent.

MUSP 790P. Special Topics: Pedagogy (1-2).
For individual or group instruction. Repeatable for credit with departmental consent. For Graduate/Undergraduate Credit. (P: Piano)

MUSP 790Q. Special Topics in Music and Foreign Language (1-5).
Allows undergraduate and graduate students to take courses in the modern foreign languages together with individualized instruction in the translation and diction of poetical texts set to music. Course may be used to satisfy the foreign language requirement of the Bachelor of Music in performance — vocal emphasis. Repeatable for credit. Prerequisite(s): departmental consent.

NURS - Nursing

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

NURS 302. Professional Nursing Practice (3).
3 Theory hours. Explores the discipline and scope of professional nursing. Prerequisite(s): acceptance into the nursing program.

NURS 309. Fundamentals of Nursing Care (2).
Focuses on beginning skills including evidence-based practice. Prerequisite(s): acceptance into the nursing program.

NURS 312. Fundamentals of Nursing Lab (2).
Focuses on learning and performing basic nursing skills. Prerequisite(s): acceptance into the nursing program.

NURS 320. Nursing Care of Adults I (4).
4 Theory hours. First of two sequential courses. Focuses on applying critical thinking and evidence-based practice to select health issues of adults. Prerequisite(s): 5th semester nursing courses.

NURS 325. Introduction to Evidence-Based Practice (2).
Cross-listed as DH 334. Emphasizes the discovery, analysis and application of evidence to support clinical practice. Open to nonmajors. Prerequisite(s): departmental consent.

NURS 329. Evidence-Based Nursing for the Practicing RN (3).
Provides opportunities for students to examine the application of evidence-based practice in the global health care environment with emphasis on developing skills in the critical evaluation of published research and use of evidence to support nursing practice. Prerequisite(s): admission to the RN-BSN program and completion of STAT 370 or equivalent, or departmental consent.

NURS 337. Foundations of Nursing Leadership for the Practicing RN (4).
Designed for the transitioning of registered nurses entering the BSN completion program. Focuses on professional concepts to advance the student's repertoire of nursing knowledge in an ever changing and complex arena of professional nursing. Prerequisite(s): admission to the RN-BSN program; and completion of NURS 329.

NURS 340. Mental Health Nursing Care (4).
2 Theory hours; 6 Practicum hours. Studies mental health nursing with clinical applications in community and hospital settings. Focuses on nursing care of clients across the life span who have mental illness. *Course includes diversity content*. Prerequisite(s): semester 5 courses. Corequisite(s): NURS 340L and semester 6 courses.

NURS 340H. Mental Health Nursing Care Honors (4).
2 Theory hours; 6 Practicum hours. Studies mental health nursing with clinical applications in community and hospital settings. Focuses on nursing care of clients across the life span who have mental illness. *Course includes diversity content*. Prerequisite(s): semester 5 courses. Corequisite(s): NURS 340L and semester 6 courses.

NURS 341. Mental Health Nursing Care (2).
Focuses on the study of mental health nursing. *Course includes diversity content*. Prerequisite(s): 5th semester nursing courses.

NURS 343. Mental Health Practicum (1).
Focuses on the application of nursing care for patients with mental health issues. Prerequisite(s): 5th semester nursing courses.

NURS 344. Health Assessment (2).
Focuses on holistic assessment of patients from diverse populations. Prerequisite(s): acceptance into the nursing program.

NURS 346. Health Assessment for the Practicing RN (3).
Emphasizes multiple methods of data collection relevant to the health status of individuals and families across the life span. The focus is a comprehensive and evidence-based approach to clinical assessment skills. The student applies clinical reasoning in situations of health, and deviations from health, to strengthen the registered nurse's competence in drawing valid inferences from available data. Prerequisite(s): admission to the RN-BSN program.

NURS 347. Health Assessment Lab (2).
Focuses on performing holistic assessments. Prerequisite(s): acceptance into the nursing program.

NURS 349. Therapeutic Nutrition (1).
Focuses on the nutritional needs of patients with select health issues. Open to nonmajors. General nutrition course. Prerequisite(s): acceptance into nursing program, departmental consent.

NURS 360. Clinical Care of Adults I (4).
18 Practicum hours; 4 Lab hours. Clinical course emphasizes care for patients with acute illness and/or acute complications of chronic illness in acute care settings. Focuses on the application of therapeutic interventions to maximize health potential in individuals from the young adult to the frail elderly. Prerequisite(s): successful completion of semester 5 courses. Corequisite(s): NURS 360L and semester 6 courses.

NURS 361. Care of Adults I Practicum (2).
Practicum course focusing on therapeutic interventions for the human response to illness. Prerequisite(s): 5th semester nursing courses.

NURS 362. Clinical Care Lab (1).
Focuses on progression of nursing skills. Prerequisite(s): 5th semester nursing courses.

NURS 366. Health Care of Older Adults (2).
Focuses on how aging impacts health. *Course includes diversity content*. Prerequisite(s): 5th semester nursing courses.

NURS 375. Health Care Informatics (1).
Focuses on the strategic role of information systems in health care. Open to nonmajors. Prerequisite(s): acceptance into the nursing program, departmental consent.

NURS 380. Maternal/Newborn Nursing Care (2).
2 Theory hours. Focuses on maternal/newborn family-centered nursing care. Prerequisite(s): 5th semester nursing courses.

NURS 381. Maternal/Newborn Practicum (1).
Focuses on providing maternal/newborn family-centered nursing care to individuals in the childbearing process. Prerequisite(s): 5th semester nursing courses.

NURS 401. Nursing Care of Adults II (4).
4 Theory hours. Second of two sequential courses. Focuses on applying critical thinking and evidence-based practice to select health issues of adults.

NURS 407. Foundations of Quality Improvement and Patient Safety (1).
Focuses on the foundational principles for promoting and improving health care quality and patient safety at the micro-system level. Prerequisite(s): 6th semester nursing courses.

NURS 410. Clinical Care Adults II (4).
Emphasizes comprehensive patient care of young adults to frail elderly individuals with complex health problems. Prerequisite(s): successful completion of semester 5 and 6 courses. Corequisite(s): semester 7 courses.

NURS 412. Care of Adults II Praticum (2).
Practicum course focuses on the comprehensive care of the human response to illness of adults. Prerequisite(s): 6th semester nursing courses.

NURS 430. Pediatric Nursing Care (3).
Focuses on family-centered nursing of children from infancy through adolescence with clinical application in community and hospital settings. Prerequisite(s): successful completion of semester 5 and 6 courses. Corequisite(s): NURS 430L and semester 7 courses.

NURS 431. Pediatric Nursing (2).
Focuses on family-centered nursing of the pediatric population. Prerequisite(s): 6th semester nursing courses.

NURS 432. Pediatric Nursing Practicum (1).
Focuses on family-centered nursing care of the pediatric population. Prerequisite(s): 6th semester nursing courses.

NURS 440. Maternal/Newborn Nursing Care (3).
Focuses on family-centered maternal nursing care with clinical application in community and hospital settings. Prerequisite(s): semester 5 & 6 courses. Corequisite(s): NURS 440L and semester 7 courses.

NURS 450. Nursing Care of Populations (3).
2.5 Theory hours; 5.5 Practicum hours. Focuses on the role of the professional nurse in community health settings. Community health nursing functions, care coordination principles for clients, and the continuum of care on local, national and global levels are integral components. Prerequisite(s): all semester 7 courses. Corequisite(s): NURS 450L.

NURS 451. Care of Populations for the Practicing RN (3).
Focuses on public health nursing practice which integrates public health standards, competencies, essential services, principles and core functions toward the goal of improving the health of populations. Determinants of health including genetics, environmental and biopsychosocial factors are examined. Infectious disease, epidemiology, bioterrorism and disaster management principles are incorporated. Prerequisite(s): admission to the RN-BSN program; NURS 329.

NURS 452. Nursing Care of Populations (2).
Focuses on nursing practice which integrates public health standards toward the goal of improving the health of populations. Prerequisite(s): 6th semester nursing courses.

NURS 460. Leadership and Clinical Decision Making (4).
Focuses on the development and application of leadership and management in the health care setting. Sound clinical decision making in the care of clients is emphasized. Prerequisite(s): successful completion of semester 5, 6 & 7 courses. Corequisite(s): semester 8 courses.

NURS 461. Care Manager - RN (4).
Web-based course. Explores the role of the professional nurse in the community setting. Students select an area of focus for community nursing enhancement and complete a community assessment project. Includes topics related to management and financial implications for nursing. Prerequisite(s): admission to School of Nursing.

NURS 462. Nursing Leadership Management (3).
Focuses on development and application of nursing leadership/ management in health care. Prerequisite(s): 7th semester nursing courses.

NURS 470. Nursing Care of Clients with Critical Illness (5).
Emphasizes the complex nursing care of critically ill clients across the life span in the critical care and emergent settings. Prerequisite(s): successful completion of semester 5, 6 & 7 courses. Corequisite(s): NURS 470L and semester 8 courses.

NURS 471. Complex Care of Adults Practicum (2).
Focuses on the application of nursing care for patients with complex health care issues. Prerequisite(s): 7th semester nursing courses.

NURS 479. Complex Care of Adults (3).
Emphasizes the nursing care of patients with complex health issues. Prerequisite(s): 7th semester nursing courses.

NURS 481. Cooperative Education (1-8).
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of 6 hours of coursework in addition to their co-op assignments, or alternating, working full-time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Repeatable for credit. Prerequisite(s): successful completion of the freshman year and satisfactory academic standing prior to the first job assignment.

NURS 490. Healthcare Leadership for the Practicing RN (3).
Provides students with an opportunity to examine managerial and leadership concepts, issues, roles and functions. Leadership concepts are applied to the nursing role in the evolving health care environment. Prerequisite(s): admission to the RN-BSN program or departmental consent; NURS 329; NURS 337, NURS 346 and NURS 451.

NURS 495. Clinical Capstone - RN (2).
96 Practicum hours. Enhances the registered nurse's skills in the community and other settings. Provides opportunity to perform therapeutic nursing interventions in student-selected settings. Prerequisite(s): all required RN-BSN courses.

NURS 496. Nursing Leadership Practicum for the Practicing RN (2).
Offers the student a leadership practice experience. The clinical experience results in collaborative partnerships with health care leaders. Prerequisite(s): completion of NURS 346, NURS 329, NURS 337, NURS 451 and NURS 490.

NURS 497. Capstone (2).
Focuses on the transition from the role of expert student to the role of novice professional nurse in a select setting. Prerequisite(s): 7th semester nursing courses.

NURS 498. Senior Seminar (2).
Focuses on the transition from expert student to novice professional nurse within the context of the student's self-awareness of professional goals. Prerequisite(s): 7th semester nursing courses.

NURS 499. Clinical Capstone (4).
36 Practicum hours (5 weeks). Focuses on the transition from the role of student to the role of professional nurse through immersion in the

clinical setting. The student focuses on a selected area of practice within the current health care environment. Prerequisite(s): successful completion of semester 5, 6 & 7 courses, NURS 460, 470.

NURS 505. Directed Study in Nursing (1-4).
Elective. Individual study of the various aspects and/or problems of professional nursing. Repeatable for credit. Prerequisite(s): departmental consent.

NURS 701. Advanced Health Assessment (2).
Designed to assist students to refine history taking, psychosocial assessment and physical assessment skills. Focuses on assessment of individuals throughout the life span. Emphasis is placed on detailed health history taking, differentiation, interpretation and documentation of normal and abnormal findings. Course includes lecture, discussion, and integrated history-taking and physical assessment assignments. May be taken concurrently with or prior to NURS 702. Prerequisite(s): admission to graduate nursing program.

NURS 702. Advanced Health Assessment Laboratory (1).
Companion course for NURS 701. Apply history-taking and assessment skills within a laboratory setting. Emphasizes differentiation, interpretation and documentation of normal and abnormal findings. Requires a complete history and physical examination of a client. Prerequisite(s): admission to graduate nursing program. Pre- or corequisite(s): NURS 701 (NURS 702 must be taken within one year of completing NURS 701).

NURS 703. Theoretical Foundations of Advanced Nursing Practice (3).
Emphasizes the role of theory in developing knowledge-based advanced nursing practice. Relationships among theory, research and practice are addressed. The application of selected theories, models and frameworks to advanced practice nursing is discussed. Prerequisite(s): admission to graduate nursing program.

NURS 715. Advanced Nursing Practice Roles (1).
Designed for the student preparing for advanced practice nursing. The historical development of the advanced practice role, as well as current and future professional and legal descriptions of advanced practice nursing roles is explored. Prerequisite(s): admission to graduate nursing program.

NURS 720. Human Lactation (2-4).
For the graduate student preparing for practice as a lactation consultant. Provides an in-depth focus on the anatomical and physiological basis of lactation and breastfeeding. Explores factors that impact maintenance of health during lactation and clinical decisions for disease prevention. Addresses preparation for lactation consultant certification. Students work on case studies, develop a paper for publication and take a final examination via the Internet. Open to non-nursing majors. Prerequisite(s): admission to graduate program.

NURS 723. Foundations of Nursing Education (3).
Assists the student to explore theoretical and practical aspects of curriculum development, and teaching of nursing in higher education and continuing education. Prerequisite(s): departmental consent.

NURS 724. Nursing Education Practicum (1-3).
Students, under professional guidance, become directly involved in clinical and classroom teaching, curriculum development and participation in other faculty functions in higher education and continuing education, or patient education. A seminar and directed observation of a master teacher accompanies the field experience. Repeatable for a total of 6 credits hours. Prerequisite(s): departmental consent. Pre- or corequisite(s): NURS 723.

NURS 726. Common Dermatological Conditions in Primary Care (1-3).
Interactive online course guides students through an instructional program with a profile of common dermatological conditions encountered in primary care. Information is presented in brief case scenarios; students identify the condition. Resource links are available for in-depth study of each condition. For clinical use, patient education links are provided. Cases give the didactic information needed to make clinical decisions. Prerequisite(s): senior rule or admission to the Graduate School or instructor's consent.

NURS 727. Low Back Pain (1-3).
Interactive online course guides students through an instructional program based on the low back pain guidelines from the Agency for Health Care Policy and Research. Case study format stimulates critical thinking. Linked information gives information needed to make clinical decisions. Prerequisite(s): senior rule or admission to the Graduate School or instructor's consent.

NURS 728. Advanced Practice Technology and Skills (3).
Focuses on application of clinical skills, advanced health assessment, and interpretation of technologies used in a variety of clinical settings. Students practice these skills in laboratory and clinical settings. Students practice history-taking and physical examination, with emphasis on differentiation, interpretation and documentation of normal and abnormal findings. A 40-hour precepted experience is included.

NURS 733. Diabetes Mellitus Nursing (3).
Exploration of clinical theories; identifies and studies appropriate nursing systems for clients with diabetes mellitus. Emphasizes attaining and maintaining optimal levels of functioning and the psychological adjustment of the client and family to a potentially devastating disease. Open to non-nursing majors.

NURS 750. Workshops in Nursing (1-4).
An opportunity for intensive study of special topics related to nursing practice, education or research. Open to nonnursing majors.

NURS 757. Teaching Strategies for Nursing Education (3).
Analysis of teaching strategies for the nurse educator to accommodate the changing health care scene. Teaching methods, including technology appropriate for a variety of learners, and learning environments are discussed. Roles of the nurse educator across the scope of learning environments are investigated: nursing education, in-service and patients/clients/families. Current issues and trends influencing nursing education are explored. The course focuses on the use of research-based evidence to guide teaching strategies .May be taken by graduate nursing students or undergraduate nursing students with senior standing. Pre- or corequisite(s): NURS 723.

NURS 791. Special Studies in Nursing (1-6).
Students engage in extensive study of particular content and skills directly or indirectly related to nursing practice. Repeatable for credit. Open to graduate or undergraduate students. Prerequisite(s): departmental consent.

NURS 793. Advanced Pathophysiology I (4).
Explores in depth scientific knowledge base relevant to selected pathophysiological states confronted in advanced nursing practice. Provides the basis for the foundation of clinical decisions related to diagnostic tests and the initiation of therapeutic regimens. Age-specific and developmental alterations are correlated with clinical diagnosis and management. Application is made through age-appropriate examples and case studies. Prerequisite(s): admission to graduate nursing program or instructor's consent.

NURS 795A. Applied Drug Therapy I (3).
Discusses the clinical application of specific categories of drugs commonly encountered in primary care settings. Explains the use of protocols, prescription writing, and the ethical/legal and economic issues surrounding the advanced nurse's role in prescribing and monitoring pharmacologic therapies in the ambulatory setting. Discusses factors such as age-appropriate content related to pharmacokinetics, dosages, expected outcomes and side effects of the drugs. Addresses first line versus second line drugs, alternate drugs, drug interactions, adjusting drug dosages, patient education and compliance issues related to drug therapy. Explores the nurse practitioner's role and responsibility related to data collection, problem identification and consultation with the physician. Application is made through age-appropriate case studies. Prerequisite(s): admission to graduate nursing program and departmental consent.

NURS 795B. Applied Drug Therapy II (3).
Expands the clinical application of drug therapy in the primary care setting. Employs evidence-based medicine to determine the proper management of the various disease states discussed. Application is made through age appropriate case studies including complex patients. Prerequisite(s): NURS 795A, admission to graduate nursing program.

NURS 796. Nursing Practicum in Special Settings (1-6).
Opportunity for directed practice in various settings including clinical specialties, nursing administration, nursing education and consultation. Prerequisite(s): departmental consent.

NURS 799. Directed Readings in Nursing (1-2).
Student engages in critical search of the literature in areas related to the profession and practice of nursing. Prerequisite(s): departmental consent.

PADM - Public Administration

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

PADM 501. Integrity in Public Service (3).
Cross-listed as CJ 501. Exposes students to basic principles of personal and professional integrity and how those principles apply to daily life as a members of the community and as employees of a government or social service agency. Employs a case study method, using cases and examples from a wide range of government and nonprofit agency experiences. Students become aware of the moral and ethical issues which may arise in their professional and personal lives, begin to develop critical thinking and analytical skills regarding ethical behavior, and become more personally and professionally responsible. Prerequisite(s): junior or senior level or instructor's consent.

PADM 550. Workshop (1-3).
Specialized instruction using variable formats in relevant urban and public affairs subjects. Repeatable for credit up to 6 hours. Prerequisite(s): departmental consent.

PADM 701. Public & Nonprofit Governance (3).
Designed to help students develop an understanding of: (a) the governmental and political complexities within which public administration operates; (b) the nonprofit sector-including its major public-benefit sub components-and its role in the public administration environment; and (c) challenges facing both public and nongovernmental actors. Students should develop a working awareness of the significant concepts and components of the governance, politics and institutions, that enables them to analyze forces of change in this challenging environment.

PADM 702. Research Methods (3).
Cross-listed as AGE 702. Provides foundational and advanced knowledge and skills to prepare students to develop research studies and locate, appraise and apply age-related research to answer clinical questions. Emphasizes principles of evidence-based practice, research design and methodologies, framing research questions, and interpretation of basic and advanced statistics necessary to critically evaluate, interpret and apply age-related research to industry challenges. Fulfills the university's professional and scholarly integrity training requirement addressing research misconduct, publication practices and responsible authorship, conflict of interest and commitment, research ethics, data management, sharing and ownership.

PADM 709. Urban Economics (3).
Cross-listed as RE 709 and ECON 709. Surveys the economic structure and problems of urban areas on both the microeconomic and macroeconomic levels. Stresses the application of regional economic analysis in the study of urban areas as economic regions. Prerequisite(s): ECON 201, 202, junior standing.

PADM 710. Public Sector Organizational Theory and Behavior (3).
Cross-listed as POLS 710. Reviews the scope of the field of public administration including a survey of key concepts and schools of thought underlying the field. Identifies issues shaping the future development of the field.

PADM 725. Public Management of Human Resources (3).
Cross-listed as POLS 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation and pay promotion policies. Emphasizes the laws governing public personnel management and the unique merit, equal employment opportunity, productivity, unionization and collective bargaining problems found in the public sector.

PADM 750. Public Administration Workshops (1-3).
Specialized instruction using variable formats in a public administration relevant subject. Repeatable for credit with departmental consent. Prerequisite(s): departmental consent.

PADM 750F. Social Entrepreneurship (3).
Social entrepreneurship is a growing field that depends on market driven practices to create social change. Social entrepreneurs leverage available economic resources and innovation to support their passion to have a positive impact on the global and local community. Social entrepreneurship is a critical topic for students and professionals who plan careers in both for-profit and not-for-profit organizations. A global interest in ecological, economic, political and social welfare requires that organizations respond wisely to societal demands. An examination of social entrepreneurship provides the framework for understanding and practicing socially responsible behaviors. Proponents of social entrepreneurship recognize that innovation, creativity, adaptation and planning are key ingredients in creating ventures that respond to critical social needs. Course introduces students to the complex dynamics underlying social entrepreneurship as an emerging national and global phenomenon. Challenges the student to look beyond well-established business objectives — the creation of wealth — and investigate how wealth creation can impact public good. Consists of lectures, case discussions, and original research conducted by the students. An investigation of global social entrepreneurial initiatives including the establishment of India’s Grameen Bank, Transparency International, Social Accountability International, the Ethos Institute, the Ashoka Foundation, and other well known, and lesser well known, “social value” initiatives and their leaders is useful in understanding the entrepreneurial aspects of business planning, scaling and sustainability.

PADM 755. Special Topics in Urban and Public Affairs (1-3).
Provides students with an opportunity to engage in advanced study in topics that are of immediate concern and arise only occasionally. Content varies with issues that arise, student needs, and faculty expertise. Directed to Master of Public Administration students. Repeatable for credit with a change of content. Prerequisite(s): instructor's consent.

PADM 760. State and Local Economic Development (3).
Explores the roles of state and local governments and officials in economic development through the use of case studies. Examines financing in economic development from the perspectives of public purpose and community objectives.

PADM 765. Public Sector Economics (3).
Cross-listed as ECON 765. Examines theories of economic decision making and institutions, with a focus on how economic tools can be used to inform policy and management in the public and nonprofit sectors. Covers economic principles and discusses market failures and public policies intended to correct or alleviate market failure. Economic decision making tools for public and nonprofit management are also introduced.

PADM 771. Planning Process (3).
For students desiring to work in an urban planning agency or who will be involved in planning issues as an administrator at the city, county, state or federal level. Also for students seeking an understanding of the complex process of urban-related life. Examines the role of planning in solving human and environmental problems. Emphasizes the relationship between specialists, citizens and elective officials as participants in the planning process.

PADM 775. State and Local Government Law (3).
Exposes students to the legal principles which undergird the foundation of governmental operation and administration.

PADM 785. Public Works Administration (3).
Introduces public works administration and management. Includes discussion of public works professionals, public works organizations and institutions, infrastructure planning, policy and project analysis; procurement, purchasing and contract administration; geographic information systems; and transportation, water, waste water and surface water system construction, maintenance and replacement.

PADM 798. Independent Study (1-3).
For graduate students to pursue research in areas not normally covered in coursework. Repeatable for credit with departmental consent. Prerequisite(s): departmental consent.

PC - Personal Computing

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

PC 105. Introduction to Computers and Applications (3).
2 Classroom hours; 2 Lab hours. *General education math and natural sciences course*. A computer literacy course introduces students to the Internet and other networks, multimedia, CD ROM, historical development of the computer, uses of the computer in business, industry, government, education and the home; hardware components of a computer system, data representation, systems analysis and design, and issues of ethics posed by technology. The laboratory section includes hands-on experience with the Internet, Windows, and personal computer applications packages such as word processors and spreadsheets. No credit granted toward the BS in computer science. Prerequisite(s): some familiarity with typewriter keyboard and minimal typing skills. Corequisite(s): PC 105L.

PHIL - Philosophy

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

PHIL 100. Meaning of Philosophy (3).
General education humanities course. Exploration of the meaning of philosophic activity through an examination of several basic interpretations of the distinguishing intentions, characteristic procedures and essential functions of the philosophic endeavor. Introduces some of the fundamental problems and possible values of philosophy. Develops a broad understanding of the meaning of philosophy as a diverse and self-critical historical enterprise.

PHIL 100H. Meaning of Philosophy Honors (3).
General education humanities course. Exploration of the meaning of philosophic activity through an examination of several basic interpretations of the distinguishing intentions, characteristic procedures and essential functions of the philosophic endeavor. Introduces some of the fundamental problems and possible values of philosophy. Develops a broad understanding of the meaning of philosophy as a diverse and self-critical historical enterprise.

PHIL 105. Critical Reasoning (3).
General education humanities course. Helps students become better at reasoning. Focuses on different patterns of reasoning common in college-level studies and in everyday life. Some patterns are treated in concrete and content-specific ways, and others are treated in highly abstract ways. Students also learn to be critical by different kinds of standards. For example, students learn about how much precision to demand when reasoning about different kinds of topics, and how to evaluate considerations in terms of relevance. Ultimately, students learn how to strengthen their own capacities for reasoning and how to recognize and correct errors in their own thinking and in other people's reasoning.

PHIL 125. Introductory Logic (3).
General education humanities course. Deals with the uses of logical concepts and techniques to evaluate and criticize reasoning. Studies some elementary systems of formal logic. Arguments evaluated are drawn from such diverse fields as law, science, politics, religion and advertising.

PHIL 125H. Introductory Logic Honors (3).
General education humanities course. Deals with the uses of logical concepts and techniques to evaluate and criticize reasoning. Studies some elementary systems of formal logic. Arguments evaluated are drawn from such diverse fields as law, science, politics, religion and advertising.

PHIL 144. Moral Issues (3).
General education humanities course. Introduction to philosophical thought about ethics. Discusses a number of contemporary moral issues and considers various philosophical approaches to their solutions. *Course includes diversity content*.

PHIL 150B. Women & Computers: Two Historical Episodes (0.5).
Recent historical studies reveal that, in the earliest days of the computer industry, there were women at the helm of the new electronic computing equipment. Eventually, as computer jobs become professionalized, the picture changes to one in which it is mostly men who are working with computers. In this course we will look at two historical studies in the history of computing that illustrate this: the birth and decline of the computing industry in Britain during and after WWII, and the use of computing machinery in the birth of space exploration in the United States (some of which was depicted in the film "Hidden Figures.")

PHIL 300. Science and the Modern World (3).
General education humanities course. Develops an understanding of the methods and accomplishments of science and how they have affected the way people understand themselves, society and the universe. The approach is both historical, with respect to the re-creation of the prescientific world view and the developments of science, and analytical with respect to understanding the goals, methods and limits of contemporary science. No prerequisite, but prior completion of general education requirements in science is desirable. *Course includes diversity content*.

PHIL 300H. Science and the Modern World Honors (3).
General education humanities course. Develops an understanding of the methods and accomplishments of science and how they have affected the way people understand themselves, society and the universe. The approach is both historical, with respect to the re-creation of the prescientific world view and the developments of science, and analytical with respect to understanding the goals, methods and limits of contemporary science. No prerequisite, but prior completion of general education requirements in science is desirable. *Course includes diversity content*.

PHIL 302. Values & the Modern World (3).
General education humanities course. Examines the philosophical pressures on values wrought by rapid modern cultural and technological change. Explores the relations between social values and social institutions, provides a framework for critically and objectively thinking about moral values, and considers various standards proposed for resolving moral dilemmas. *Course includes diversity content*.

PHIL 303. 19th Century Philosophy (3).
A study of selected 19th century philosophers or systems of thought such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bradley, Kierkegaard, Peirce, Nietzsche, Comte, Dilthey, Schleier-Macher, idealism, materialism, positivism, empiricism and pragmatism.

PHIL 305. Analytic Philosophy (3).
General education humanities course. Studies the rise of analytic philosophy in the 20th century, emphasizing the themes unifying philosophers who originated modern philosophical analysis. Includes the nature of analysis and the relationship between analysis and classical philosophical problems, such as the nature of reality, the nature of knowledge, the nature of language, the nature of morality.

PHIL 306. Business Ethics (3).
General education humanities course. A critical examination of representative moral issues that arise in the context of business. Focuses on topics such as the nature of professionalism, the social responsibility of business, regulation, employee rights and obligations, sexual harassment, economic justice, environmental impact, the limits of property rights, and conflicting international mores and practices. *Course includes diversity content*. Prerequisite(s): PHIL 105 with a grade of C or better.

PHIL 311. Philosophy of Law (3).
General education humanities course. Introduction to philosophical problems arising in the theory and practice of law. Includes the objective basis of legal systems, the relationship between morality and legality, the justifiability of civil disobedience, the limits of legal constraints on the individual, and the nature and justification of punishment. Attention to classical and contemporary readings. *Course includes diversity content*.

PHIL 311H. Philosophy of Law Honors (3).
General education humanities course. Introduction to philosophical problems arising in the theory and practice of law. Includes the objective basis of legal systems, the relationship between morality and legality, the justifiability of civil disobedience, the limits of legal constraints on the individual, and the nature and justification of punishment. Attention to classical and contemporary readings. *Course includes diversity content*.

PHIL 313. Political Philosophy (3).
General education humanities course. Examines various philosophical issues concerning political systems. Discusses issues such as the nature of political authority, the rights of individuals, constitutionalism and civil disobedience. *Course includes diversity content*.

PHIL 315. Late Modern Philosophy (3).
General education humanities course. Studies philosophical thought in the 18th century with selections from philosophers such as Berkeley, Hume, Reid, Adam Smith, Butler, Hutcheson, Wolff and Kant, and movements such as empiricism, rationalism, the Scottish common sense school, and idealism.

PHIL 320. Philosophy of Science (3).
General education humanities course. Studies the methods, goals and world views of the sciences with attention to such topics as the structure and evaluation of scientific theories, the nature of explanation, the dynamics of scientific revolutions, and the impact of science on human society and values.

PHIL 321. The History and Philosophy of the Physical Sciences in the 20th Century (3).
The 20th century saw radical changes in our theories about the nature of the physical world. This course uses a brief initial survey of the so-called "classical" physics of the late 19th century as a springboard for exploring the rise and development of our current views about space, time, matter, energy, gravitation, cosmology and more. The emphasis is not on mastery of technical details but rather on understanding important results in the physical sciences from a humanistic perspective, including their cultural, philosophical and technological implications.

PHIL 322. Early Modern Philosophy (3).
General education humanities course. Studies philosophical thought in the period from the Renaissance through the 17th century with selections from philosophers such as Pico, Vico, Galileo, Cusanus, Telesio, Erasmus, More, Hobbes, Bacon, Machiavelli, Descartes, Spinoza, Leibniz, Malebranche and Locke.

PHIL 325. Formal Logic (3).
Studies systems of formal logic including sentential and predicate logic. Emphasizes the uses of these systems in the analysis of arguments. Prerequisite(s): PHIL 125.

PHIL 327. Bioethics (3).
General education humanities course. Examines ethical issues related to health care such as truth-telling to patients, confidentiality, euthanasia, abortion, prenatal obligations and distribution of health care. *Course includes diversity content*.

PHIL 331. Ancient Greek Philosophy (3).
General education humanities course. Examines the development of Greek philosophy in its major phases, including an exploration of the Milesian and Eleatic traditions, Pythagoras, the Atomists, the Pluralists, the Sophists, Socrates, Plato and Aristotle.

PHIL 338. Philosophy of Feminism (3).
General education humanities course. Cross-listed as WOMS 338. Explores philosophical issues raised by the feminist movement emphasizing conceptual and ethical questions. *Course includes diversity content*.

PHIL 341. Contemporary Ethics (3).
General education humanities course. A study of contemporary developments in ethics. Highlights landmark works from the 20th century to the present. May explore contemporary approaches to

an important ethical issue or investigate recent defenses of such ethical theories as Kantian deontology, consequentialism, virtue ethics, contractualism, care ethics and feminist ethics. Prerequisite(s): PHIL 100, 125, or 144.

PHIL 342. History of Ethics (3).
General education humanities course. Examines the development of ethics from its ancient Greek origins to the present, or focuses on the ethics of an important historical period such as the modern period. Highlights the substantive and methodological shifts, as well as the historical, social and philosophical pressures that make such shifts explicable. Engages such historically influential philosophers as Socrates, Plato, Aristotle, Cicero, Hume, Kant, Mill and Nietzsche. Prerequisite(s): PHIL 100, 125, or 144.

PHIL 345. Philosophy of Sex and Love (3).
Examines the ethical, metaphysical and conceptual dimensions of sex and love. Includes the nature of sex, sexual perversion, homosexuality, pornography, sadomasochism, the nature and varieties of love, the features of love, and the relationship between love and sex. Uses selections from writings of both historical and recent authors.

PHIL 346. Philosophy of Religion (3).
General education humanities course. Examines some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, human immortality, and the problem of evil.

PHIL 350. Ancient Chinese Philosophy (3).
A survey of Chinese philosophy during the pre-Han period, roughly 500-200 B.C.E. Includes major figures Confucius, Mencius, Mo-Tzu, Hsun-Tzu, Chuang-Tzu, Lao-Tzu and Han-Fei-Tzu. Includes the major positions of Confucianism, Mohism, Legalism, Taoism and Dialecticalism.

PHIL 352. Contemporary Chinese Philosophy (3).
General education humanities course. Surveys Chinese philosophy from the late 19th century to the present day. Covers major figures such as Sun Zhongshan (Sun Yat-sen) Chen Duxiu, Li Dazhao, Mao Zedong and Deng Xiaoping. Also covers major schools of thought such as the New Culture Movement, Nationalism, Communism, Socialism, Maoism and the post-Mao Economic Reform Movement. Prerequisite(s): PHIL 100 or 144.

PHIL 354. Ethics and Computers (3).
General education humanities course. Ethics with application to the ethical issues which may arise from the use of computers, including the moral responsibility of computer professionals for the effect their work has on persons and society; the moral obligations of a computer professional to clients, employer and society; the conceptual and ethical issues surrounding the control and ownership of software; and the justifiability of regulation of the design, use and marketing of computer technology. *Course includes diversity content*. Prerequisite(s): junior standing or departmental consent.

PHIL 360. Ethical Theory (3).
General education humanities course. Studies selected topics in ethics. Investigates issues such as the meaning and justification of moral judgments, the nature of morality, the relations between normative categories and the concept of justice, and the problem of revolution in moral schemes. Prerequisite(s): one course in philosophy.

PHIL 361. Metaethics (3).
General education humanities course. Studies selected topics in metaethics. Investigates, for example, ethical realism, moral relativism, expressivism, moral knowledge, moral motivation and moral value. Readings may include work from figures such as G.E. Moore, A.J. Ayer, R.M. Hare, J.L. Mackie, Gilbert Harman, Philippa Foot, Bernard Williams and Christine Korsgaard. Prerequisite(s): PHIL 100, 125, or 144.

PHIL 365. Survey of Asian Philosophy (3).
General education humanities course. Surveys philosophical systems of Asia, including Confucianism, Taoism, Buddhism and Hinduism. Key points of similarity and contrast among these systems and between these systems and those dominant in Western societies, regarding the nature of the self and reality, and the sources of moral, political and social value are considered.

PHIL 385. Engineering Ethics (3).
General education humanities course. Examines representative ethical issues that arise in engineering. Topics include: professional responsibility and integrity, whistle-blowing, conflict of interest, ethical issues in engineering consulting and research, engineering and environmental issues, and engineering in a global context. *Course includes diversity content*. Prerequisite(s): junior or senior standing.

PHIL 421. Philosophy of Mind (3).
Critically examines recent developments in the philosophy of the mind. Possible topics include the nature of consciousness, mental representation, the mind-body problem, mental causation, psychological explanation, and the computational theory of mind.

PHIL 450. Truth & Reality (3).
A survey of philosophical theories of truth, including the correspondence, pragmatic and deflationary theories. Topics to be covered include skepticism, realism and anti-realism, and social constructionism. Reading may include selections from figures such as James, Peirce, Deway, Wittgenstein, Russell, Tarski, Quine, Davidson, Austin, Strawson, Field, Hacking and Horwich.

PHIL 501. Philosophy of Language (3).
Examines the relationships between philosophy and language. Focuses on questions such as: What is the relation between language and thought? Language and the world? What can the study of language contribute to the resolution of philosophical problems? Prerequisite(s): one 300-level or higher course in philosophy.

PHIL 525. Evidential Reasoning (3).
Explores philosophical issues related to reasoning about evidence. Topics may include: induction, confirmation, falsification, the under-determination of theories by evidence, theories of probability, and scientific method. Examines some case studies of reasoning about evidence in, for example, poker, medicine, risk analysis, forensic sciences and the law.

PHIL 530. Ethics of Space Exploration (3).
General education humanities course. Surveys various philosophical and ethical questions raised by the exploration of the space environment and in space policy discussions. Topics may include rationales for space exploration, space resource exploitation, and space settlement; planetary protection and preservation of the space environment; duties to extraterrestrial microbial life; and regulation and policy for space exploration. Prerequisite(s): at least one course in philosophy.

PHIL 540. Theory of Knowledge (3).
A critical examination of the nature of knowledge and of the philosophical problems concerning skepticism, knowledge of the self, material objects, other minds, the past, present and future, universals, and necessary truths. Includes selections from both historical and recent writings. Prerequisite(s): one course in philosophy.

PHIL 546. Rationalism (3).
A study of the philosophical views that emphasize reasoning rather than sensory experience as the source of knowledge with particular attention to the philosophies of Descartes, Spinoza and Leibniz.

PHIL 549. Topics in Ancient Philosophy (3).
Explores one decisive issue in philosophy from the time of Thales through the Stoics. The examination of an issue may confine itself to one period within the total span of ancient philosophy or it may trace the issue throughout the span, indicating its contemporary treatment. Some issues treated are: the nature of what is, the concept of the sacred, the meaning of truth, the relation of invariance and process, the existence of universal standards of thought and conduct, the problem of knowledge, skepticism, the nature of language, and the character of philosophical inquiry.

PHIL 550. Metaphysics (3).
An exploration of some basic topics in the theory of reality. Includes such notions as space, time, substance, causality, particulars, universals, appearance, essence and being. Prerequisite(s): one course in philosophy.

PHIL 555. Philosophy of the Social Sciences (3).
Studies such topics as the relation of social sciences with natural sciences and philosophy, methodological problems peculiar to social sciences, the nature of sound explanation concepts and constructs, and the roles of mathematics and formal theories in social sciences.

PHIL 557. Contemporary European Philosophy (3).
An exploration of a theme, issue, philosopher, or movement in contemporary European philosophy. Includes philosophers Husserl, Heidegger, Jaspers, Gadammer, Habermas, Marcuse, Adorno, Bergson, Sartre, Merleau-Ponty, Bachelard, Lacan, Derrida, Foucault, and Ricoeur. Examines philosophical movements such as phenomenology, idealism, existentialism, structuralism, process philosophy, hermeneutics, and Marxism.

PHIL 565. Topics in Asian Philosophy (3).
An in-depth examination of selected topics in Asian philosophy. The topics covered in any particular semester vary. Representative topics include movements such as Confucianism, Taoism or Buddhism. Prerequisite(s): one philosophy course.

PHIL 577. Philosophy of The Arts (3).
General education humanities course. Intensively examines one or more fundamental problems or themes in the philosophy of art or in the special aesthetics of painting, music, sculpture, literature, drama, movies and so forth. Includes the problem of tragedy, the character of the aesthetic attitude, the function of the arts, the legitimacy of general art theory, the presuppositions of specialized art theory, the creative act, art and truth, art and life, and the nature and function of art criticism.

PHIL 585. Studies in a Major Philosopher (3).
A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite(s): instructor's consent.

PHIL 585R. Major Philosopher: Nietzsche (3).
Examines Nietzsche's writings as philosophy and as literature, and considers the implications of Nietzsche's "perspectivism" for philosophy, morality and interpretation. Nietzsche's own writings are, of course central, although students also engage the celebrated book, "Nietzsche: Life as Literature," and consider Nietzsche's influence on contemporary approaches to literary, biblical and constitutional interpretation.

PHIL 585RH. Major Philosopher: Nietzsche Honors (3).
Examines Nietzsche's writings as philosophy and as literature, and considers the implications of Nietzsche's "perspectivism" for philosophy, morality and interpretation. Nietzsche's own writings are, of course central, although students also engage the celebrated book, "Nietzsche: Life as Literature," and consider Nietzsche's influence on contemporary approaches to literary, biblical and constitutional interpretation.

PHIL 590. Special Studies (1-3).
Topic for study announced by instructor. Repeatable for credit. Prerequisite(s): instructor's consent.

PHIL 590AD. Environmental Ethics (3).
Surveys various philosophical and ethical questions raised by human interaction with, and impact on, the natural environment. Focuses on historical and contemporary, theoretical and applied, issues in environmental ethics. Topics include: anthropocentrism versus nonanthropocentrism; environmental justice and rights; progress and innovation versus stewardship and restoration; the science of climate change.

PHIL 590K. Philosophy of Medicine (3).
Covers topics related to the metaphysics and epistemology of medicine, not excluding their human impact. Topics of philosophical investigation may include for example concepts of disease and disability, evidence based medicine, medical models and mechanisms, reductionism, constructivism, expert consensus, clinical judgment, categorization and classification, epidemiology, and outcome measurement. May include historical and multicultural approaches to health and medicine.

PHIL 699. Directed Readings (1-3).
For the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite(s): departmental consent.

PHS - Public Health Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

PHS 150. Workshop (0.5-3).
Intensive study of topics related to health sciences. Differing topics are denoted by a letter following the course number (i.e., 150C, 150P, etc.).

PHS 150B. Balance and Cardio Dance (0.5).
Dance, regardless of its style, can significantly improve muscular strength and endurance, balance and other aspects of functional fitness in older adults. This exercise class is specially designed for older adults, focusing on balance, using elements from modern, ballet and other forms of dance. Class goal is to maintain and/or regain stability and balance for everyday life. Cardiovascular (aerobic) activity is also addressed during faster-paced dance styles such as swing, waltz, lindy hop and line dancing.

PHS 322. Introduction to Alternative and Complementary Medicine (3).
A fundamental and basic knowledge of medical therapies that are alternatives to or complementary of traditional Western medicine. Covers naturopathy, traditional Chinese medicine, homeopathy, botanical medicine, massage therapy, chiropractic, etc. Examines research evidence for effectiveness and how these therapeutic approaches may blend with and complement the more traditional clinical approach. Combines didactic presentations with a mix of demonstrations by alternative health care providers, visits by patients, case studies and small group presentations.

PHS 325. Introduction to Epidemiology (3).
Introduces the science and methodology of disease and risk surveillance in public health. Presents the foundations and structure used to solve medical and environmental health problems in the community with a focus on population health promotion and disease prevention. Includes lecture, film, group analysis and discussion. Prerequisite(s): MATH 111 passed with a C- or better.

PHS 325H. Introduction to Epidemiology Honors (3).
Introduces the science and methodology of disease and risk surveillance in public health. Presents the foundations and structure used to solve medical and environmental health problems in the community with a focus on population health promotion and disease prevention. Includes lecture, film, group analysis and discussion. Prerequisite(s): MATH 111 passed with a C- or better.

PHS 327. Introduction to Global Health Issues (3).
Overview of the complex health problems and challenges facing low and middle-income countries which experience the highest rates of global morbidity and mortality. Addresses strategies to improve the health status of these vulnerable populations, to appreciate how social, behavioral, economic and environmental factors influence the health of the population, and to implement techniques to prevent premature death and disability. Course content assists the learner by developing a broad view of global health problems and solutions. *Course includes diversity content*.

PHS 333. Organizational Behavior and Leadership in Health Organizations (3).
Designed to familiarize students with the classic themes and perspectives from the field of organizational behavior. Emphasizes the application of this material to leadership in health care through lecture, group and individual examination of the literature, analysis of case studies, and personal assessment.

PHS 344. The Role of Culture in Health and Health Care (3).
Examines the importance of culturally-informed care as a professional responsibility in health services and is designed to critically examine cultural competency and the underlying challenges of responding to health disparity. Cultural context constructs the ways people frame, define, react to, and treat illness and other health risks. Many factors, such as age, identity, ethnicity, education, religion, income, family tradition, status and ability, shape individual illness experience. When combined with influences such as power, hierarchy in medicine, authority, resource allocation and technology, differences between the patient's and provider's understanding of, and response to, illness can result in poor health outcomes. Therefore, students are challenged to increase awareness and understanding of diversity to build a foundation for providing culturally-responsive, person-centered systems and approaches to care. *Course includes diversity content*.

PHS 344H. The Role of Culture in Health and Health Care Honors (3).
Examines the importance of culturally-informed care as a professional responsibility in health services and is designed to critically examine cultural competency and the underlying challenges of responding to health disparity. Cultural context constructs the ways people frame, define, react to, and treat illness and other health risks. Many factors, such as age, identity, ethnicity, education, religion, income, family tradition, status and ability, shape individual illness experience. When combined with influences such as power, hierarchy in medicine, authority, resource allocation and technology, differences between the patient's and provider's understanding of, and response to, illness can result in poor health outcomes. Therefore, students are challenged to increase awareness and understanding of diversity to build a foundation for providing culturally-responsive, person-centered systems and approaches to care. *Course includes diversity content.*

PHS 356. Introduction to Health Administration and Policy (3).
Introduces the underlying principles, practices and concepts of health services administration both from an individual and organizational perspective. Covers planning, decision making, influencing and effecting change. Emphasizes how health care policy, an organization's external and internal environment, and technology influence organizational strategy, design and function.

PHS 356H. Introduction to Health Administration and Policy Honors (3).
Introduces the underlying principles, practices and concepts of health services administration both from an individual and organizational perspective. Covers planning, decision making, influencing and effecting change. Emphasizes how health care policy, an organization's external and internal environment, and technology influence organizational strategy, design and function.

PHS 410. Health Communication (3).
Helps students discover the vital role that health communication plays, and the factors influencing health communication in various settings. Principles of health communication are explored on many levels including: interpersonal patient, family and provider conversations, the role of technology related to health communication, health organization communication, communicating health data and statistics, risk communication, health promotion messaging and the role of media. Explores the theory, research and skills associated with communicating in these various contexts.

PHS 410H. Health Communication Honors (3).
Helps students discover the vital role that health communication plays, and the factors influencing health communication in various settings. Principles of health communication are explored on many levels including: interpersonal patient, family and provider conversations, the role of technology related to health communication, health organization communication, communicating health data and statistics, risk communication, health promotion messaging and the role of media. Explores the theory, research and skills associated with communicating in these various contexts.

PHS 413. Introduction to Social and Behavioral Aspects of Public Health (3).
Course is based on the assumption that public health is a multi-disciplinary field aimed at reducing preventable morbidity and premature mortality, and promoting a higher quality of life in populations and groups through health intervention. While recognizing that biological, physical and medical care factors contribute to population health outcomes, this course emphasizes the relationship of behaviors as well as social and political structures to health outcomes. Highlights the importance of both local contexts and global practice for understanding and improving health. A social ecological framework forms the conceptual basis of the course, focusing attention on interactions between four levels of factors: individual, interpersonal, community and population. Designed to encourage an appreciation of the wealth of conceptual and methodological approaches in the social and behavioral sciences that can inform public health practice and research.

PHS 416. Introduction to Environmental Health (3).
Introduces students to the importance of the environment to human health by examining the causes and controls of major environmental health problems. Topics are structured around the things individuals and societies do that result in environmental health hazards — including energy production, industry, food production, and the modern lifestyle — as viewed through both a local and global lens. Emphasizes environmental risk factors to susceptible populations and how they translate into public health policy and prevention. Students learn ways to protect and enhance their health, and to influence the quality of the environment. Includes lecture, film, group analysis and reflection.

PHS 428. Health Care Organization (3).
Covers concepts and issues of management, organization, and operations of health care organizations, stressing the unique character

of health care delivery organizations. Emphasizes types of health organizations, leadership and managerial roles, organizational structure and dynamics, the external environment, quality assessment and improvement, planning and marketing with a focus on synthesizing resources and capabilities to meet organizational goals.

PHS 448. Quality Improvement in Health and Health Care (3).
Addresses quality improvement (QI) in health services organizations. Students learn about the history and current status of quality improvement initiatives, QI models, QI tools and the role of quality in organizational strategic management. Upon successful completion of the course, students are equipped with a toolkit of resources that they can directly apply to improving processes that result in healthier patients and more effective and efficient systems.

PHS 475. Leadership Capstone (3).
Familiarizes students with the factors influencing successful professionalism in the health care setting. Emphasizes the application of course material to the development of the student's health care career. Course format includes lecture, group and individual examination of the literature, analysis of case studies, interprofessional education, and fieldwork. Prerequisite(s): health management majors enrolled in the health administration concentration only; must have completed the HM program core courses: HP 408, PHS 325, PHS 344, PHS 356 and PHS 410.

PHS 478. Health Economics (3).
Approaches health economics by following the flow of funds to describe the incentives and organizational structure of the health care system in the United States. Examines transactions between patients and providers, the role and results of insurance and government involvement, and some of the history of the U.S. health care system. Also considers national health spending and public health from a macroeconomics perspective.

PHS 481. Cooperative Education (1-8).
Provides the student with a field study that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Repeatable for credit. Prerequisite(s): instructor's and cooperative education coordinator's consent.

PHS 485. Health Management Capstone (3).
Provides the opportunity to develop skills and apply learning from across the curriculum to a series of issues and problem-solving situations in public health. Students develop a model for professionalism required by those working in the field, assess and evaluate ethical decision-making situations which integrate the program core, build capacity for lifelong learning, and complete an applied group project that synthesizes content and knowledge from across the curriculum. For students in the last semester of their program of study. Prerequisite(s): health management majors only; and must have completed the health management core courses: HP 408, PHS 325, PHS 344, PHS 356, and PHS 410. Pre- or corequisite(s): PHS 494.

PHS 490. Independent Study (1-6).
Supervised intensive study of special topics and problems relating to health care delivery. Repeatable for a total of 6 credit hours. Prerequisite(s): program consent.

PHS 494. Health Management Practicum Preparation (0).
Facilitates students' preparation for the practicum experience. Includes developing interview skills, resume building, selecting a practicum placement site, and developing a learning contract. Pre- or corequisite(s): PHS 485.

PHS 495. Health Management Practicum (3).
Enables students to apply skills and knowledge through a supervised field training experience in a health care setting that complements the student's interests and career goals. Enables students to gain practical experience as professionals under conditions conducive to educational development. Students may select, with the consent of the practicum coordinator, an internship in an appropriate health or social service organization. Requires participation in a broad fieldwork component, completion of a focused project component, and a written report of the experience. Repeatable for a maximum of 6 credit hours. Prerequisite(s): PHS 494 or instructor's consent.

PHS 501. Field Research Health Science (1-3).
Examination of the methods of participant observation, data collection and interview as approaches to understanding issues in health science. Students gain practical experience in these methods through individual fieldwork projects. Repeatable for credit up to 6 credit hours. Prerequisite(s): instructor's consent or 12 credit hours of public health sciences credit.

PHS 575C. Domestic Human Trafficking (3).
Cross-listed as SCWK 611C. This course will build on the undergraduate and graduate student's knowledge in working with individuals, groups, and communities with a specific focus on populations at-risk of and/or subjugated to domestic trafficking. With specialized instruction regarding domestic human trafficking, particularly domestic minor sex trafficking, this course aims to equip students with the practice knowledge, skills, and ethics in order that they might engage in effective anti-trafficking responses. Topics covered within this course include: forms of human trafficking; those involved; risk and resiliency factors; prevention; and direct-services through the prevention, assessment, identification, intervention/restoration, and termination/transition/prosperity process (Countryman-Roswurm, 2015).

PHS 575K. Supervisory in Healthcare Graduate Bridge (1).
This course is a study of supervisory management concepts and techniques that apply to healthcare organizations and programs. Emphasis is on understanding the healthcare environment and its various healthcare settings, the identification of issues facing front-line employees, supervisors and mid-level managers, and the development of administrative and leadership skills necessary to successfully lead healthcare work teams. It identifies, analyzes and solves problems that clinical department heads, supervisors and other health related mid-management personnel encounter in their work.. This course is intended for students who completed HMCD or PHS 621 as an undergraduate, but did not complete the additional graduate requirements. Prerequisite(s): PHS 621 (HMCD 621).

PHS 575L. Human Resources in Healthcare Graduate Bridge (1).
This course is intended for health care management students who will assume responsibility for managing people in health services organizations. The course is an introduction to the essential theories, components, and issues of human resource management in the health care field. It includes, among many other topics, the study of the effectiveness of the human resource management function, employee recruitment, selection, training, performance appraisal, benefit and compensation, employee relations and other relevant legal requirements affecting employment in the health care sector. Students enrolled in this course will be required to learn and to demonstrate the ability to analyze human resources problems and to find and present sound solutions. This course is intended for students who completed HMCD or PHS 622 as an undergraduate, but did not complete the additional graduate requirements. Prerequisite(s): PHS 622 (HMCD 622).

PHS 575M. Quality Graduate Bridge (1).
This course addresses quality management in health services organizations, with a focus on a systematic approach to meet the Institute of Medicine's aim to provide care that is safe, effective, patient-centered, timely, efficient and equitable. The history and current status of quality management initiatives, as well as the role of quality in organizational strategic management are presented. Students learn the role of quality from theory to application in a broad base of organizational settings. This course is intended for students who completed HMCD or PHS 648 as an undergraduate, but did not complete the additional graduate requirements. Prerequisite(s): PHS 648 (HMCD 648).

PHS 575N. Care of Populations: Public Health Science (0.5).
Focuses on the core competency for Public Health Professionals, Public Health Science Skills, Tier 1. Focuses on the science of public health practice which integrates, competencies, essential services, retrieval of evidence, and core functions toward the goal of improving the health of populations. As part of the course requirements, the student completes step 1 of an integrated community health assessment and health improvement plan.

PHS 575O. Care of Populations: Care Leadership & Systems Thinking (0.5).
Focuses on the core competency for Public Health Professionals, Public Health Science Skills, Tier 1. Focuses on the science of public health practice which integrates, competencies, essential services, retrieval of evidence, and core functions toward the goal of improving the health of populations. As part of the course requirements, the student completes step 1 of an integrated community health assessment and health improvement plan.

PHS 575P. Care of Populations: Financial Planning & Management (0.5).
Focuses on the core competency for Public Health Professionals, Public Health Science Skills, Tier 1. Focuses on the science of public health practice which integrates, competencies, essential services, retrieval of evidence, and core functions toward the goal of improving the health of populations. As part of the course requirements, the student completes step 1 of an integrated community health assessment and health improvement plan.

PHS 575Q. Care of Populations: Community Dimensions of Practice (0.5).
Focuses on the core competency for Public Health Professionals, Public Health Science Skills, Tier 1. Focuses on the science of public health practice which integrates, competencies, essential services, retrieval of evidence, and core functions toward the goal of improving the health of populations. As part of the course requirements, the student completes step 1 of an integrated community health assessment and health improvement plan.

PHS 575R. Care of Populations: Cultural Competency (0.5).
Focuses on the core competency for Public Health Professionals, Public Health Science Skills, Tier 1. Focuses on the science of public health practice which integrates, competencies, essential services, retrieval of evidence, and core functions toward the goal of improving the health of populations. As part of the course requirements, the student completes step 1 of an integrated community health assessment and health improvement plan.

PHS 575S. Care of Populations: Policy Development & Program Planning (0.5).
Focuses on the core competency for Public Health Professionals, Public Health Science Skills, Tier 1. Focuses on the science of public health practice which integrates, competencies, essential services, retrieval of evidence, and core functions toward the goal of improving the health of populations. As part of the course requirements, the student completes step 1 of an integrated community health assessment and health improvement plan.

PHS 575T. Health Science Capstone (3).
Designed to familiarize students with the factors influencing successful professionalism in the health care setting. Emphasizes the application of course materials to the development of the student's health care career. Course format includes lecture, group and individual examination of the literature, analysis of case studies, inter-professional education and fieldwork. This course is for undergraduates in the BSHS program only. Prerequisite(s): HS program core courses (PHS 325, PHS 344, PHS 356, PHS 410 and PHS 642).

PHS 621. Supervisory Management in Health Care Organizations (3).
Cross-listed as HA 621. Studies supervisory management concepts and techniques that apply to health care organizations and programs. Emphasizes understanding the health care environment and its various health care settings, identifying issues facing front-line employees, supervisors and mid-level managers, and the development of administrative and leadership skills necessary to successfully lead health care work teams. Identifies, analyzes and solves problems that clinical department heads, supervisors and other health-related mid-management personnel encounter in their work. The principles of effective management techniques — planning, decision making, organizing, budgeting, time management, leadership, direction, delegation, communication, motivation, discipline, performance appraisal, managing change, teamwork, effective meetings, working with unions, quality improvement and career development — are covered.

PHS 622. Human Resource Management in Health Care Organizations (3).
Cross-listed as HA 622. Intended for clinical health care professionals who will assume responsibility for managing people in health services organizations. Introduces the essential theories, components and issues of human resources management in the health care field. Includes, among many other topics, the study of the effectiveness of the human resources management function, employee recruitment, selection, training, performance appraisal, benefits and compensation, employee relations and other relevant legal requirements affecting employment in the health care sector. Covers issues of contemporary relevance for human health services resource departments such as employee health and safety, employee assistance programs, occupational stress and job burnout, use of the Internet in the workplace, violence in the workplace, and work/family issues. Students are required to learn and demonstrate the ability to analyze human resources problems and to find and present sound solutions. Students are expected to learn and demonstrate effective group working skills as they join small groups and engage in collaboratively solving a number of human resources management problems.

PHS 624. Community Development Methods (3).
Builds on the foundation of public health by examining a variety of advanced methods, theories and skills used for community development. Students familiarize themselves with the approaches used to assess and improve health outcomes in a community context, and familiarize themselves with how to effectively apply these approaches. Includes lecture, group and individual projects, fieldwork and visiting lectures from practicing community development professionals.

PHS 642. Financing Health Care Services (3).
Examines the principles of financial analysis and management, used in health care institutions, which are most useful to nonfinancial personnel. Emphasizes understanding and application of general financial concepts crucial to the health setting; considers financial

organization, sources of operating revenues, budgeting and cost allocation methods. Uses examples for various types of health service organizations. Pre- or corequisite(s): BADM 162.

PHS 644. Program Planning and Evaluation (3).
Introduces students to the planning, development and evaluation of health programs through the use of lecture, group projects and individual presentations. Students familiarize themselves with a variety of approaches available in the field of program planning. Emphasizes the application of this material to the development of a program plan.

PHS 648. Concepts of Quality in Health Care (3).
Cross-listed as HA 648. Addresses quality management in health services organizations, with a focus on a systematic approach to meet the Institute of Medicine's aim to provide care that is safe, effective, patient-centered, timely, efficient and equitable. The history and current status of quality management initiatives, as well as the role of quality in organizational strategic management are presented. Students learn the role of quality from theory to application in a broad base of organizational settings.

PHYS - Physics

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

PHYS 111. Introductory Physics (4).
3 Classroom hours; 3 Lab hours. *General education math and natural sciences course*. A general physics course for liberal arts students and those who have not had physics in high school. Includes mechanics, heat, electricity and magnetism, wave phenomena and modern physics. Not open to students who can meet prerequisites for PHYS 313. Prerequisite(s): two years of high school algebra or one each of algebra and geometry or equivalent.

PHYS 131. Physics for Health Sciences (3).
General education math and natural sciences course. Background in basic physics for students in health-related professions. The choice of topics, the emphasis on problems, and the detailed applications are directed toward the special uses of physics in the health sciences. Prerequisite(s): two years of high school algebra or one year each of algebra and geometry or equivalent.

PHYS 151. Preparatory Physics (2).
A general physics course for those who have not had adequate preparation for PHYS 313. Emphasizes problem solving using selected areas of physics, including vectors, one-dimensional motion, rotational motion, equilibrium, elasticity, hydrostatics, thermal effects, lenses and mirrors. Prerequisite(s): MATH 112.

PHYS 195. Introduction to Modern Astronomy (3).
General education math and natural sciences course. Surveys astronomy for the student with little or no background in science or math. The nature and evolution of the universe and objects in it are considered from the perspective of the question: Why do things happen the way they do? May include comparison of the planets, stars and black holes, galaxies and quasars, and the expansion of the universe.

PHYS 196. Laboratory in Modern Astronomy (1).
3 Lab hours. The application of the techniques and analysis of the data of modern astronomy. For the student with some background in the physical sciences. When PHYS 196 is completed, 195 and 196 count as a laboratory science. Requires field trips. Prerequisite(s): two semesters of high school algebra or the equivalent, or instructor's consent, and PHYS 195, which may be taken concurrently.

PHYS 199A. Special Topics in Astronomy (0.5).
This course will introduce you to selected topics of our modern view of the universe, its contents, and how particular objects got to be the way they are. Among the topics we will discuss are objects in our solar system; the birth and death of stars; the fate of the universe; and the search for life in the solar system and beyond.

PHYS 210. Physics of Sound (3).
2 Classroom hours; 1 Lab hour. *General education math and natural sciences course*. Studies the physical nature of sound generation by the human vocal system and musical instruments, including sound propagation and wave properties. Covers sound reception in the human ear, electronic sound generation, recording and measurements. Basic principles of physics are introduced to build a working knowledge of the subject for students in speech-language pathology, audiology, music and related fields.

PHYS 213. General College Physics I (5).
4 Classroom hours; 3 Lab hours. *General education math and natural sciences course*. Mechanics, heat and wave motion. For students with a working knowledge of algebra and trigonometry but who have had no calculus. Credit is given for only one of PHYS 213 or 313. Prerequisite(s): high school trigonometry or MATH 112. Corequisite(s): PHYS 213L.

PHYS 214. General College Physics II (5).
4 Classroom hours; 3 Lab hours. *General education math and natural sciences course*. Continuation of PHYS 213. Electricity, light and modern physics. Prerequisite(s): PHYS 213 or 313. Corequisite(s): PHYS 214L.

PHYS 313. Physics for Scientists I (4).
General education math and natural sciences course. The first semester of a calculus-based physics sequence. Topics include motion, forces, energy, fluids, oscillations, waves and thermodynamics. Natural sciences majors are required to take the lab, PHYS 315, that accompanies this course. Credit is given for only one of PHYS 213 or 313. Pre- or Corequisite(s): MATH 243 with a grade of C or better.

PHYS 314. Physics for Scientists II (4).
General education math and natural sciences course. The second semester of a calculus-based physics sequence. Topics include electricity, magnetism, circuits, EM waves, light and selections from modern physics. Credit is only given for one of PHYS 214 or 314. Natural sciences majors are required to take the lab, PHYS 316, that accompanies this course. Prerequisite(s): MATH 243 with a grade of C or better and PHYS 313.

PHYS 315. University Physics Lab I (1).
3 Lab hours. *General education math and natural sciences course*. Lab experiments in mechanics, waves and thermodynamics. Required for natural sciences majors enrolled in PHYS 313. Prerequisite(s): MATH 242. Pre- or corequisite(s): PHYS 313.

PHYS 316. University Physics Lab II (1).
3 Lab hours. *General education math and natural sciences course*. Lab experiments in electricity, magnetism and optics. Required for natural sciences majors taking PHYS 314. Pre- or corequisite(s): PHYS 314.

PHYS 395. Solar System Astronomy (3).
General education math and natural sciences course. Studies the sun, major planets and minor bodies of the solar system, particularly their nature and origin. Discusses classical ground-based observations and the results of satellite investigations. Primarily for students with little prior contact with science.

PHYS 481. Cooperative Education in Physics (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply knowledge gained through coursework to job-related situations. No more than 4 hours earned in PHYS 481 may be applied toward satisfying the requirements for a major in physics. Prerequisite(s): departmental consent.

PHYS 481N. Internship (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

PHYS 501. Special Studies in Physics for Educators (1-3).
3 Lab hours. A series of courses covering basic physical concepts which provide a physical science background for teachers. Repeatable for a total of 5 credit hours. Prerequisite(s): inservice or preservice teacher.

PHYS 501K. Nuclear Concepts (1-3).
Part of a series of courses covering basic physical concepts which provide a physical science background for teachers. Structure of atoms and the experiments that revealed this structure, quantization of matter, electric charge, and light, concepts of quantum mechanics. This course may also include further topics and applications, for example cosmic microwave background radiation or other topics of current interest.

PHYS 502. Science Investigations: Physics (3-5).
Introductory course for prospective teachers. Basic physics concepts in mechanics, heat, and electricity and magnetism developed through laboratory investigations. Emphasizes science process skills and the nature of the scientific endeavor. Prerequisite(s): MATH 111 or equivalent; inservice or preservice teacher.

PHYS 516. Advanced Physics Laboratory (2).
4 Lab hours. Experiments in classical and modern physics to stress scientific methods and experimental techniques. The experiments are open-ended projects requiring individual study. Repeatable for a total of 8 credit hours. Pre- or corequisite(s): PHYS 551.

PHYS 517. Electronics Laboratory (2).
1 Classroom hour; 3 Lab hours. Experiments in electronics that treat some of the applications of electronics in scientific physics research. Experiments cover the uses of transistors, op-amps, integrated and digital circuits. Prerequisite(s): PHYS 314.

PHYS 551. Topics in Modern Physics (3).
An introduction to selected areas of modern physics emphasizing the features of atomic, nuclear and solid state physics that require modifications of classical physics for their explanation. Prerequisite(s): PHYS 214 or 314, or departmental consent. Pre- or corequisite(s): MATH 344.

PHYS 555. Modern Optics (3).
Geometrical and physical optics, coherence theory and Fourier optics. Additional topics may include radiation, scattering, optical properties of solids and optical data processing. Prerequisite(s): PHYS 214 or 314 and MATH 344.

PHYS 595. Astrophysics (3).
Covers the formation, life and death of stars. Topics include: HR-diagrams, atomic and molecular spectra, radiative and convective transfer, the structure and spectra of stellar atmospheres, and stellar evolution. Prerequisite(s): PHYS 551.

PHYS 600. Individual Readings in Physics (1-3).
Repeatable for a total of 6 credit hours for physics majors. Prerequisite(s): departmental consent.

PHYS 601. Individual Readings in Astrophysics (1-3).
Studies several topics in astronomy and astrophysics in depth. Lectures, independent readings and student projects may be assigned. Repeatable for credit up to 6 hours. Prerequisite(s): instructor's consent.

PHYS 616. Computational Physics Laboratory (2).
1 Classroom hour; 2 Lab hours. Provides a working knowledge of computational techniques with applications in both theoretical and experimental physics, including an introduction to the FORTRAN and C++ languages as used in physics. Pre- or corequisite(s): MATH 555.

PHYS 621. Analytical Mechanics (3).
Motion of a particle or system of particles in one or several dimensions, central forces, rotating coordinate systems, the harmonic oscillator and the Lagrangian and Hamiltonian formulation of mechanics. Prerequisite(s): PHYS 214 or 314, and MATH 344 with grades of C or better.

PHYS 623. Advanced Mechanics (3).
Continuation of PHYS 621. Covers dynamics of a system of coupled particles, fluid mechanics, systems with continuum distributions of mass, and theory of small oscillations all in a Lagrangian or Hamiltonian formulation. Prerequisite(s): PHYS 621, or MATH 553 or 555, or instructor's consent.

PHYS 631. Electricity and Magnetism (3).
Electric and magnetic field theory, direct and alternating currents and Maxwell's electromagnetic wave theory. Prerequisite(s): PHYS 214 or 314, and MATH 344 with grades of C or better.

PHYS 641. Thermophysics (3).
The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations, and an introduction to statistical mechanics. Prerequisite(s): PHYS 214 or 314, and MATH 344.

PHYS 651. Quantum Mechanics I (3).
Introduction to quantum mechanics, the Schrodinger equation, elementary perturbation theory and the hydrogen atom. Prerequisite(s): PHYS 551.

PHYS 652. Quantum Mechanics II (3).
A continuation of PHYS 651 and covers time dependent perturbation theory, WKB, scattering, Bell's theorem, quantum reality, applications of quantum mechanics, and nanotechnology. Prerequisite(s): PHYS 651.

PHYS 661. Introduction to Atomic Physics (3).
Quantum mechanics is the basis of all our physical understanding of atomic and molecular spectra. This course uses quantum mechanics to understand the nature and formation of the spectra of one, two and many-electron atoms. A discussion of atomic collisions is included. Corequisite(s): PHYS 651.

PHYS 675. Nuclear/Particle Physics (3).
Theories of nuclear and particle physics, including experimental techniques and important features of current data. Summary of mesons, baryons and leptons, and their electromagnetic, strong and weak nuclear force interactions. Phenomenological descriptions of nuclear and high-energy scattering and particle production leading to the quark theory of matter and other new exotic particles. Prerequisite(s): PHYS 551.

PHYS 681. Solid State Physics (3).
A one-semester introduction to solid state physics, which explores and explains-in terms of the microscopic processes that produce them-the thermal, mechanical and electronic properties of solids. Discusses practical applications and interdisciplinary material. Prerequisite(s): PHYS 551.

PHYS 695. Astrophysics II (3).
Continuation of PHYS 595. Covers the properties of the solar system and extra-solar planets. Other topics of modern astronomy are included such as the formation of galaxies, cosmology and the Big Bang model. Prerequisite(s): PHYS 595 or instructor’s consent.

PHYS 701G. Mathematical Methods in Physics (3).
This course is a continuation of PHYS 714, Theoretical Physics. It is a study of mathematical techniques applicable to physics and

other sciences. Topics covered in this course include group theory, differential geometry, statistical methods, functional methods, path integrals, renormalization grouping, chaos theory, and string theory. Prerequisite(s): PHYS 714 or instructor's consent.

PHYS 702. Energy and Sustainability (3).
Cross-listed as ME 702. Introduces sustainability in a world of increasing population with more energy intensive lifestyles and diminishing resources; anthropogenic global climate change and the engineer's responsibilities; estimating our carbon footprint; surveys alternative energy sources with special emphasis on wind and solar energy; life cycle analysis (LCA) of engineered products; the electric grid; emissions from various transportation modes, and alternatives. Consists of traditional lectures, seminars by invited experts, and case studies. Meets the ME undergraduate curricular requirement for thermal/fluids elective and/or a general ME elective. *Course includes diversity content*. Pre- or corequisite(s): ME 522 or PHYS 551; or instructor's consent.

PHYS 714. Theoretical Physics (3).
A study of mathematical techniques applicable to physics and other sciences. Instructor selects topics, such as power series, infinite products, asymptotic expansions, WKB method, contour integration and residue methods, integral transforms, Hilbert spaces, special functions and integral equations. Prerequisite(s): MATH 555 or instructor's consent.

PHYS 730. Principles of Computer Modeling (2).
1 Classroom hour; 2 Lab hours. Essential elements, principles and strategies of forward and inverse numerical computer modeling. Formulation of a qualitative problem (parametrization), model design, implementation, and interpretation of model results. Working knowledge of computational techniques with examples in physics, geology, chemistry and environmental sciences. Prerequisite(s): PHYS 616 or EEPS 701, plus knowledge of a programming language or numerical or symbolic mathematics package, or instructor's consent.

PHYS 761. Environmental Physics (3).
Covers the application of physics to the environment, including the production and use of energy, the transport of pollutants, and the study of noise. Topics include basic thermodynamics with applications to fossil fuels, hydroelectric, wind, geothermal and solar energies, plus effects on global warming, pollution and climate. Prerequisite(s): PHYS 313-314 and MATH 242, or EEPS 721, or instructor's consent.

PHYS 795. Earth and Space Physics (3).
Cross-listed as GEOL 795. An introduction to the geosciences and astrophysics of the solar system. Topics include the surface, interior and atmospheres of the planets with a comparative planetology approach, and the sun-planet system including solar physics and the effect of the sun on the earth's environment and geologic history. Prerequisite(s): PHYS 313-314, and MATH 242, or EEPS 721, or instructor's consent.

POLS - Political Science

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

POLS 121. American Politics (3).
General education social and behavioral sciences course. Analyzes the basic patterns and structure of the American political system emphasizing policies and problems of American politics.

POLS 121H. American Politics Honors (3).
General education social and behavioral sciences course. Analyzes the basic patterns and structure of the American political system emphasizing policies and problems of American politics.

POLS 150. Political Science Workshop (1-3).
Prerequisite(s): instructor's consent.

POLS 150B. National Politics (0.5-3).
National Politics examines how American politics works at the federal level. We will investigate how the rules of the Constitution shape our politics and evaluate how our politics lives up to Constitutional ideals. We will examine how people connect to their government through elections and lobbying. We will also discuss the process for making policy to govern the country, the actors that have influence in that process and how those actors interact with each other, and who thus holds power in policymaking.

POLS 150D. Presidential Leadership (0.5).
This course is a continuation of our discussion on presidents of the modern era. During this course we will focus on Dwight D. Eisenhower, Lyndon B. Johnson, George H.W. Bush, and William J. Clinton. We will evaluate each president’s leadership effectiveness based on presidential scholar Fred Greenstein’s criteria: Communication, Political Skill, Organizational Ability; Knowledge Application, Vision, and Emotional Intelligence. Video documentaries will be viewed and brief articles handed out prior to each class.

POLS 150E. Current Events and Timely Topics (0.5).
Examines how current events influence public policy and citizen expectations of governance at the local, state and national levels.

POLS 153. Model United Nations I (2-4).
A workshop to prepare students to participate effectively in various model United Nations, especially the Midwest Model U.N. in St. Louis.

POLS 220. Introduction to International Relations (3).
General education social and behavioral sciences course. Examines approaches to the study of international relations. Includes foreign policy, international conflict and conflict management, international organizations and law, development and globalization. *Course includes diversity content*. Either POLS 220 or 336, but not both, may be accepted toward a major in history.

POLS 226. Comparative Politics (3).
General education social and behavioral sciences course. Analyzes the basic patterns and structures of Western democratic and political systems, transitional systems, and dictatorial or totalitarian systems.

POLS 232. Political Theory and Philosophy (3).
General education social and behavioral sciences course. Shows the direct relationship between political philosophy and practical political structures and policies. Examines the political philosophies of six important Western philosophers at an introductory level. Studies different models of democracy to demonstrate the relationship between a set of basic philosophic assumptions and the political society that seems appropriate to that set of assumptions. Examines one or two major political issues to illustrate the various kinds of solutions that may be suggested by different political philosophies.

POLS 232H. Political Theory and Philosophy Honors (3).
General education social and behavioral sciences course. Shows the direct relationship between political philosophy and practical political structures and policies. Examines the political philosophies of six important Western philosophers at an introductory level. Studies different models of democracy to demonstrate the relationship between a set of basic philosophic assumptions and the political society that seems appropriate to that set of assumptions. Examines one or two major political issues to illustrate the various kinds of solutions that may be suggested by different political philosophies.

POLS 305. Environmental Politics (3).
General education social and behavioral sciences course. Examines the politics of environmental protection and the management of natural

resources. Examines such politics at local, national and global levels. No prerequisites, but a background in introductory political, economic and environmental science courses is helpful.

POLS 310. Latin American Politics (3).
General education social and behavioral sciences course. Overview of domestic political processes in Latin-American countries. A synopsis of historical developments in the region up to and including the transitions from authoritarianism to democracy that took place in the mid 1980s. Presents a regional perspective on key current issues related to governance and democratization such as institutional frameworks (constitutional aspects, elections, political parties and the State), the rule of law, citizen participation and civil society, the role of the elites and the military, the impact of socio-economic factors and the importance of political culture. *Course includes diversity content*.

POLS 315. The Presidency (3).
General education social and behavioral sciences course. Focuses on the evolution of the presidential office, the recruitment of presidents, and the nature of presidential power.

POLS 315H. The Presidency Honors (3).
General education social and behavioral sciences course. Focuses on the evolution of the presidential office, the recruitment of presidents, and the nature of presidential power.

POLS 316. Legislative Politics (3).
General education social and behavioral sciences course. Focuses on the U.S. Congress, state legislatures and the politics of legislatures in general.

POLS 317. Urban Politics (3).
Analyzes politics in urban areas, including the nature and distribution of community power, influence and leadership, the nature of community conflict, the formation of policy, urban problems, and political solutions and trends in urban politics.

POLS 319. State Government (3).
General education social and behavioral sciences course. Examines the role of the states in the federal system and compares state politics and their political institutions.

POLS 320. Developing World (3).
General education social and behavioral sciences course. Examines the politics and processes of development and change in developing nations in Latin America, Africa, Asia and the Middle East, and the implications for developed nations, including the United States. Attempts to provide students with the theoretical tools and concepts to evaluate politics in these societies. Looks at the theories of political development and modernization, the political institutions, the relationships between the state and society, and the social forces that influence politics and economics in these states. Examines the regime types that exist in the different regions, emphasizing the recent transitions from authoritarianism to democracy. Deals with current challenges for developing nations in the economic and social realm. *Course includes diversity content*.

POLS 321. Introduction to Public Administration (3).
A general survey of the scope and nature of public administration, policy and administration, administrative regulations and adjudication, organization and management, budgeting and fiscal management, public personnel administration, political, judicial and other controls over the administration.

POLS 325. Women in the Political System (3).
Cross-listed as WOMS 325. Examines the political process of policy making using policies of current interest concerning women. Explores the association of societal gender role expectations with existing and proposed public policies that pertain to women's lives. *Course includes diversity content*. Prerequisite(s): 6 credit hours of social sciences or instructor's consent.

POLS 336. International Organizations (3).
General education social and behavioral sciences course. Focuses on the role of international organizations in the international system. Emphasizes the United Nations. Also covers some regional organizations. Either POLS 220 or 336, but not both, may be accepted toward a major in history.

POLS 337. Conflict Analysis (3).
General education social and behavioral sciences course. Explores the causes of war on three different levels of analysis: international, domestic and individual. Examines historical conflicts as well as more recent wars, and the diplomatic efforts that have been made to achieve lasting peace settlements.

POLS 337H. Conflict Analysis Honors (3).
General education social and behavioral sciences course. Explores the causes of war on three different levels of analysis: international, domestic and individual. Examines historical conflicts as well as more recent wars, and the diplomatic efforts that have been made to achieve lasting peace settlements.

POLS 340. Global Challenges (3).
Seminar-style course in which students actively discuss the scope of, and potential solutions to, many global problems. Topics include: proliferation of weapons of mass destruction, prevention of terrorism, protection of human rights, promotion of development, protection of the environment, alleviation of poverty, and promotion of free trade/ globalization. *Course includes diversity content*.

POLS 352. Law and Political Power (3).
General education social and behavioral sciences course. Focuses on the growth of government power in the United States, with an emphasis on the decisions of the Supreme Court and other interpretations of the Constitution. Subjects examined may include economic regulation, federalism and states' rights, separation of powers, and war powers.

POLS 352H. Law and Political Power Honors (3).
General education social and behavioral sciences course. Focuses on the growth of government power in the United States, with an emphasis on the decisions of the Supreme Court and other interpretations of the Constitution. Subjects examined may include economic regulation, federalism and states' rights, separation of powers, and war powers.

POLS 353. Model United Nations II (2-4).
A workshop to prepare students to participate effectively in various model United Nations especially the Midwest Model U.N. in St. Louis.

POLS 356. Civil Liberties (3).
General education social and behavioral sciences course. Focuses on the rights individuals and groups claim against the government of the United States, with emphasis on decisions of the Supreme Court. Areas of law covered include freedom of speech, freedom of religion, rights of the accused, privacy and abortion rights, and equal rights. *Course includes diversity content*.

POLS 356H. Civil Liberties Honors (3).
General education social and behavioral sciences course. Focuses on the rights individuals and groups claim against the government of the United States, with emphasis on decisions of the Supreme Court. Areas of law covered include freedom of speech, freedom of religion, rights of the accused, privacy and abortion rights, and equal rights. *Course includes diversity content*.

POLS 357. Supreme Court (3).
Focuses on the U.S. Supreme Court as a political institution. Readings and class discussion examine judicial selection, judicial behavior, Supreme Court doctrine, and connections between the court and

American politics broadly conceived. Readings include works of political science and judicial opinions. Students participate in simulated Supreme Court decisions.

POLS 357H. Supreme Court Honors (3).
Focuses on the U.S. Supreme Court as a political institution. Readings and class discussion examine judicial selection, judicial behavior, Supreme Court doctrine, and connections between the court and American politics broadly conceived. Readings include works of political science and judicial opinions. Students participate in simulated Supreme Court decisions.

POLS 360. Human Rights (3).
Considers the concept of human rights and the Universal Declaration of Human Rights. Also considers Western and non-Western conceptions of human rights and the problem of cultural relativism. Examples of topics discussed are women in a patriarchal world, the treatment of minorities, genocide and international legal instruments to protect human rights. Videos on different topics are viewed, including on the leaders of the countries where violations of human rights have been openly perpetrated. *Course includes diversity content.*

POLS 365. Political Data Analysis (3).
Introduces students to the use of different types of quantitative data often used by political scientists. Provides the foundation for students to effectively employ a variety of research sources, organize information, conceptualize problems, interpret and analyze data, turn data into usable information, perform basic quantitative analysis, use summary statistics, design basic research and test theories and hypotheses. A hands-on course taught in a computer lab, where students learn where to find data, how to differentiate between aggregate and survey data, raw and secondary data, and the basics of SPSS software. Required for political science majors and a prerequisite for POLS 600.

POLS 370. European Politics (3).
An in-depth study of the politics of Western and Eastern European countries. Europe's special relationship with democracy and democratization will be examined. The European Union and the goals of European integration receive special attention as well as the impact of globalization on the European democracies.

POLS 375. Latin America International Relations (3).
Reviews historical and current issues relating to the international relations of Latin America and the Caribbean. Examines the relations among Latin-American countries, as well as the relations of Latin-American states with other regions of the world, in particular the United States, the European Union and Canada. Looks at the position of Latin-American and Caribbean states in the major sub-regional, regional and hemispheric organizations. Discusses current political issues such as democratization, human rights, security, transnational crime and migration, as well as those related to economic issues (trade agreements, international investment and globalization).

POLS 380. Parties and Elections (3).
General education social and behavioral sciences course. Examines electoral contests at all levels, national, state and local, with an emphasis on the practical aspects of competitive campaigns. Offered during the fall semester of election years, the course features candidates, campaign strategists, pollsters, fund raisers, and political advertising and media experts. Students have the choice of working on a local campaign and writing a report on it, or researching and writing on a competitive gubernatorial or U.S. Senate race.

POLS 380H. Parties and Elections Honors (3).
General education social and behavioral sciences course. Examines electoral contests at all levels, national, state and local, with an emphasis on the practical aspects of competitive campaigns. Offered during the fall semester of election years, the course features candidates, campaign strategists, pollsters, fund raisers, and political advertising and media experts. Students have the choice of working on a local campaign and writing a report on it, or researching and writing on a competitive gubernatorial or U.S. Senate race.

POLS 385. Democracy and Authoritarianism (3).
General education social and behavioral sciences course. The countries of the world can be divided into democratic and authoritarian regimes, but in between those extremes there are many shades. This course discusses the features that define a democracy and distinguish it from a hybrid or authoritarian regime. It evaluates the theories of democracy and authoritarianism and also looks at quantitative indicators and public opinion data. In addition it discusses the role that different domestic actors and international factors can play in the process of democratization in any given country. Other topics include: the preconditions for democracy, the different waves of democratization that have occurred in the world, the modes of transition from authoritarianism to democracy, and the backsliding or total breakdown from democracy to authoritarianism. *Course includes diversity content.*

POLS 390. Special Topics in Political Science (3).
General education social and behavioral sciences course. Analyzes selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit.

POLS 390C. Developing World (3).
General education social and behavioral sciences course. Examines the politics and processes of development and change in developing countries in Latin America, Africa, Asia and the Middle East, and the implications for developed nations, including the United States. Looks at the theories of political development and modernization, the political institutions, the relationships between the state and society, and the social forces that influence politics and economic development in these states. Examines the different political regime types that exist in the developing world and the political challenges that those countries face. Emphasizes current issues, but also looks at the historical roots of the problems that exist in the developing world nowadays.

POLS 390F. Lobbyists and Interest Groups (3).
General education social and behavioral sciences course. Examines how interest groups and nonprofit organizations engage in fundraising, electioneering, and lobbying of government officials, focusing on specific case studies.

POLS 390G. Presidential Nominations (3).
General education social and behavioral sciences course. Focuses on how political parties in the United States pick presidential candidates.

POLS 391. Special Topics in Political Science (3).
General education social and behavioral sciences course. Analyzes selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit.

POLS 391L. Democracy and Authoritarianism (3).
General education social and behavioral sciences course. The countries of the world can be divided into democratic and authoritarian regimes, but in between those extremes there are many shades. Course discusses the features that define a democracy and distinguish it from a hybrid or authoritarian regime. It evaluates the theories of democracy and authoritarianism and also looks at quantitative indicators and public opinion data. In addition, it discusses the role that different domestic actors and international factors can play in the process of democratization in any given country. Other topics include: the preconditions for democracy, the different waves of democratization that have occurred in the world, the modes of transition

from authoritarianism to democracy, and the possible distortions to or total breakdown of democracy.

POLS 391M. Legislative Leadership and Politics (3).
General education social and behavioral sciences course. Examines the practice of leadership in legislative institutions, particularly how individuals attempt to create positive change in institutions like Congress and state legislatures. Taught by Kansas Rep. Brandon Whipple, this course is designed for all Wichita State students. Of particular appeal to those interested in careers in public service and politics.

POLS 391MH. Legislative Leadership and Politics Honors (3).
General education social and behavioral sciences course. Examines the practice of leadership in legislative institutions, particularly how individuals attempt to create positive change in institutions like Congress and state legislatures. Taught by Kansas Rep. Brandon Whipple, this course is designed for all Wichita State students. Of particular appeal to those interested in careers in public service and politics.

POLS 391P. Public Opinion and Political Psychology (3).
General education social and behavioral sciences course. The basic premise of democratic government is that the government should be responsive to the wishes or opinions of the people. But how does government know what these opinions are? How are these opinions formed? Can these opinions be changed? And is government really responsive to the public's wishes? Investigate these and several more questions throughout the semester to gain a more complete understanding of the scholarly research on public opinion and political psychology in the U.S. political system.

POLS 391R. Space Politics (3).
General education social and behavioral sciences course. Introduces students to issues surrounding the policies and regulation of spaceflight activities. Topics include: rationales for space exploration (both historical and contemporary); the Outer Space Treaty; space debris mitigation policies; planetary protection policies; commercial spaceflight and the regulation of space mining; and the politics of space settlement.

POLS 395. U.S. Foreign Policy (3).
General education social and behavioral sciences course. Explores the dynamic decision-making process in the development of U.S. foreign policy. Examines the variety of actors involved, including the military, the State Department, the President and others. Bilateral as well as global policy issues are examined.

POLS 398. Directed Readings (1-3).
For exceptional students to meet their needs and deficiencies. Repeatable for credit. Prerequisite(s): senior standing and departmental consent.

POLS 399. Travel Seminar (1-4).
An interdisciplinary travel seminar that allows students to gain credit for the study of culture, art, literature, architecture, politics, society, science and/or economics while visiting historic places of interest. Students observe the political systems of the places they visit, analyze their dynamics, and demonstrate their understanding of those systems through a project which has the approval of the department's adviser.

POLS 481. Cooperative Education (1-3).
Provides practical experience to complement the student's more formal political science curriculum. Student programs must be approved by the department.

POLS 481A. Cooperative Education (1-3).
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Repeatable for credit. Prerequisite(s): junior standing and approval by the appropriate faculty sponsor.

POLS 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

POLS 490. Internship in Government/Politics (1-6).
(Washington, 6 credit hours; Topeka, 3 credit hours). Credit for an approved work experience in a public, quasi-public or governmental agency, including an academic component. Washington interns participate in the program co-sponsored with the University of Kansas for which an on-site coordinator is provided. Kansas legislative interns spend two days per week in Topeka while the legislature is in session. Both internships offered each spring semester. Prerequisite(s): sophomore or upper-class standing, POLS 121 or equivalent, and instructor's consent.

POLS 490A. Internship Seminar (3).
DC, Topeka and local Internships must be arranged with and approved by Department Chair. You must acquire an electronic signature from the department’s Administrative Assistant (418 LH) in order to enroll.

POLS 570. International Political Economy (3).
Cross-listed as ECON 570. Examines policy decisions regarding exchanges of trade, money and labor that span national boundaries. Studies the interaction of politics and economics at the international level, as well as the modern history of the global economy. Economics often studies the material benefits and costs of different policies. Political science asks why these policies exist in the first place with a focus on who gets the benefits, who pays the costs, and how decisions about allocating benefits and costs are made. *Course includes diversity content*.

POLS 600. Senior Thesis (3).
Capstone course for political science majors designed to pull together many of the themes and concepts covered in introductory and upper-division courses. The main component is writing a senior thesis in which students conduct in-depth research about a topic of their interest. The topic should be related to one of the main areas of political science: American politics, international relations or comparative politics. In exceptional cases, students may write a paper related to political theory. Course professor provides guidelines and a schedule of activities, supervises and grades the overall research process; however each student works closely with a faculty member in order to develop his or her research projects. For undergraduate students only.

POLS 710. Public Sector Organizational Theory and Behavior (3).
Cross-listed as PADM 710. Reviews the scope of the field of public administration including a survey of key concepts and schools of thought underlying the field. Identifies issues shaping the future development of the field.

POLS 725. Public Management of Human Resources (3).
Cross-listed as PADM 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation and pay promotion policies. Emphasizes the laws governing public personnel management and the unique merit, equal employment

opportunity, productivity, unionization and collective bargaining problems found in the public sector.

PSY - Psychology

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

PSY 111. General Psychology (3).
General education social and behavioral sciences course. Introduces the general principles and areas of psychology. Includes learning, perceiving, thinking, behavioral development, intelligence, personality and abnormalities of behavior. Course is a prerequisite for advanced and specialized courses in psychology.

PSY 111H. General Psychology Honors (3).
General education social and behavioral sciences course. Introduces the general principles and areas of psychology. Includes learning, perceiving, thinking, behavioral development, intelligence, personality and abnormalities of behavior. Course is a prerequisite for advanced and specialized courses in psychology.

PSY 150. Workshop in Psychology (1-4).
Workshops in a variety of psychology topics. Different topics are indicated by a letter following the course number.

PSY 301. Psychological Statistics (3).
Introduces basic quantitative techniques for the description and measurement of behavior, as well as tests for making decisions regarding the compatibility of data to scientific hypotheses. Covers probability models, t, chi square and F. Prerequisite(s): PSY 111.

PSY 311. Research Methods in Psychology (4).
3 Classroom hours; 3 Lab hours. Covers the philosophy of research methods, experimental designs, appropriate data analysis techniques, and historical trends and developments in experimental psychology. The laboratory exposes students to representative experimental lab techniques in the major subdivisions of psychology. Actively involves all students in research project(s). Prerequisite(s): PSY 301.

PSY 320. Biological Psychology (3).
General education social and behavioral sciences course. A review of the biological foundations of cognition and behavior. Includes evolutionary influences on brain and behavior, the role of hormones in cognition and behavior, neurochemical correlates of cognition and behavior, and recent advances in cognitive neuroscience. Prerequisite(s): PSY 111.

PSY 321. Psychology of Learning (3).
General education social and behavioral sciences course. Explores basic principles of how organisms learn and highlights key concepts such as reinforcement and punishment, generalization of behavior across settings, and extinction of specific behaviors. Important research, theoretical issues and current trends are discussed. Prerequisite(s): PSY 111.

PSY 322. Cognitive Psychology (3).
General education social and behavioral sciences course. Presents a coherent picture of human memory and cognition within the framework of the information-processing approach and as a function of neural activity. This approach views the individual as an active, constructive planner in remembering and organizing new and prior learned knowledge. The study of attention, memory, thought, decision-making and problem-solving processes are included. Prerequisite(s): PSY 111.

PSY 323. Social Psychology (3).
General education social and behavioral sciences course. Studies perception of self, others and groups. Includes attitude formation and change, group processes like conformity, compliance and conflict, and interpersonal processes such as attraction and the formation of close relationships. Also includes the application of social psychological principles to the study of prosocial and aggressive behavior. Prerequisite(s): PSY 111.

PSY 323H. Social Psychology Honors (3).
General education social and behavioral sciences course. Studies perception of self, others and groups. Includes attitude formation and change, group processes like conformity, compliance and conflict, and interpersonal processes such as attraction and the formation of close relationships. Also includes the application of social psychological principles to the study of prosocial and aggressive behavior. Prerequisite(s): PSY 111.

PSY 324. Psychology of Personality (3).
General education social and behavioral sciences course. Examines psychoanalytic, behavioral, trait and other contemporary theories of human personality. Gives consideration to major factors influencing personality, results of research in the area, ways of assessing personality, and some of the methods of treating personality disorders. Presents and discusses case studies. Prerequisite(s): PSY 111.

PSY 324H. Psychology of Personality Honors (3).
General education social and behavioral sciences course. Examines psychoanalytic, behavioral, trait and other contemporary theories of human personality. Gives consideration to major factors influencing personality, results of research in the area, ways of assessing personality, and some of the methods of treating personality disorders. Presents and discusses case studies. Prerequisite(s): PSY 111.

PSY 325. Developmental Psychology (3).
General education social and behavioral sciences course. Descriptive survey of human development from conception to death emphasizing the interplay of environmental, genetic and cultural determinants of development. Selected topics emphasized and elaborated by demonstrations and class projects. Prerequisite(s): PSY 111.

PSY 327. Systems and Theories in Psychology (3).
Includes behaviorism, Gestalt psychology and structuralism. Attempts to develop the logical relations of these theories to each other as well as to common historical themes and current issues. Prerequisite(s): PSY 111.

PSY 328. Psychological Testing and Measurement (3).
A critical analysis of the psychological foundations of tests and the interpretation of test findings. Surveys several tests representing the areas of intelligence, personality, normal and abnormal psychology, interests, special abilities and aptitudes to illustrate general principles of testing. Prerequisite(s): PSY 301.

PSY 403. Introduction to Individual Counseling (3).
Surveys contemporary theories and techniques of individual counseling. Compares various theoretical approaches and includes practical applications of each theory studied. Introduces professional and ethical issues involved in individual counseling. Emphasizes the therapeutic relationship, effective listening, issues surrounding defense mechanisms, and crisis intervention. Prerequisite(s): PSY 111.

PSY 404. Psychology of Aging (3).
General education social and behavioral sciences course. Cross-listed as AGE 404. Examines the issues surrounding the adult aging process. Includes personality and intellectual change, mental health of the elderly, and the psychological issues of extending human life. Emphasizes the strengths of the elderly and preventing the psychological problems of the elderly. Prerequisite(s): PSY 111.

PSY 405. Human Factors Psychology (3).
The study of how people respond to the demands of complex machines and the varied environments of workplace, home and other settings. Introduces the tools and methods of machine, task and environment

design to achieve the matching of human capabilities and the demands of machines and environments so as to enhance human performance and well being. Prerequisite(s): PSY 111.

PSY 406. Introduction to Community Psychology (3).
General education social and behavioral sciences course. Reviews the historical, societal, theoretical and empirical bases of community psychology which focuses on interdisciplinary approaches to improving lives in community settings. Presents contemporary models of community psychology, including the ecological and social action perspectives. Includes social support, self-help, social policy, prevention, community development, and program development and evaluation. *Course includes diversity content*. Prerequisite(s): PSY 111.

PSY 409. Psychology of Perception (3).
General education social and behavioral sciences course. Explores current research and theory in perception and sensation. Emphasizes how organisms come to perceive and understand their environments with regard to perception of space, form, objects and events. Prerequisite(s): PSY 111.

PSY 410. Substance Use & Abuse (3).
General education social and behavioral sciences course. Studies the individual, social and cultural aspects of alcohol and other legal and illegal drug use and abuse. Investigates both nonproblem and problem substance use, treatment of alcoholism and other drug addictions, prevention of abuse, addiction and abuse-related problems, and the needs of special populations. Prerequisite(s): PSY 111.

PSY 413. Leadership in Self and Society (3).
General education social and behavioral sciences course. Cross-listed as HP 408. Examines principles and competencies of adaptive leadership. Uses experiential methods so that the classroom serves as a learning laboratory where students practice leadership. Helps those students who care about making a difference in this world discover how they can become more effective in personal, community and professional settings.

PSY 413H. Leadership in Self and Society Honors (3).
General education social and behavioral sciences course. Cross-listed as HP 408H. Examines principles and competencies of adaptive leadership. Uses experiential methods so that the classroom serves as a learning laboratory where students practice leadership. Helps those students who care about making a difference in this world discover how they can become more effective in personal, community and professional settings.

PSY 414. Child Psychology (3).
General education social and behavioral sciences course. Covers psychological development from conception through infancy and childhood. Includes the development of language, perceptual and cognitive functioning, social-emotional attachment, and socialization. Attention to practical issues of discipline and child rearing. Prerequisite(s): PSY 111.

PSY 416. Psychology and Problems of Society (3).
General education social and behavioral sciences course. A study of the special role of psychological theory, research and principles applied to contemporary social issues and problems such as environmental concerns, problems in the schools, substance abuse, nuclear proliferation, racism/sexism, mental illness, child abuse, juvenile delinquency, aggression, behavioral control, aging, technology, etc. *Course includes diversity content*. Prerequisite(s): PSY 111.

PSY 428. Field Work In Psychology (1-3).
Special projects and practicums under supervision in public and/or private agency settings. Psychological study, observation, service and/or research may be undertaken with prior approval by the department. Repeatable for a total of 6 credit hours, but only 3 hours may be earned per semester. Prerequisite(s): PSY 111 and departmental consent.

PSY 470. Abnormal Child and Adolescent Psychology (3).
Introduces the wide-ranging theories of developmental psychopathology in adults, children and adolescents. Topics include the major DSM-5 diagnostic categories as well as research and treatment. Focuses heavily on major forms of atypical development in childhood and adolescence. These include disorders of behavior (e.g., attention-deficit hyperactivity disorder, oppositional disorder), disorders of emotion (e.g., anxiety and depression), developmental and learning problems (e.g., autism, communication and learning disorders), and problems related to physical and mental health (e.g. health-related disorders, eating disorders). Students learn about the defining characteristics, associated features, possible causes, theoretical formulations, research evidence, and current approaches to intervention and prevention for a wide range of child and adolescent disorders. Students trace the possible development course of each disorder covered and show how biological, psychological and socio-cultural factors interact with the child's (and adult's) environment to determine its expression.

PSY 481. Cooperative Education (1-3).
Provides practical experience, under academic supervision, that complements the student's academic program. Consultation with, and approval by, an appropriate faculty sponsor are necessary.

PSY 508. Psychology Tutorial (1-3).
Selected topics in psychology. Repeatable for a total of 6 credit hours. Instructor's consent may be required. Check Schedule of Courses. Prerequisite(s): PSY 111.

PSY 508AB. Psychology of Video Games (3).
An introduction to psychological research and how it pertains to video games. This course will cover game design from the perspective of psychological research, both in academic fields such as perception and attention and also user experience research found in the game development industry. Prerequisite(s): PSY 111.

PSY 511. Introduction to School Psychology (3).
Cross-listed as CLES 511. Introduces students to a career in school psychology. School psychologists work in schools to solve students' academic and behavioral problems through consultation, assessment and intervention. Course examines the roles and functions of school psychologists, the methods used to address students' psychoeducational needs, and the school and community systems within which they operate. *Course includes diversity content*.

PSY 512. Exploring Concepts and Careers in Educational Psychology (3).
Cross-listed as CLES 512. Explores the field of educational psychology and its application in different areas, such as teaching, learning, coaching, training, assessment and research. Introduces students to the wide variety of careers in educational psychology. Also introduces students to the practical application of educational psychology by considering topics such as cognition (problem solving, memory, decision making), behavioral learning principles, motivation, human development, curriculum development, assessment, basic research design, and the role of research. *Course includes diversity content*.

PSY 534. Psychology of Women (3).
General education social and behavioral sciences course. Cross-listed as WOMS 534. Psychological assumptions, research and theories of the roles, behavior and potential of women in contemporary society. *Course includes diversity content*. Prerequisite(s): PSY 111.

PSY 544. Abnormal Psychology (3).
An introductory survey of abnormalities of behavior. Examines definitions, causes, types and classifications of abnormal behavior. Covers various theories of abnormality, research evidence and various methods of diagnosis and treatment. Presents hypotheses regarding prevention of abnormality. Prerequisite(s): PSY 324.

PSY 556. Introduction to Clinical Psychology (3).
A survey of current ethical, conceptual and research issues involved in the assessment and treatment of psychopathology. Reviews contemporary psychotherapies emphasizing the relative efficacy of each and the therapeutic mechanisms through which they initiate behavioral change. Prerequisite(s): PSY 324.

PSY 559. Successful Aging: Theory, Research and Practice (3).
Cross-listed as AGE 559, SCWK 559, and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts and Sciences, and Engineering. *Course includes diversity content*. Prerequisite(s): AGE 100, or PSY 111, or SCWK 201, or SOC 111.

PSY 559H. Successful Aging: Theory, Research and Practice Honors (3).
Cross-listed as AGE 559, SCWK 559, and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts and Sciences, and Engineering. *Course includes diversity content*. Prerequisite: AGE 100, or PSY 111, or SCWK 201, or SOC 111.

PSY 568. Computer Applications to the Behavioral Sciences (3).
Introduction to state of the art programming environments designed for psychological research. Students learn how to perform basic statistical analyses, program visual and auditory experiments, and analyze data. Applications include such areas as mathematical modeling and creating experiments. Previous programming experience is encouraged, but not required. Repeatable for credit with a change of content. Prerequisite(s): 9 hours in the social sciences.

PSY 608. Special Investigation (1-3).
Upon consultation with instructor, advanced students with adequate preparation may undertake original research or directed readings in psychological problems. Repeatable for a total of 6 credit hours. Requires consultation with, and approval by, appropriate adviser prior to registration. Prerequisite(s): 9 hours in psychology and instructor's consent.

PSY 727. Selected Topics in Human Factors Psychology (3).
Introduction to one of several special topics in the area of human factors. Students review relevant literature and learn theory and application of specific methodologies in a variety of work environments. Repeatable for credit. Prerequisite(s): instructor's consent.

PSY 750. Psychology Workshop (1-3).
Specialized instruction, using various formats in selected topics and areas of psychology.

RE - Real Estate

Department of Finance, Real Estate & Decision Sciences

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

RE 310. Principles of Real Estate (3).
A broad and fun introduction to real estate markets and decision making for students of all backgrounds and career goals. Emphasizes how individuals and businesses interact with real estate on a daily basis. Topics cover legal and physical characteristics of real estate, zoning and other restrictions on land use, urban development and growth patterns, the real estate sales process, mortgage finance, appraisal, business location decisions, and the basics of real estate investment. (Note: non-Barton School students do not need special permission to enroll in this course.) Prerequisite(s): junior standing.

RE 390. Special Group Studies in Real Estate (1-3).
Repeatable for credit with departmental consent. Prerequisite(s): junior standing, advanced standing.

RE 420. Real Estate Property Management (3).
Covers all aspects of both multi-family and commercial property management. Topics include commercial leases, multi-family leases, cash flow management, tenant relations, personnel issues, Fair Housing, ADA laws, the management contract, take-over procedures, insurance, management trends, daily operations and more. Class format includes case studies, guest speakers and class discussions over property management issues. (Note: non-Barton School students do not need special permission to enroll in this course.) Prior enrollment in RE 310 recommended for students with a declared emphasis in real estate. Prerequisite(s): junior standing.

RE 438. Real Estate Law (3).
Provides in-depth coverage of the laws and regulations affecting real estate ownership and use. Particular attention is paid to Kansas statutes and case law. Topics covered include ownership interests, property conveyance, mortgages, title assurance, landlord-tenant relationships, and public and private land-use controls. (Note: non-Barton School students do not need special permission to enroll in this course.) RE 310 recommended for students with a declared emphasis in real estate. Prerequisite(s): junior standing.

RE 481. Cooperative Education (1-3).
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Prerequisite(s): junior standing, advanced standing, 2.250 GPA.

RE 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

RE 491. Independent Study/Project (1-3).
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Prerequisite(s): 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

RE 611. Real Estate Finance (3).
Cross-listed as FIN 611. Covers the institutions and instruments used to finance residential and commercial properties, and provides essential knowledge and skills for students who are interested in careers as

commercial bankers, mortgage bankers or analysts or investors in mortgage-related securities. Topics include fixed-rate and alternative mortgage instruments, financial analysis and decision making, residential mortgage underwriting, mortgage market regulations, primary and secondary mortgage market structure and institutions, and mortgage-backed securities. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

RE 614. Real Estate Appraisal (3).
Provides in-depth coverage of the methods used to estimate the value of residential and commercial properties. Students learn about the sales-comparison, cost and income-capitalization approaches for appraising real estate. (Note: non Barton School students do not need special permission to enroll in this course.) Prerequisite(s): junior standing. RE 310 recommended for students with a declared emphasis in real estate.

RE 618. Real Estate Investment Analysis (3).
Cross-listed as FIN 618. Covers the tools and techniques used to evaluate the financial profitability of real estate investments, as well as real estate decisions affecting businesses. Students learn about pro forma and discounted cash flow analysis of real estate, the effects of leverage on real estate investments, federal tax treatment of real estate investments, and disposition and renovation decisions. In addition, topics such as lease-versus-own analysis, sale-leasebacks and other corporate real estate issues are discussed. Prior enrollment in RE 310 recommended for students with a declared emphasis in real estate. Prerequisite(s): FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

RE 619. Urban Land Development (3).
A hands-on course focusing on the challenges and opportunities associated with real estate development projects. Class time is devoted to analyses of actual development projects, with numerous guest lecturers and field trips. Topics covered include market and feasibility analysis, site selection, development financing, ownership structures and marketing strategies. (Note: non Barton School students do not need special permission to enroll in this course.) Prerequisite(s): junior standing and RE 310, or admission into either the Master of Public Administration or Master of Business Administration program; students with a declared emphasis in real estate are strongly recommended to take as many other real estate classes as possible before taking RE 619.

RE 690. Seminar in Selected Topics (1-5).
Repeatable for credit with departmental consent. Prerequisite(s): junior standing, advanced standing.

RE 709. Urban Economics (3).
Cross-listed as ECON 709 and PADM 709. Surveys the economic structure and problems of urban areas on both the microeconomic and macroeconomic levels. Stresses the application of regional economic analysis in the study of urban areas as economic regions. Prerequisite(s): ECON 201, 202, junior standing.

RE 750. Workshop in Real Estate (1-4).
Prerequisite(s): junior standing.

REL - Religion

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

REL 110. Old Testament (3).
General education humanities course. Introduction to the books of the Old Testament, including the histories of patriarchs and matriarchs, descriptions of Israelite religion and history, depictions of gender relations, and examples of wisdom literature.

REL 115. New Testament (3).
General education humanities course. Introduces students to the world of the New Testament, the second section of the Christian Bible and basis for Christian belief and practice. Examines the historical context and contemporary applications of the New Testament paying attention to how it fits into or challenges its social milieu, with specific focus on gender, authority and use of violence.

REL 311A. Topic: Moses and David (3).
Focuses on the lives of Moses and David, the two greatest leaders of the Old Testament. Examines both the biblical stories of Moses and David and the ways in which the two are portrayed and discussed in post-biblical Judaism, Christianity, and Islam. Students are also introduced to the fascinating array of novels, poems, works of art, films and political writings which portray and assess their personalities and careers.

REL 311G. Archaeology and the Bible (3).
Explores the intersection of the biblical text and the archaeology of "biblical lands." Includes a consideration of the history of archaeological exploration in the areas and time periods associated with the Bible, and how archaeology has impacted the study of the Bible. Students learn about the social and religious aspects of the cultures and people of biblical time periods. Periods covered include: the Kingdoms of Israel and Judah, Persian period Yehud, Judea under Hellenistic and Roman rule, the empires of the ancient Near East. Topics include: social organization and settlement patterns, urban and rural life, trade and commerce, gender roles in ancient societies, religious and cultic life, culture, arts and literature.

REL 321. New Testament Topics (3).
An in-depth study of a major facet of the religion of the New Testament such as the synoptic traditions, Johannine theology, Pauline theology, apocalyptic and canonization.

REL 321C. Jesus: Traditions and Images (3).
Examines traditions about Jesus in the New Testament and other early Christian literature, in particular the Gospels. The course charts debates that saw the development of doctrines about Christ and controversies in emerging Christianity over the person of Jesus. The course also explores depictions of Jesus in visual art, poetry and music in various religious traditions, both in the past and in contemporary cultures.

REL 327. Magic, Witchcraft and Religion (3).
General education humanities course. Cross-listed as ANTH 327. Examines various concepts concerning the realm of the supernatural as held by various peoples around the world. Relates such religious beliefs and the resultant practices to the larger patterns of cultural beliefs and behaviors. *Course includes diversity content.*

REL 370. Women in World Religions (3).
Cross-listed as WOMS 370. Examines past and present roles and statuses of women in various religious traditions of the world, e.g., Judaism, Christianity, Islam, Hinduism, Buddhism, Confucianism and Taoism. Examines the portrayal of women's roles in various religious and philosophical texts, and the redefinition of women's roles in the modern age within the contexts of these belief systems. *Course includes diversity content.*

REL 380. Special Studies (3).
A concentrated intermediate study of a particular component of religious studies. Repeatable for credit.

REL 380U. Biblical Cities (0.5).
Combines archaeological discovery with Biblical texts to visit some of the key cities and landscapes of the Bible.

REL 384. Paul (3).
Cross-listed as WOMS 384. Introduces students to the life, world and writings of the apostle Paul. His journey through the ancient Mediterranean world speaking to women and men about his understanding of the gospel is appreciated and used to examine the development of the early church. Highlights issues in Paul's letters such as women and gender, the socio-historical situation of the early church, and the question of authorship. *Course includes diversity content*.

REL 420. Women and the Bible (3).
General education humanities course. Cross-listed as WOMS 420. Examines the roles and statuses of women in biblical narrative, poetry and law, as well as the position of women in various Near Eastern societies. Attention may be given to the ways in which later theologians, novelists and artists have refashioned and re-evaluated the biblical portrayal of women in their works. *Course includes diversity content*.

REL 480. Special Studies (1-3).
A concentrated study of a religious issue or text announced by the instructor when course is scheduled. Repeatable for credit.

REL 490. Independent Work (1-3).
Designed for the student capable of doing advanced independent work in a specialized area of the study of religion that is not formally offered by the department. Repeatable for credit. Prerequisite(s): departmental consent.

REL 542. Religion in America (3).
Cross-listed as HIST 542. Surveys various religious traditions in American history from Colonial times to the present. Discusses how religions, groups, beliefs and issues have changed over time and how they interact with each other. Includes the different branches of Christianity and Judaism, the study of awakenings and revivals, the stories of prominent religious thinkers and leaders, immigrant religious traditions, the tensions between liberal and traditional religious forms, the prophetic and apocalyptic traditions in American, and the impact of Native American, Asian and African beliefs and practices on the religious landscape.

REL 576. The Reformations: From Heresies to Diversity (3).
General education humanities course. Cross-listed as HIST 576. Studies the religious changes in the 16th century in political, social and intellectual contexts. Includes the Medieval and Renaissance background of the reformations and the major doctrinal issues that separated Catholic and Protestant groups. Explores how major figures and movements developed their theologies and political strategies from the 15th century through the Catholic Reformation and the Thirty Years' War. Additionally, explores what these reformations mean for us in the 21st century world of religious pluralism.

REL 780. Special Topics in Religion (1-3).
Intensive study of topic(s) in religion. Discussion, reports and research projects. Repeatable for credit with departmental consent. Prerequisite(s): instructor's consent.

REL 790. Independent Study (1-3).
For the student who is capable of doing graduate work in a specialized area of the study of religion not formally offered by the department. Repeatable for credit. Prerequisite(s): departmental consent.

RUSS - Russian

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

RUSS 111. Elementary Russian (5).
A presentation of the sounds and structure of Russian to develop the four basic skills of understanding, speaking, reading and writing.

RUSS 112. Elementary Russian (5).
A continuation of RUSS 111 to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite(s): RUSS 111 or equivalent.

RUSS 210. Intermediate Russian (5).
General education humanities course. Reading, grammar review and audiovisual presentations in Russian to enhance listening comprehension, speaking, reading and basic writing skills. Prerequisite(s): RUSS 112 or equivalent.

RUSS 224. Intermediate Russian (3).
General education humanities course. Continuation of Russian 210; further enhancement of listening comprehension and speaking, reading and writing skills. Prerequisite(s): RUSS 210 or instructor's consent.

RUSS 300. Intermediate Russian Readings (3).
General education humanities course. Intensive reading and analysis of Russian literary works of all periods. Prerequisite(s): RUSS 224 or instructor's consent.

RUSS 325. Intermediate Russian Conversation and Composition (2).
Continued development of speaking and listening skills, focusing on the vocabulary of everyday Russian life and idiomatic usage. Prerequisite(s): RUSS 224 or 225, or instructor's consent.

SCWK - Social Work

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

SCWK 150. Workshop (1-5).
Intensive study of topics related to social work. Differing topics are denoted by a letter following the course number (i.e., 150C, 150P, etc.).

SCWK 150D. Sexual Assault Issues (1).
Cross-listed as WOMS 150O. Introductory course explores cultural myths and stereotypes about rape, law enforcement and legal system issues pertaining to sexual assault and abuse, community resources, providing help, and other related issues. These topics are explored through course readings, lecture, class discussion, films and guest discussions. *Course includes diversity content*.

SCWK 150F. Women and Compassion Fatigue (1).
Cross-listed as WOMS 150A. High turnover rates in fields associated with caregiving are often associated with burnout or compassion fatigue. Course examines factors that contribute to compassion fatigue, how to recognize it, the ways in which it may interfere with effectiveness, and strategies to combat it. *Course includes diversity content*.

SCWK 150N. Introduction to Domestic Violence (1).
Cross-listed as WOMS 150N. Introductory course examines historical, personal, social and legal perspectives of domestic violence and intimate partner violence. Explores cultural images and messages related to intimate relationships in the media, and analyzes how those messages influence beliefs about relationships. Looks at the consequences of domestic violence, how the community responds to it, and what resources exist to provide assistance. *Course includes diversity content*.

SCWK 201. Introduction to Social Work and Social Welfare (3).
General education social and behavioral sciences course. Introduces and examines social problems, policies and services in social welfare and social work. Includes history of social welfare, an introduction to the helping process, and current trends in social services and programs. Concepts of diversity are integrated throughout to provide awareness of social issues, poverty, government and social welfare history.

SCWK 300. Policy I: Understanding Social Welfare Policy (3).
Surveys a broad spectrum of social welfare programs, policies and controversies with an emphasis on public and private systems which address individual, family and group needs. Explores social welfare historical developments and policy trends which have an impact on service provisions and needs of diverse populations. Examines the relationship of area services to larger social welfare institutions and provides an introduction to social work professional roles, organizations, values and goals.

SCWK 302. Techniques and Skills in Generalist Practice (4).
Introduces the study and practice of interpersonal professional interaction skills within the framework of a social work helping process. Focuses on developing skills in professional observation, communication, interviewing, recording and reporting. Course is didactic as well as interactive and includes an integrated laboratory component focusing on experiential learning. Required for social work majors. Prerequisite(s): SCWK 201.

SCWK 304. Social Diversity and Ethics (3).
General education social and behavioral sciences course. Explores the dynamics and theories of oppression and diversity in society as applied to the helping professions. Applies ethics and values of the social work profession to advancing social justice. *Course includes diversity content.*

SCWK 340. Human Sexuality (3).
Cross-listed as WOMS 340. Provides a forum for information and discussion on topics relating to physical, psycho-social and cultural components of human sexuality. Includes female and male sexual attributes and roles, sexual problems, alternate lifestyles, birth control, values, sexuality and cultural components of sexuality. *Course includes diversity content.*

SCWK 351. Introduction to Social Work Research (3).
Introduction to social work research and evaluation using a human rights and social justice lens. Describes the historical contribution of social work research and evaluation to promoting social work research. Provides a framework for applying human rights and social justice to research and evaluation, and reviews the research and evaluation cycle from problem formulation to sharing and acting upon the findings. Students obtain basic research and evaluation competencies understanding and applying research paradigms, critical thinking and decision-making processes, ethics and values, diverse research methods such as quantitative, qualitative and action research approaches, as well as writing and other advocacy efforts.

SCWK 360. Person in Society: Micro (3).
Provides a beginning theoretical framework within which the integration of prior knowledge can be made regarding the physical, mental and social development of the human being, perspectives on American culture and subcultural variations and their effects on human adaptability in the social environment, and the relationship of those entities to beginning professional social work practice. Prerequisite(s): school approved human diversity course.

SCWK 361. Person in Society: Macro (3).
Explores theories and perspectives which explain human behavior in groups, organizations and communities. Includes application of systems theory to macro and mezzo systems, social interaction theories, group and family dynamics, community structures, and the effects of discriminatory structures and practices on minority groups and communities in our society.

SCWK 385. Lesbian, Gay, Bisexual, Transgender Studies (3).
General education social and behavioral sciences course. Cross-listed as WOMS 385. Focuses on Lesbian, gay, bisexual, transgender people, their history and culture, considering sexualities and genders as identities, social statuses, categories of knowledge, and as lenses to help us frame how we understand our world. Examines a broad range of contemporary gay, lesbian, bisexual, transgender issues in various contexts including mass media, literary, sociological, political, racial, socioeconomic, biomedical and sexual. Students have the opportunity to develop critical thinking skills and practical academic skills vital to university success. Course includes books, articles, films, guest speakers. *Course includes diversity content*.

SCWK 400. Policy II: Connecting Policy and Practice (3).
Provides development of analytical frameworks for understanding the processes of policy formation, factors shaping policy decisions, the content of program designs, and the performances of social welfare policy and service programs. Examines voluntary and proprietary systems in the development of knowledge and skills for the engagement of complex community resources, the promotion of service innovations, and the shaping of decisions in the arenas of public policy. Emphasizes diverse populations in metropolitan environments. Prerequisite(s): POLS 121 or HIST 131 or 132; SCWK 300.

SCWK 401. General Practice With Groups (3).
Introduces practice competencies needed for working with groups. Presents small group theories, interventions and ethics necessary for beginning generalist social work practice. Prerequisite(s): SCWK 302 and admission to the major.

SCWK 402. Practicum I (4).
Placement in community social service agencies for supervised periods of observation and direct service assignments emphasizing performance of basic practice skills and understanding of the social service agency and its role in the community service network. Prerequisite(s): SCWK 302 and admission to the major.

SCWK 403. General Practice With Individuals (3).
Introduces practice competencies needed for working with individuals. Presents assessment, intervention and evaluation for generalist practice. Focuses on processes, skills, techniques and ethics of social work practice with individuals. Prerequisite(s): SCWK 302 and admission to major.

SCWK 404. Practicum II (3-4).
Placement in community social service agencies for supervised direct service assignments emphasizing formulation of appropriate goals. Includes the selection of various social work roles and in-depth development of techniques and skills common to practice in the social service field. Prerequisite(s): SCWK 402 and admission to major.

SCWK 407. Generalist Practice With Children and Families (3).
Introduces practice competencies needed for working with children and families. Special emphasis on risk assessment, identification of environmental factors that contribute to neglect and violence in families, and legal procedures relevant to children and families.

SCWK 411. Social Work Badge Topics (0.5).
Selected topics in practice, policy, research and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Repeatable for credit. Graded Bg/NBg. Prerequisite(s): instructor's or program consent.

SCWK 411BA. Social Work Badge: Professionalism in Practice (0.5).
Introduction to current issues related to professionalism in fields of practice, with particular attention to values and ethics. Writing standards, documentation, and social media presence are also explored through the class, as well as the ethics of technology usage. Graded Bg/NBg.

SCWK 411BB. Social Work Badge: Trauma Informed Care (0.5).
Covers the core principals of trauma informed care (individual, family and community) and reviews the identification of trauma and symptoms of adverse childhood experiences. Addresses secondary trauma exposure and the necessity of clinician self-care. This review reflects the core areas of cultural competency, empowerment and social justice, and provides opportunities for applying theories and critical thinking. Ethics, knowledge of self, and development of practice skills for human service fields (medical, social work, substance abuse, education and criminal justice) are emphasized. At the end of the course students: are aware of theoretical perspectives of trauma informed care and interventions in response to trauma experiences, are able to apply basic assessment skills in the presence of possible trauma reactions, demonstrate initial understanding of the range of responses to trauma, and are familiar with resources available to clinicians and clients when trauma has occurred. Graded Bg/NBg.

SCWK 411BE. Social Work Badge: Biofeedback in Social Work Practice (0.5).
This .5 credit hour course will provide an introduction to biofeedback as a practice technique in human services. The class will overview both the sympathetic and the parasympathetic nervous systems in relation to biofeedback. The course will also provide an overview of ethics and values in social work and biofeedback practice. Finally biofeedback as an evidence based practice will be discussed. Graded Bg/NBg.

SCWK 411BF. Social Work Badge: Creative Processes in Practice (0.5).
Selected topics in practice, policy, research, and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Graded Bg/NBg. Prerequisite(s): instructor's or program's consent.

SCWK 451. Social Work Research (3).
Reviews basic social science research knowledge and extends student awareness of issues which confront the social worker in combining practice and research. Course develops research skills. Social workers need to be consumers of social science research, to apply research findings to the field, and be able to evaluate social work practice. Course includes a combination of lecture, group activities, experiential learning, and conducting a research project from start to finish. Requires using a computer statistical package to assist in the understanding of research findings.

SCWK 470. Generalist Practice with Organizations and Communities (3).
Introduces practice competencies needed for working with organizations and communities. Presents macro practice roles and skills for beginning-level social work interventions with organization and community systems. Prerequisite(s): SCWK 302 and admission to major.

SCWK 481. Cooperative Education (1-4).
A practical experience with public and private sector agencies which addresses a broad range of individual needs and community problems. Topical journals focus upon individual knowledge and skill development through field experiences while engaged in the major social work curriculum. Repeatable for credit up to 12 hours as elective credit.

SCWK 481N. Internship (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

SCWK 521. Forensic Social Work (3).
Cross-listed as CJ 521. Introduction to and overview of the field of forensic social work. Course content focuses on the role of social workers in forensic arenas, and the issues related to recent practice trends, relevant theoretical frameworks, collaborative team roles, and multisystem interactions. Psychosocial and legal issues are explored, with particular focus on intersections with family and social services, education, child welfare, mental health, substance abuse, criminal justice, diversity and human rights. Prerequisite(s): 6 hours of social sciences.

SCWK 531. Social Work Practice in Addictions (3).
Prepares students for social work practice in the field of substance abuse and to intervene effectively when working in other areas where addictions are a concern. Includes content on the epidemiology of alcoholism and drug addiction, intervention approaches and prevention, public policy toward the regulation of drugs and their consequences, and the treatment of chemical dependency among special populations. Included in the curriculum to fulfill requirements for the Licensed Addiction Counselor (LAC) with the Behavioral Sciences Regulatory Board (BSRB). The program requires an addiction treatment focused practicum. Interested students should be advised by the social work adviser assigned to this program. Replaces SCWK 610V effective fall 2013.

SCWK 532. Pharmacology and Drug Classification in Social Work (3).
Prepares students for social work practice in the field of substance abuse and to intervene effectively when working in other areas where addiction may be a concern. It includes psychological, physiological and sociological effects of mood altering substances and behaviors and their implications for the addiction process. An emphasis on pharmacological effects of tolerance, dependency/withdrawal, cross addiction and drug addiction are covered. Understanding common patterns and causes of drug use among subcultures of diverse populations is included. Included in the curriculum to fulfill requirements for the Licensed Addiction Counselor (LAC) with the Behavioral Sciences Regulatory Board (BSRB). The program requires an addiction treatment focused practicum. Interested students should be advised by the social work adviser assigned to this program.

SCWK 541. Women, Children and Poverty (3).
General education social and behavioral sciences course. Cross-listed as WOMS 541. Addresses the problem of poverty among women in the U.S. today, and examines existing and proposed public policies designed to alleviate the problem. Explores theoretical models of poverty policy analysis and the role of values in their formulation and implementation. Discusses issues of age, race and family; special attention is given to poverty among Kansas families. *Course includes diversity content*. Prerequisite(s): 6 credit hours of social science.

SCWK 542. International Social Work (3).
Introduces the student to international social work and social welfare policy. Provides an overview of micro and macro practice outside of one's own culture and internationally that facilitates skill development in cross-cultural assessment and intervention at the individual, group and community levels. It includes a history of international social work, community and social development. Course examines social problems, policies, programs, services, and national and multinational responses as well as current trends in the global community.

SCWK 551. Independent Studies (1-3).
Individual projects for social work students who are capable of doing independent work in areas of special interest. Repeatable for credit up to 6 credit hours. Prerequisite(s): instructor's consent.

SCWK 559. Successful Aging: Theory, Research and Practice (3).
Cross-listed as AGE 559, PSY 559 and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts and Sciences, and Engineering. *Course includes diversity content*. Prerequisite(s): AGE 100, or PSY 111, or SCWK 201, or SOC 111.

SCWK 559H. Successful Aging: Theory, Research and Practice Honors (3).
Cross-listed as AGE 559, PSY 559 and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts and Sciences, and Engineering. *Course includes diversity content*. Prerequisite: AGE 100, or PSY 111, or SCWK 201, or SOC 111.

SCWK 571. Contemporary Issues and Perspectives: LGBTQ (3).
General education social and behavioral sciences course. Cross-listed as WOMS 571. Explores contemporary issues within the lesbian, gay, bisexual, transgender and queer communities. Explores personal attitudes regarding the social context for LGBTQ persons as well as other issues which have emerged as matters of concern and celebration with LGBTQ individuals and communities. Empowerment principles are employed and used to highlight a positive and affirming framework of the LGBTQ community. Students acquire basic skills in understanding issues of diversity and other contemporary conditions of life and culture. *Course includes diversity content*.

SCWK 572. Social Work Practice with Families of Diverse Cultures (3).
Introduces students to the global context of working with diverse families. Provides students with working knowledge, skills, and practice models for developing cultural competence when working with diverse families. Enhances students' knowledge, skills and ethics to contribute to more effective and competent practice with diverse families. *Course includes diversity content*.

SCWK 590. Domestic Violence (3).
Cross-listed as WOMS 580J, CJ 522 and CJ 381V. Deals with the roots of domestic violence embedded in family roles, legal systems, religious beliefs, and the psychology of women, children and men. Also covers the consequences and prevention of family abuse. Includes discussion of literature and films. *Course includes diversity content*.

SCWK 610. Topics In Social Work (1-3).
Selected topics in practice, policy, research and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Repeatable for credit. Prerequisite(s): instructor's or program consent.

SCWK 611. Special Topics in Social Work (1-3).
Special topics in practice, policy, research and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Repeatable for credit. Prerequisite(s): instructor's or program consent.

SCWK 611C. Domestic Human Trafficking (3).
Cross-listed as PHS 575C. This course will build on the undergraduate and graduate student's knowledge in working with individuals, groups, and communities with a specific focus on populations at-risk of and/or subjugated to domestic trafficking. With specialized instruction regarding domestic human trafficking, particularly domestic minor sex trafficking, this course aims to equip students with the practice knowledge, skills, and ethics in order that they might engage in effective anti-trafficking responses. Topics covered within this course include: forms of human trafficking; those involved; risk and resiliency factors; prevention; and direct-services through the prevention, assessment, identification, intervention/restoration, and termination/transition/prosperity process (Countryman-Roswurm, 2015).

SCWK 611Q. Social Work in Sports (3).
Cross-listed as CLES 750V. Explores the role of social work practice in serving the holistic needs of an athlete while understanding their involvement in the culture of sport. Explores the vulnerabilities and resiliencies of individuals who participate in youth, secondary, collegiate and professional sports. Provides a foundation for professionals interested in social work practice in sporting environments and begins to prepare social workers to assist athletes at all levels and in various settings.

SCWK 611T. Creative Techniques and Skills in Practice with Adolescent Girls (1-3).
Introduces the techniques and practice of interpersonal skills with adolescent girls. Focuses on development of skills and knowledge to better work with this population, in a manner that acknowledges and addresses the risks and strengths of adolescent girls. Course is didactic as well as interactive and includes experiential learning.

SCWK 611U. International Child Welfare (3).
Focuses on human rights issues affecting children in the welfare system around the globe. Topics include issues of adoption, foster care, kinship care, placement permanency, child welfare workers burnout, organizational factors in effective child welfare globally and others. These issues are discussed from comparative historical, cultural, economic and societal perspectives. Students actively engage in creating solutions for domestic child welfare issues based on international best practices. The overarching goal is to develop problem-solving skills for responding to U.S.-based child welfare challenges by the integration of international best practices in this field and building students' skills in recognizing global diversity of childhood experiences. Employs high-impact educational practices including collaborative projects, experiential learning and exposure to global differences. *Course includes diversity content*.

SCWK 700. Foundations of Generalist Practice I (3).
Provides foundation content in the knowledge and skills for empowerment-based generalist social work practice with individuals, families, groups, organizations, and communities. Includes professional role development, communication and interviewing theory, skill development in social work assessment, intervention and evaluation methods. Prerequisite(s): degree admission to MSW program. Corequisite(s): SCWK 720.

SCWK 702. Foundations of Generalist Practice II (3).
Provides continued social work practice foundation content emphasizing developing generalist knowledge and skill at the group, organizational, community and societal levels. Emphasizes material on group process ,and organizational and community leadership in the development of a problem-solving model for work with systems of all sizes. Prerequisite(s): SCWK 700, degree admission to MSW program. Corequisite(s): SCWK 721.

SCWK 710. Micro Human Behavior and the Social Environment (3).
Provides theories and knowledge of human bio-psycho-social development and functioning of individuals and families, and of the transaction between individuals and families and their environment. Presents theoretical perspectives on development over the life span and family functioning. Explores areas of universality and differences across gender, race, ethnicity, class, physical and mental ability, and

sexual orientation. Prerequisite(s): degree admission to MSW program. Corequisite(s): SCWK 717.

SCWK 712. Macro Human Behavior and the Social Environment (3).
Provides theories and content on organizational and community structure, dynamics and change, social movements, large groups and structural oppression, and provides a theory base for the contextualization of social work practice within diverse environments and macro systems. Emphasizes understanding the needs of minority communities and understanding change and empowerment strategies which further social justice in communities and organizations. Prerequisite(s): SCWK 710, degree admission to MSW program. Corequisite(s): SCWK 751.

SCWK 717. Policy I: Social Welfare and Analysis (3).
Surveys social welfare institutions, emphasizing the strengths and weaknesses of programs within the context of the social problems they address. The comparison of these structures and provisions enables the development and use of frameworks for analyzing social policies and evaluating programs in light of the mission of the social work profession, the principles of social and economic justice, and the historical, economic and political factors which impinge on policy. Content on the effects of policy and social work practice includes the uses of professional roles in shaping the processes of policy formulation in agency and governmental arenas. Prerequisite(s): degree admission to the MSW program. Corequisite(s): SCWK 710.

SCWK 720. Field Practicum I (4).
Placement in community social service agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Promotes an understanding of the social service agency and its role in the community service network. Corequisite(s): SCWK 700.

SCWK 721. Field Practicum II (4).
Requires placement in community social service agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Promotes an understanding of the social service agency and its role in the community service network. Corequisite(s): SCWK 702.

SCWK 730. Graduate Topics in Social Work (1-3).
Specialized instruction using a variable format in a social work relevant subject. Repeatable for credit.

SCWK 730U. Explore Animal Assisted Therapy (1).
An introduction to Animal Assisted Therapy: definition, criteria and comparison/contrast of the multiple ways that animals and humans function within the animal/human relationship and bond. This course explores the modalities in which both untrained volunteers and professional practitioners utilize various animals to assist in working with a variety of client services. The focus of this course is on AAT in social work services, but much of the material presented is applicable to other human service disciplines as well.

SCWK 750. Social Work Workshops (2-5).
Selected topics in practice, policy, research and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners and area service institutions. Repeatable for credit up to a total of 6 hours.

SCWK 751. Fundamentals of Social Work Research (3).
Introduces students to the components of quantitative and qualitative research methods and describes how research is designed to conduct studies which seek to improve social work practice. Introduces the basic concepts of the social work research process as well as the methods that are employed. Students develop a framework for critically evaluating (1) methods employed in current social work research, and (2) potential benefits of applying these research findings to social work practice. Prerequisite(s): degree admission to the MSW program. Corequisite(s): SCWK 712.

SCWK 760. Advanced Generalist Practice Seminar I (1).
Builds on the graduate social work student's knowledge, experience and skills by integrating social work theory, values, ethics, methodology and literature. It is based in the generalist perspective and prepares students for the advanced generalist practice curriculum. This course is a prerequisite to all 800-level MSW core courses and must be completed in the summer before beginning the advanced generalist 800-level courses. Prerequisite(s): degree admission to the MSW program.

SCWK 799. Directed Study (1-3).
Individual study with a focus developed in collaboration with a departmental faculty member. Allows students to pursue an area of special interest. Repeatable for credit up to 6 hours. Prerequisite(s): departmental consent.

SMGT - Sport Management

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

SMGT 112. Introduction to Sport Management (3).
Introduction to the discipline of sport management and its vast array of career opportunities. Successful management is required in all segments of the sport industry whether professional or amateur, private or public, school-related or club, community or national, and at all levels of competition.

SMGT 210. Practicum in Sport Management (3).
Integrates coursework with planned and supervised professional experiences for a total of at least 160 hours. Prerequisite(s): SMGT 112.

SMGT 220. Ready! Set! Lead! (3).
Introduces core skills needed to be a successful leader. Students explore aspects of critical thinking, financial literacy, problem solving, professionalism and leadership through application of training, engagement and real-world experiences. Prerequisite(s): high school senior in GEAR UP.

SMGT 300. Technology in Sport Management (3).
Students gain a greater appreciation for the applications of current technology in the area of sport management, including but not limited to: the fundamentals of computers and their use, the application of commercial software to the sport management setting, the ethical issues sport managers face in using computers to conduct research and work with various social media platforms in sport settings.

SMGT 330. Applied Leadership Experience in Sport and Entertainment (3).
Experiential learning with focus on applying leadership principles and activities in sport, recreation, physical activity and entertainment industries. *Course includes diversity content*. Repeatable for credit.

SMGT 426. Sport Public Relations (3).
Focuses on the application of public relations principles in a sport-related setting. Significant attention to media relations with specific topics including media guides and publications, handling statistics and crisis management. Prerequisite(s): SMGT 112.

SMGT 428. Revenue Management in Sport (3).
Introduces the sport management student to financial challenges, financial statements, financial planning and related issues in the revenue management of the sport organizations. Prerequisite(s): SMGT 112.

SMGT 444. Human Resource Management in Sport (3).
Introduction to the administration of sport in public schools, institutions of higher education, community recreation, and commercial and professional sport organizations. Students learn about the various components of sport administration, and how to apply managerial decision making and leadership theories in an environment of complexity and diversity. *Course includes diversity content*. Pre- or corequisite(s): SMGT 112.

SMGT 446. Preinternship Seminar (1).
Provides focused preparation for students regarding internship activities, policies, procedures and experiences. The internship experience is the cumulative learning experience within sport management. Assists students in understanding how to successfully complete and maximize their internship experience. Prerequisite(s): SMGT 112 and admission to College of Applied Studies.

SMGT 447A. Internship Sport Management (3-12).
Culminating activity for students in sport management. Students spend the equivalent of full-time employment in an appropriate agency for a total of at least 640 hours. Prerequisite(s): SMGT 446, 90 hours of accumulated course credit, 2.000 GPA overall, advisor's consent.

SMGT 447B. Internship in Sport Management (3-12).
Second internship experience for students in sport management; takes place in a different setting than SMGT 447A. Students spend the equivalent of full-time employment in the appropriate agency for a total of at least 640 hours. Prerequisite(s): SMGT 447A, 2.000 GPA overall and for major, senior standing in College of Applied Studies, advisor's consent.

SMGT 450. Special Studies in Sport Management (3).
Umbrella course created to explore a variety of subtopics in sport management differentiated by letter (e.g., 450A, 450B, etc.) Students should enroll in the lettered courses with specific topics in the titles rather in this root course.

SMGT 450A. Overview of Esports (3).
This course is an in depth analysis of the history of Esports. Students will gain perspective from current developers, managers, media, and the athletes themselves. Also, understand the cultural and economical impact of an Esports franchise along with developing an Esports-centric promotional campaign themselves."

SMGT 461. Legal Aspects of Sport and Physical Activity I (3).
Provides students with the knowledge, understanding and application of how the following legal issues influence the sport industry. Specific content addressed includes: the legal system, statutory law, risk management, tort law (negligence and intentional torts), contracts and employment-related issues within the sport industry. A primary objective is to enhance the decision-making and problem-solving ability of each individual student as it pertains to legal issues in sport and physical activity. Prerequisite(s): SMGT 112.

SMGT 465. Psychology of Sport and Physical Activity (3).
Explores the observations, descriptions and explanations of various psychological and physiological factors that influence diverse aspects of sport and physical activity.

SMGT 466. Sport Marketing and Promotion (3).
Introduces the various techniques and strategies to fulfill the wants and needs of stakeholders in the sport industry. Emphasizes marketing theories, strategies and research that are applicable to the sport marketing mix of product, price, place and promotion for the sport administrators. Prerequisite(s): SMGT 112.

SMGT 475. Diversity in Sport Management (3).
Basic understanding of how to critically examine not only the institution of sport here in American culture, but also how to better understand issues of social justice in sport, such as discrimination based on gender, gender identification, social economic status, race, ethnicity, and how to integrate persons with disabilities into local, regional, national and international sporting communities.

SMGT 481. Cooperative Education (1-8).
Allows students to participate in the cooperative education program. Prerequisite(s): 2.000 GPA and admission to College of Applied Studies.

SMGT 511. Selling in the Sport Industry (3).
Examines both the theory and the practical application of sales and promotions in the sports industry. Students learn a process for sales and use that process in a real-life sales exercise. Students are introduced to methods of sales management. The class conducts sales projects for local sports organizations for practical experience and application of theory.

SMGT 520. Sport Tournament and Event Management (3).
Examines the processes, methods and practices involved in sport event management, including sport tournaments, sports team events and individual sporting events. Students completing this class should feel prepared to initiate and execute a sport event on their own. Prerequisite(s): SMGT 112 or graduate standing.

SMGT 525. Sport Facility Management (3).
Focuses on various aspects of facility management, such as mission development, funding and budget, site selection/planning/design, floor surfaces, risk management, equipment purchase and maintenance, and personnel management. Prerequisite(s): SMGT 112 or graduate standing.

SMGT 540. Business Analytics in Sport (3).
Integrates the knowledge base of sport and business as it applies in the practical setting. Prerequisite(s): 2.000 GPA, junior, senior or graduate standing.

SMGT 545. Sport Governance and Policy (3).
Discusses the fundamental aspects of management and administration within any sport-related organization. Students are exposed to key industry concepts such as strategic management, ethics and event planning activities, in addition to governance and policy related topics such as scholastic, intercollegiate and amateur sport.

SMGT 552. Study Abroad in Sport and Entertainment (1-3).
Introduces students to management and marketing principles in the sport and entertainment industry. Provides firsthand experiences in international sport and entertainment events and organizations through a study abroad opportunity. *Course includes diversity content*. Prerequisite(s): 18 years of age or older.

SMGT 590. Independent Study (1-3).
Arranged individual independent study in specialized content areas under the supervision of a faculty member. Repeatable for credit. Prerequisite(s): departmental consent.

SMGT 711. Structuring and Scheduling Sports Tournaments (3).
The structural design, scheduling processes, and mathematics of sport tournaments, elimination, placement and round robin formats.

SMGT 750D. Sociology of Coaching (3).
The purpose of the course is to provide an exhaustive examination of the role, purpose, and impact of sport coaches on all levels of sport. Students will use sociological concepts to explain coaching dynamics within and outside the realm of sport.

SMGT 750E. Marketing in Sport Industry (3).
Cross-listed as SMGT 803. Focuses on the application of marketing principles in a sport-related setting. Addresses such content areas as corporate sponsorships, ticket sales, broadcast agreements,

promotional events, and direct marketing in the sport entertainment, sport participation and sporting goods sectors of the industry.

SMGT 750F. Financial Dimensions of Sport Management (3).
Designed to provide the prospective sport manager with an overview of the major financial issues concerning the sport industry. The concepts of resource acquisition and financial management are examined and applied to the problems faced by sport and leisure organizations today, primarily at the college and professional levels, with some attention to commercial recreational enterprises.

SMGT 750G. Public Relations in Sport Mgmt (3).
A sport organization's success is largely dependent on the degree to which it can effectively communicate with key constituents. This class addresses topics pertaining to organizational communication, including public relations management, image, media relations and community relations.

SMGT 750I. Sociocult Dimens of Sport Mgmt (3).
A basic understanding of the developments, trends, and social processes explaining the popular sporting and physical activity experiences within the sport management industry.

SMGT 750J. Technology in the Sports Industry (3).
Students in this course will gain a greater appreciation for applications of current technology in the area of sport management including but not limited to: the fundamentals of computers and their use, the application of commercial software to the sport management setting, and ethical issues sport managers face in using computers to conduct research and work with various social media platforms in sport settings.

SMGT 750K. Building Sport Franchises (3).
Introduces the sport management student to financial challenges, financial planning and related issues within professional sport organizations.

SMGT 750L. Personnel Management in Sport (3).
Initial introduction into the administration of sport in public schools, institutions of higher education, and commercial and professional sport organizations. Learn about the various components of sports administration by reading appropriate materials and entering into dialogue with practicing administrators.

SMGT 750N. Social Psychological Foundations of Sport (3).
Examines relevant psychological and sociological concepts that explain individual, community and cultural patterns of sport, exercise and physical activity participation.

SMGT 750O. Sport and Entertainment Agencies (3).
Examines the driving changes transforming the sport and entertainment industry, while focusing on what sport and entertainment enterprises look like now and how they are set to evolve in the future.

SMGT 750P. Maximizing Mentoring Success (1).
Designed to enhance participants' effectiveness in individual and group mentoring. Designed as a four-part series, each session introduces new content on relationship management, communication and cross-generational awareness to support participants' development as mentors. *Course includes diversity content*.

SMGT 750Q. Sports, Stories and Films (3).
The purpose of this class is to provide students not only the tools necessary to understand storytelling for their career and/or sport organization, but also to illustrate how sport films can be educational, motivational and awareness-raising resources. Students learn the basic facets of narrative-building and how to deconstruct, critique and deploy sport-based storytelling techniques to better connect with a variety of internal and external stakeholders.

SMGT 781. Cooperative Education (1-3).
Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with appropriate graduate faculty. The plan of study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education graduate credit. Repeatable for credit. A maximum of 3 hours (for nonthesis option) or 6 hours (for thesis option) may count toward the graduate degree.

SMGT 799. Mentoring and Networking in Sport (1).
Gives students the necessary tools for impactful networking while also providing them a class-long mentor who is a successful industry professional. Prerequisite(s): admission to the MEd in sport management program.

SOC - Sociology

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

SOC 111. Introduction to Sociology (3).
General education social and behavioral sciences course. Introduces basic concepts, propositions and theoretical approaches of sociology, including elementary methods of studying social phenomena. The basic course for students who intend to take additional courses in sociology.

SOC 306. Introduction to Gender Studies (3).
General education social and behavioral sciences course. Cross-listed as WOMS 306. Introduces the sociology of gender. Explores how gender is socially constructed through culture, everyday interactions, the media, and institutions such as the family, education and work. Considers the consequences of gender for relationships, sexuality, economic opportunity and well-being, with a goal of connecting theory and research on gender to personal experiences. Examines how gender intersects with other forms of social inequality, including race, social class and sexual orientation. *Course includes diversity content*.

SOC 307. Romantic Relations in a Changing Society (3).
Romantic relationships are studied from the perspective that rapid changes in society can and do affect what we experience as romance. Technology, aging, urbanization, the Internet, the emancipation of women, cohabitation, divorce and later marriage are social variables that impact romantic relations. Examines such subjects with an eye to contemporary research on the topics.

SOC 308. Relationship Problems (3).
Looks at different relationship types and the common problems found in such relationships. Course has practical information about how to avoid the pitfalls of close relationships. Students are exposed to romantic relations, friendships, family and co-worker relationship types and look at how these relationships are affected by such variables as gender, power, conflict, communication and boundary problems.

SOC 311. Introduction to Sociological Theory (3).
Comprehensive survey of classical sociological theory. Emphasizes theories relevant to the development of sociology. Prerequisite(s): SOC 111.

SOC 312. Introduction to Social Research (3).
Provides students with a general understanding of the core concepts and techniques used in designing and executing a social research project. Special emphasis is given to the major data collection techniques commonly used by sociologists. Prerequisite(s): SOC 111.

SOC 313. Introduction to Social Statistics (3).
Applies descriptive and inferential statistics to sociological problems. Includes computer experience with statistical software. Prerequisite(s): SOC 111. Pre- or corequisite(s): SOC 312.

SOC 315. Marriage and Families (3).
General education social and behavioral sciences course. Aids students in the acquisition of a sociological perspective of relationship processes as they exist in the United States today. Explores dating relationships, mate selection, the transition to parenthood, marital and family interaction, communication and other issues relating to families over the life course.

SOC 316. Men and Masculinities (3).
General education social and behavioral sciences course. Cross-listed as WOMS 316. Presents the sociological perspective on contemporary masculinities. Students are exposed to developmental changes in masculinity across the life course and such topics as: masculine socialization, race/ethnicity variations, work, relationships, sexualities, media, family and the men's movement. *Course includes diversity content*.

SOC 319. Sociology of Sexualities (3).
General education social and behavioral sciences course. Course goal is to encourage students to use a sociological perspective to view all areas of sexuality. A sociological perspective of sexuality examines how sexual desires, identities, relationships, and practices are socially and culturally constructed and enforced. Such a course works to dispel myths about sexuality and uncovers the complexity of sexuality. Investigates cultural variations in sexual practices and understandings of sexuality and explores how cultural values and beliefs about sexuality shape individual desires, relationships, and well-being. Explores how sexuality influences and is influenced by other identities, including race and ethnicity, gender, socioeconomic status, age, and religion. Identifies how “normative” sexual identities are enforced in schools, families, workplaces and in the media. *Course includes diversity content.*

SOC 320. Contemporary Social Problems (3).
General education social and behavioral sciences course. Examines the theoretical and methodological frameworks used to analyze contemporary social problems. Emphasizes examining the complex interrelationship among specific social problems and developing critical-thinking skills necessary to analyze political and social policy debates.

SOC 322. Deviant Behavior (3).
General education social and behavioral sciences course. The structure, dynamics and etiology of those behavior systems that are integrated around systematic violations of the control norms. Presents and evaluates competing theories within the context of the assumption that humans are a social product. Prerequisite(s): SOC 111.

SOC 323. Sports Criminology (3).
With the high-profile nature of modern sport, increased amounts of media attention have highlighted not only individual acts of criminality, but also crimes committed by groups, organizations and/or communities. Class purpose is to expose students to not only various explanations, but also to provide the tools necessary for better understanding athletes, spectators, sport managers, groups and organizations involved in criminal offenses.

SOC 325. Parenting (3).
General education social and behavioral sciences course. Examines the role of parenting in American society from a number of different perspectives. Focuses on the major developmental changes facing couples as they move through the family life cycle. Covers the decision to have children, remaining childless, the transition into parenthood, parent-infant relationships, parents and school-age children, and the transition from active parenthood. Also includes single parents, divorce, step-parenting and dual-career parents. Discusses several different parenting techniques and styles as well.

SOC 326. Sociology of Race & Ethnicity (3).
General education social and behavioral sciences course. Examines the overlapping concepts of culture, race and ethnicity from a sociological perspective in order to foster an understanding of race as both a category of social organization and social stratification among ethnic groups that make up American culture today. Course unpacks the intersecting contexts in which race relations are socially constructed and regulated at the micro and macro levels. Controversial topics, such as affirmative action, as well as theories of discrimination, and resistance strategies are discussed and analyzed. *Course includes diversity content*. Prerequisite(s): SOC 111.

SOC 330. Social Inequality (3).
General education social and behavioral sciences course. Analyzes class, status and inequality in various societies especially in the United States. Also includes the relationship of social inequality to various social institutions. *Course includes diversity content*. Prerequisite(s): SOC 111.

SOC 332. Media Through a Sociological Lens (3).
General education social and behavioral sciences course. Presents the sociological perspective on the institution of Media. Students are encouraged to examine their own reflexivity (personal world view) within the influence of a society that is immersed “from cradle to grave” in media. By examining the major theoretical frameworks of sociological theory and applying them to a rich analysis of many modes of media (film, television, video games, social networks, etc.) students engage in an introduction to the field of visual sociology. Students exit the class with media literacy and a better understanding of this major institution of socialization.

SOC 336. Work In Modern Society (3).
General education social and behavioral sciences course. Broad overview of work in the modern economy. Examines the historical development of industrial-based capitalism, both the organizational-level changes and relations between management and labor. Also examines from a sociological perspective industrial and occupational level data focusing on changes in work environments, occupational and industrial opportunities, demographics of work occupants, and changes in compensation and work status.

SOC 337. Young Women's Health (3).
General education social and behavioral sciences course. Examines topics in young women's health in the United States. Explores the intersections of physical, emotional, social, economic, intellectual and spiritual health. Based on a developmental approach, it traces the underpinnings of health from childhood to adolescence and young adulthood. Students leave this class with the knowledge to enhance their own health and well-being.

SOC 338. Health & Lifestyle (3).
General education social and behavioral sciences course. Examines the component dimensions of health and the societal-level factors and lifestyle choices that influence health across the life span.

SOC 346. Sociology of Globalization (3).
General education social and behavioral sciences course. Critically examines the global integration of markets, known as globalization. Identifies and explores social processes and relations surrounding rapidly growing international flows of people, goods, services, information and assets. Identifies and explores social issues relating to political, cultural and economic causes and effects of globalization. Topics include trade agreements such as NAFTA, international

institutions such as the International Monetary Foundation and the World Bank, the global restructuring of workplaces and jobs, the globalization of American culture, effects of globalization on the natural environment, and the various types of responses to globalization by individuals, interest groups and governments. *Course includes diversity content.*

SOC 350. Social Interaction (3).
General education social and behavioral sciences course. Studies the effect groups have on individuals. Primary focus on the symbolic interactionist perspective in sociology. The goal is for students to understand how social interaction influences their daily activities. Includes the meaning and importance of the symbol, the nature and development of self, social roles and their influence on individuals, and the social construction of society. Prerequisite(s): SOC 111.

SOC 399AA. Social Madness (The Good, the Bad & the Ugly) (3).
Provides an overview of the social dynamics and phenomena of the internet and the social world. Provides students with an understanding of the cultural and social principles of a virtual world from the perspective of social sciences and with a focus upon the relationship between social networks and society. Examines the ways in which society is changing due to the introduction and wide spread use of virtual communication. Explores the social changes due to the internet, including new social networks and their impact on social lives including cyber-bullying/stalking, online gaming, online dating/romance, cyber-warfare, virtual crime and the social dynamics of various virtual worlds.

SOC 399AB. Visual Sociology (3).
Explores the ever growing visual nature of the student's world and the means in which the visual can represent both an avenue of investigation and a means of applying and displaying sociological concepts. Attention is given to understanding the production and consumption of a variety of modes of visual content (such as film, video, photography, comic books, memes and other emerging visual texts), as students learn common methods of conducting visual sociological study in order to analyze potential social meanings.

SOC 399AC. Social Epidemiology (3).
This course will focus on how social processes are fundamentally linked to the health of populations and/or individuals. Social epidemiology considers social, psychological, biological, and medical determinants of disease and health using a multidisciplinary approach to analyze and explain complex contemporary social issues. Additionally, this course will also emphasize the role of social determinants of health, such as socioeconomic status and/or race/ethnicity in relation to health equity. The course will also analyze the social determinants of health and how society makes individuals sick and/or healthy. Addressing not only the existing evidence of health/racial disparities, identification of new disease risk factors (e.g., deficient social capital) as well as how well-known exposures (e.g., cigarette smoking, lead paint, health insurance) emerge, promote or undermine the health of populations and are maintained by the social system.

SOC 399AD. Sociology of Mental Disorders (3).
Examines the individual and structural level variables that influence the development and treatment of various mental disorders.

SOC 399Q. Sociology of Violence (3).
Designed to explore the question, what is violence? At first pass, this question may seem straightforward, but it is complex and requires a sociological imagination to see the interpersonal, institutional and structural factors at play in any violent situation or event. Moreover, the very nature of what it means to be violent is open to debate. Class is designed to help students engage in essential debates and develop an informed point of view on violence, its causes, and its solutions. Violence is studied as a social phenomenon. Students explore general descriptions and explanations of violent crime, specific causal explanations for violence such as alcohol, drug use, or gun availability, and possible methods to reduce lethal and nonlethal violence. While many forms of personal violence are examined, special emphasis is given to sexual and family violence, gang violence, and terrorism.

SOC 399R. LOVE (3).
Examines some of the cultural, structural and theoretical perspectives of love and relationships. Looks at a subject taken for granted, but not understood — that love is both a physiological state and a socially constructed experience. Course is designed to explore how intimate moments are socially shaped and to help the student navigate the structural and cultural factors that have made being in love, and relationships and love a fundamental part of life.

SOC 399Y. Social Perspectives on Intimate Partner Violence (3).
Examines the social ecology of intimate partner violence including interpersonal, structural, and cultural perspectives. Focuses on the dynamics of violence (verbal, physical, sexual) within romantic relationships. Historical views, policy directions, health outcomes, gender dynamics, and prevention initiatives are explored through a combination of lecture, films, personal reflection and applied learning activities.

SOC 405. Sociology of Aging (3).
General education social and behavioral sciences course. Cross-listed as AGE 405. Analyzes the social dimensions of old age, including changing demographic structures, role changes and their impact on society.

SOC 481. Cooperative Education (1-4).
Provides the student with practical experience under academic supervision, that complements the student's academic program. Consultation with, and approval by, an appropriate faculty sponsor are necessary. Prerequisite(s): instructor's consent.

SOC 481N. Internship (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

SOC 512. Measurement and Analysis (4).
An applied study of the conceptual tools and methodological skills needed to conduct quantitative sociological research. Prerequisite(s): SOC 111, 312, 501. Corequisite(s): SOC 512L.

SOC 512L. Measurement & Analysis Lab (0).
The lab component of the SOC 512 course covers learning how to use the statistical software program SPSS and working on projects as part of the applied study of the conceptual tools and methodological skills needed to conduct quantitative sociological research.

SOC 514. Sociology Capstone (3).
Capstone experience designed to provide students an opportunity to integrate the knowledge, skills and insights they've developed as emerging Sociologists. While specific sociological topic areas may vary from semester to semester, the course exposes students to current research and perspectives while providing opportunities to engage in sociological practice by applying the tools of the discipline to a relevant social phenomenon and drawing links between the classroom and potential careers. For undergraduate credit only. Pre- or corequisite(s): SOC 111, 311, 312, 313.

SOC 515. Family Diversity (3).
General education social and behavioral sciences course. Analyzes the varieties of family forms in the U.S. with particular emphasis on the intersection of gender, race/ethnicity, social class and sexual orientation. Attention is given to the reciprocal effects of families and

their social environments, and the impact of public policies on families. *Course includes diversity content*.

SOC 516. Sociology of Gender (3).
General education social and behavioral sciences course. Cross-listed as WOMS 516. Focuses on historic and current gender issues within a national and global context. Students explore both the individual and structural-level factors that influence the experience of "doing gender" within a variety of social institutions including potential avenues for change and collective action. *Course includes diversity content*.

SOC 517. Intimate Relations (3).
Examines the social dimensions of intimacy including an analysis of intimacy in different types of relationships, i.e., romantic, friendship, marriage. Reviews theory and research in the area with a special focus on the place of intimacy in social interaction. *Course includes diversity content*. Prerequisite(s): SOC 111.

SOC 520. Family and Aging (3).
Cross-listed as AGE 520. Analyzes the families and family systems of older people. Emphasizes demographic and historical changes, widowhood, caregiving and intergenerational relationships as these relate to the family life of older people. *Course includes diversity content*.

SOC 528. Schools and Society (3).
General education social and behavioral sciences course. Introduces sociological perspectives on the purpose of schools and their connection to the larger society. Uses key sociological concepts, theories and methods to go beyond individual experiences and explore the educational system in the context of larger social forces. Examines the multiple functions and goals of education, stratification between schools and within schools, and inequalities of race, social class and gender. Other topics may include family and school relationships, bullying and youth culture, sexuality education, and educational policy issues. *Course includes diversity content*. Prerequisite(s): SOC 111.

SOC 534. Urban Sociology (3).
General education social and behavioral sciences course. Studies the process of urbanization and its influence on the development of cultural and social structures throughout the world. Also discusses social problems associated with urbanization. *Course includes diversity content*. Prerequisite(s): SOC 111.

SOC 537. The Social Consequences of Disability (3).
An eclectic survey of the social aspects of disability showing the impact of social values, institutions and policies upon adults with disabilities. Appropriate for both students of sociology and the service professions. *Course includes diversity content*. Prerequisite(s): SOC 111.

SOC 538. Medical Sociology (3).
General education social and behavioral sciences course. Analyzes social and cultural factors related to physical and mental illness. Also includes the dynamics of communication and role relationships among patients and medical personnel and social research and theory relevant to the health professions. *Course includes diversity content*.

SOC 539. Juvenile Delinquency (3).
General education social and behavioral sciences course. The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite(s): SOC 111.

SOC 540. Criminology (3).
The extent and nature of criminal behavior and societal reactions to it. *Course includes diversity content*. Prerequisite(s): SOC 111.

SOC 543. Aging and Public Policy (3).
Cross-listed as AGE 543. Seminar-style course explores the impact of an aging population on social institutions, covers the history of American aging policies, the organization and financing of health care for the elderly, and discusses policy analysis as an evaluation tool for comparing public approaches to responding to the needs of an increasingly diverse aging population. Considers the process of policy formation, identifies key players and interest groups, and contrasts political ideologies regarding federal, state and private responsibilities for older people. Emphasizes Social Security, the Older Americans Act, Medicare and Medicaid as policy examples. Also looks at the potential contributions of the older population to society (volunteer services, provision of family care, etc.) as affecting and affected by policy. *Course includes diversity content*.

SOC 559. Successful Aging: Theory, Research and Practice (3).
Cross-listed as AGE 559, PSY 559, and SCWK 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts and Sciences, and Engineering. *Course includes diversity content*. Prerequisite(s): AGE 100, or PSY 111, or SCWK 201, or SOC 111.

SOC 559H. Successful Aging: Theory, Research and Practice Honors (3).
Cross-listed as AGE 559, PSY 559, and SCWK 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts and Sciences, and Engineering. *Course includes diversity content*. Prerequisite: AGE 100, or PSY 111, or SCWK 201, or SOC 111.

SOC 600. Selected Topics in Sociology (3).
Study in a specialized area of sociology emphasizing student research projects. Includes deviant behavior, political sociology and the family. Repeatable for a total of 6 credit hours. Prerequisite(s): SOC 111, instructor's consent, and substantive area course.

SOC 651. Directed Research (1-3).
Gives the student further research skills in an area of special interest. All students are under the direction of a member of the graduate faculty who guides them in developing research skills. Prerequisite(s): SOC 512 or equivalent and instructor's consent.

SOC 670. Independent Reading (1-3).
For the advanced student capable of doing independent work in an area of special interest. Prerequisite(s): 15 hours of sociology and instructor's consent.

SOC 711. Sociological Theory (3).
Comprehensive survey of classical sociological theory emphasizing theories relevant to the development of sociology. Prerequisite(s): departmental consent.

SOC 713. Statistics for Social and Behavioral Sciences (3).
Applies descriptive and inferential statistics to sociological problems. Includes computer experience with statistical software. Prerequisite(s): departmental consent.

SOC 750. Sociology Workshop (1-3).
Provides specialized instruction using a variable format in a sociologically relevant subject.

SOC 781. Cooperative Education (1-4).
Provides practical experience, under academic supervision, that complements the student's academic program. Consultation with, and approval by, an appropriate faculty advisor are necessary. With advisor approval, up to 4 hours of cooperative education may count toward graduate degree requirements.

SOC 781N. Sociological Practice Internship (1-3).
Integrates academic theory with planned professional experience providing students with practical skills training under academic supervision to complement the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors as well as the Career Development Center. Repeatable for credit.

SPAN - Spanish

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

SPAN 111. Elementary Spanish I (5).
Students develop listening, speaking, reading and writing skills in the target language, and gain awareness of both the structure of the Spanish language and of how language is used to create meaning within a range of social contexts. Requires work within the classroom, daily computer-based assignments, and reading and writing activities to be completed at home. Intended for students with no previous instruction in Spanish. Anyone with previous instruction must take the placement exam and will be admitted to 111 only if the placement score does not qualify the student for SPAN 112.

SPAN 112. Elementary Spanish II (5).
Students develop listening, speaking, reading and writing skills in the target language, and gain awareness of both the structure of the Spanish language and of how language is used to create meaning within a range of social contexts. Requires work within the classroom, daily computer-based assignments, and reading and writing activities to be completed at home. Prerequisite(s): SPAN 111 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 150. Workshop in Spanish (2-4).
Repeatable for credit.

SPAN 210. Intermediate Spanish (5).
General education humanities course. Students develop listening, speaking, reading and writing skills in the target language, and gain awareness of both the structure of the Spanish language and of how language is used to create meaning within a range of social contexts. Requires work within the classroom, daily computer-based assignments, and reading and writing activities to be completed at home. Prerequisite(s): SPAN 112 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 212. Spanish for Law Enforcement (5).
Accelerated course focusing on the real-world Spanish language needs of preservice and in-service law enforcement officers. Provides intensive practice in comprehension and production of spoken Spanish in transactional law enforcement situations. Develops some reading and writing skills; the main goal, however is content-specific listening and speaking proficiency. Also aims to prepare students to practice law enforcement in a culturally-sensitive manner. Substitutes as SPAN 210 for criminal justice majors only to meet the LAS foreign language requirement.

SPAN 215. Spanish Study Abroad (1-3).
Transfer of credit for a Spanish-speaking university or study abroad program in (a) grammar, (b) conversation, (c) reading. *Course includes diversity content*. Not repeatable for credit.

SPAN 220. Intermediate Spanish Grammar and Composition (3).
Review of all major tenses in Spanish and the three moods (indicative, subjunctive, imperative); in-depth exploration of structural elements of the language including pronouns, adjectives, adverbs, prepositions and comparisons; special emphasis on written Spanish through composition writing. As grammar review, this course differs in approach and pace from SPAN 111-210. Prerequisite(s): SPAN 210 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 220H. Intermediate Spanish Grammar and Composition Honors (3).
Review of all major tenses in Spanish and the three moods (indicative, subjunctive, imperative); in-depth exploration of structural elements of the language including pronouns, adjectives, adverbs, prepositions and comparisons; special emphasis on written Spanish through composition writing. As grammar review, this course differs in approach and pace from SPAN 111-210. Prerequisite(s): SPAN 210 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 221. Spanish Grammar and Composition for Heritage Speakers (3).
Focuses on writing skills, spelling and selected grammar points. For students who grew up speaking Spanish at home but have not studied the language formally, and students who have had extensive experience in an immersion context. *Course includes diversity content*. Prerequisite(s): self-identification and qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 223. Selected Spanish Readings (3).
General education humanities course. Intensive reading of Latin-American and Spanish literary works. Also includes outside readings and reports. Course satisfies the LAS literature requirement. Prerequisite(s): SPAN 210, or three units of high school Spanish, or departmental consent.

SPAN 223H. Selected Spanish Readings Honors (3).
General education humanities course. Intensive reading of Latin-American and Spanish literary works. Also includes outside readings and reports. Course satisfies the LAS literature requirement. Prerequisite(s): SPAN 210, or three units of high school Spanish, or departmental consent.

SPAN 300. Intermediate Spanish Readings (3).
General education humanities course. Intensive reading and analysis of Spanish literary works of all periods. Course satisfies the LAS literature requirement. Prerequisite(s): SPAN 223 or departmental consent.

SPAN 325. Intermediate Spanish Conversation (3).
Develops aural and oral proficiency through listening, vocabulary building, culturally appropriate communication strategies and pronunciation practice in an immersion environment. Prerequisite(s): SPAN 210 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 481. Cooperative Education (1-4).
Provides a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs formulated in consultation with, and approved by, appropriate faculty sponsors. Repeatable for credit. Prerequisite(s): SPAN 220 or departmental consent.

SPAN 481N. Internship (1-4).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

SPAN 505. Spanish Phonetics (3).
Cross-listed as LING 505C. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future Spanish teachers. Prerequisite(s): any 200-level SPAN course or departmental consent.

SPAN 515A. Major Topics in Spanish (1-4).
Repeatable for credit. Prerequisite(s): departmental consent.

SPAN 520. Literature in Film (3).
Spanish or Latin American literature and its representation in film. Repeatable for credit. Prerequisite(s): SPAN 300.

SPAN 525. Advanced Spanish Conversation (3).
Provides students the opportunity to further develop aural and oral proficiency through listening, vocabulary building, culturally appropriate communication strategies, skits, presentations and pronunciation practice in an immersion environment. Prerequisite(s): SPAN 325 or departmental consent.

SPAN 526. Advanced Spanish Grammar and Composition (3).
Prerequisite(s): SPAN 220 or 221 or departmental consent.

SPAN 546. Spanish Language Learning (3).
Cross-listed as LING 546. Introduces language learning from an applied linguistics perspective: the processes of first and second language acquisition, elements of Spanish grammar that are often difficult for English speakers, and social aspects of language learning. Appropriate for advanced undergraduate students and graduate students. Taught in Spanish. *Course includes diversity content*. Prerequisite(s): SPAN 526 or departmental consent.

SPAN 547. Spanish in the U.S. (3).
Cross-listed as LING 547. Explores the structural and social aspects of Spanish in the United States. Examines the history and social context of the use of Spanish in the U.S. as well as dialectical and contact phenomena in U.S. Spanish. Also covers Spanish in education, in the media and in other aspects of public life in the U.S. Appropriate for advanced undergraduate students and graduate students. Taught in Spanish. *Course includes diversity content*. Prerequisite(s): SPAN 526 or departmental consent.

SPAN 552. Business Spanish (3).
Provides the opportunity to learn and practice commercial correspondence, business vocabulary, translation and interpretation of business texts. Prerequisite(s): SPAN 526.

SPAN 557. Principles of Translation and Interpreting (3).
For students wishing to learn skills and techniques of translation and interpreting in addition to developing vocabulary in different domains of professional Spanish. Course combines readings, discussions and applied practice/hands-on activities. Pre- or corequisite(s): SPAN 526 or departmental consent.

SPAN 558. Advanced Translation and Interpreting (3).
Further study of translation and interpreting of different types of texts for the professional world. Prerequisite(s): SPAN 526, 557; or departmental consent.

SPAN 559. Spanish for the Health Professions (3).
Gives students a fundamental background in the Spanish that is spoken in health care settings and explores health disparities affecting Latinos in the U.S. Through conversation practice, simulated situations, readings, vocabulary exercises, projects, oral interviews, etc., students learn to communicate in Spanish in a wide range of situations pertinent to health-related scenarios. While the course does review some grammatical concepts in Spanish, all grammar practice is studied in the context of the health care setting. Prerequisite(s): SPAN 526.

SPAN 561. Practicum in Spanish for the Professions (3).
Service-learning course in which advanced students in the Spanish for the Professions program are matched with a community partner organization that has identified a need for professional-level Spanish language work. Students spend 45 or more hours using their Spanish language skills to meet the identified community need. Students develop a service-learning plan with a site preceptor at the community organization and participate in activities designed to prepare them to meet the needs of their site, meet regularly with the supervising Spanish professor, reflect critically on the community need they are addressing and on their own role in addressing this need, and reflect on their experiences with the partner organization and community members. *Course includes diversity content.*Prerequisite(s): SPAN 557, SPAN 558 and SPAN 559 or instructor's consent.

SPAN 562. Practicum in Spanish Teaching (3).
Service-learning course in which advanced students in Spanish are matched with an educational institution that has identified a need for assistance in a Spanish bilingual or heritage language educational context. Students spend 45 or more hours using their Spanish language skills to meet the identified educational need. They develop a service-learning plan with a site preceptor at the educational institution and participate in activities designed to prepare them to meet the needs of their site, meet regularly with the supervising Spanish professor, reflect critically on the educational and community needs they are addressing and on their own role in addressing this need, and reflect on their experiences with the partner organization and community members. Students who are already full-time teachers can complete this practicum in their own classroom. *Course includes diversity content*. Prerequisite(s): MCLL 454F and SPAN 546 or SPAN 547.

SPAN 610. Survey of Spanish Medieval and Premodern Literature (3).
Spanish literature from the beginning to 1700. Prerequisite(s): SPAN 300 or departmental consent.

SPAN 611. Survey of Spanish Modern Literature (3).
Main currents of Spanish literature from 1700 to the present. Prerequisite(s): SPAN 300 or departmental consent.

SPAN 620. Survey of Latin-American Literature (3).
Survey of Latin-American literature from pre-Columbian times through the building of new nations, and to the rise of Modernismo at the turn of the 20th century. Prerequisite(s): SPAN 300 or departmental consent.

SPAN 621. Survey of Contemporary Latin-American Literature (2-3).
Provides students with a chronological and thematic approach to the main currents of Latin-American literature in the 20th and 21st centuries. Provides a critical presentation of major realist, naturalist, avant-garde, boom and postboom authors. Prerequisite(s): SPAN 300 or departmental consent.

SPAN 622. Special Studies in Spanish (1-4).
Topic for study chosen with aid of instructor. Repeatable for credit. Prerequisite(s): instructor's consent.

SPAN 623. Seminar In Spanish (2-3).
Seminar in Spanish literature, language or civilization. Repeatable for credit. Prerequisite(s): SPAN 300.

SPAN 623B. Seminar in Spanish and Latin-American Literature (1-5).
Studies a selection of Latin-American cultural productions (literature and film) to answer two questions: How do criticism, fatality and heroism interrelate with Latin American culture? What can this threefold relationship tell us about the cultural development of Latin America? Latin-American cultural productions are centered in representing a dichotomy; on the one hand, romantic and erotic instincts related to sexual appetites and, on the other, thematic digressional, and chaotic energies — pathological desire — that constantly challenge the utopic integration of Latin-American nations.

SPAN 623C. Seminar in Spanish-American Culture (1-5).
Special studies in Spanish and Latin-American culture and civilization. For graduate/undergraduate credit. Given on a rotating basis. Repeatable for credit. Prerequisite(s): departmental consent.

SPAN 624. Seminar in Latin-American Literature or Culture (3).
May focus on a literary genre, historic or artistic period, main historic figure or author, region or topic, including transnational or transatlantic phenomena. Repeatable for credit. Prerequisite(s): SPAN 300 or departmental consent.

SPAN 625. Contemporary Latin-American Novel (3).
Prerequisite(s): SPAN 300 or departmental consent.

SPAN 626. Spanish Civilization (3).
Intensive study of Spanish culture, including historical and geographical factors in its development and its contributions to world civilization. Pre- or corequisite(s): SPAN 300 or departmental consent.

SPAN 627. Latin-American Civilization (3).
Intensive study of Latin-American culture, including the historical and geographical factors of its development and its contributions to world civilization. Pre- or corequisite(s): SPAN 300 or departmental consent.

SPAN 631. Seminar in Latin-American Literature: Short Story (3).
Study of the main writers in contemporary Latin-American literature. Prerequisite(s): SPAN 300 or departmental consent.

SPAN 632. Hispanic Cooking Communities (3).
Analyzes food and food representation as potential national symbols and examines their cultural meanings. Examples of the importance of Hispanic and Latino foods and culinary traditions through the years with particular attention to the diasporic communities and the impact of immigrant food are studied. *Course includes diversity content*. Prerequisite(s): SPAN 220/SPAN 221 and SPAN 325 or departmental consent.

SPAN 633. Latin@ Studies (3).
Introduces students to the range of issues that form the foundation of Latin@ studies. Students analyze the histories of the diverse Latin@ subgroups and acquire a multidisciplinary and panoramic perspective on the Latin@ collective and individual experience in the U.S. Special consideration is paid to the experiences of Latin@s in the Midwest and the representation of Latin@s in media. Course is taught in Spanish and includes readings in both Spanish and English. *Course includes diversity content*. Prerequisite(s): SPAN 220, 221 and 325 or departmental consent.

SPAN 641. Seminar in Hispanic Applied Linguistics (3).
Topics include: (1) learning and teaching Spanish, (2) Spanish in the professions, (3) discourse and intercultural communication, (4) social and political contexts. *Course includes diversity content*. Prerequisite(s): MCLL 351 or instructor's consent.

SPAN 750. Workshop in Spanish (2-4).
Repeatable for credit.

SPAN 750C. Contextualized Language Instruction (2).
Cross-listed as FREN 750C. Workshop on foreign language pedagogy. Required for GTAs in Spanish; open to advanced undergraduate French, Latin, or Spanish teaching majors. Prerequisite(s): enrolled in the MCLL Teaching Major, acceptance into the MA program in Spanish or French, or departmental consent.

STAT - Statistics

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

STAT 370. Elementary Statistics (3).
General education math and natural sciences course. Surveys elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference, linear correlation and regression. Not open to mathematics majors. Students cannot receive credit for both STAT 171 and STAT 370. Prerequisite(s): MATH 111 with a C or better or equivalent.

STAT 460. Elementary Probability and Mathematical Statistics (3).
General education math and natural sciences course. Covers elementary probability concepts, some useful discrete and continuous distributions and mathematical aspects of statistical inference including maximum likelihood estimation, confidence intervals, hypothesis testing and regression. Prerequisite(s): MATH 243 with a C or better.

STAT 570. Special Topics in Statistics (3).
Covers topics of interest not otherwise available. Prerequisite(s): departmental consent.

STAT 571. Statistical Methods I (3).
General education math and natural sciences course. Includes probability models, points and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance, and topics in design of experiments. Prerequisite(s): MATH 243 with a grade point of 2.000 or better, or departmental consent.

STAT 572. Statistical Methods II (3).
General education math and natural sciences course. Includes probability models, points and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance, and topics in design of experiments. Prerequisite(s): MATH 243 with a grade point of 2.000 or better, or departmental consent.

STAT 574. Elementary Survey Sampling (3).
Reviews basic statistical concepts. Covers simple, random, stratified, cluster and systematic sampling, along with a selection of sample size, ratio, estimation and costs. Applications studied include problems from social and natural sciences, business and other disciplines. Prerequisite(s): any elementary course in statistics, such as STAT 370, SOC 501 or PSY 301 with a grade point of 2.000 or better.

STAT 576. Applied Nonparametric Statistical Methods (3).
General education math and natural sciences course. Studies assumptions and needs for nonparametric tests, rank tests, and other nonparametric inferential techniques. Applications involve problems from the social and natural sciences, business and other disciplines. Prerequisite(s): any elementary statistics course such as STAT 370, SOC 501 or PSY 301 with a grade point of 2.000 or better.

STAT 701. Matrix Theory (3).
Studies matrix theory as a tool for studying linear models, analysis of variance, regression analysis, time series, and multivariate analysis. Topics include Eigenvalues and Eigenvectors, matrix factorization and matrix norms, generalized inverses, partitioned matrices, Kronecker product, vec operator, and matrix derivatives, with applications to statistics in each topic and special emphasis on quadratic forms in normal variates. Although some background in statistics is desirable, it is not necessary. Prerequisite(s): MATH 511 with a grade point of 2.000 or better.

STAT 761. Probability (3).
A study of axioms of probability, discrete and continuous random variables, expectation, examples of distribution functions, moment generating functions, and sequences of random variables. Prerequisite(s): MATH 344 with a grade point of 2.000 or better.

STAT 762. Applied Stochastic Processes (3).
Studies random variables, expectation, limit theorems, Markov chains, and stochastic processes. Prerequisite(s): STAT 761 or 771 with a grade point of 2.000 or better or departmental consent.

STAT 763. Applied Regression Analysis (3).
Studies linear, polynomial and multiple regression. Includes applications to business and economics, behavioral and biological sciences, and engineering. Uses computer packages for doing problems. Prerequisite(s): STAT 571, MATH 344 and 511 with a grade point of 2.000 or better in each, or departmental consent.

STAT 764. Analysis of Variance (3).
An introduction to experimental design and analysis of data under linear statistical models. Studies single-factor designs, factorial experiments with more than one factor, analysis of covariance, randomized block designs, nested designs, and Latin square designs. Uses computer packages for doing problems. Prerequisite(s): STAT 571, MATH 344 and 511 with a grade point of 2.000 or better in each, or departmental consent.

STAT 771. Theory of Statistics I (3).
An examination of stochastic dependence distributions of functions of random variables limiting distributions, order statistics, theory of statistical inference, non-parametric tests, and analysis of variance and covariance. Prerequisite(s): MATH 545 or 547 with a grade point of 2.000 or better, or departmental consent.

STAT 772. Theory of Statistics II (3).
An examination of stochastic dependence distributions of functions of random variables limiting distributions, order statistics, theory of statistical inference, non-parametric tests, and analysis of variance and covariance. Prerequisite(s): MATH 545 or 547 with a grade point of 2.000 or better, or departmental consent.

STAT 774. Statistical Computing I (3).
Trains students to use modern statistical software for statistical modeling and writing of technical reports. Examines many of the advanced features of most commercial statistical packages. Students perform complete statistical analyses of real data sets. Prerequisite(s): STAT 763 and 764, or departmental consent.

STAT 775. Applied Statistical Methods I (3).
Covers selected topics from time series analysis including basic characteristics of time series, autocorrelation, stationarity, spectral analysis, linear filtering, ARIMA models, Box-Jenkins forecasting and model identification, classification, and pattern recognition. Prerequisite(s): STAT 763 with a grade point of 2.000 or better, or departmental consent.

STAT 776. Applied Statistical Methods II (3).
Covers selected topics from multivariate analysis including statistical theory associated with the multivariate normal, Wishart and other related distributions, partial and multiple correlation, principal component analysis, factor analysis, classification and discriminant analysis, cluster analysis, James-Stein estimates, multivariate probability inequalities, majorization and Schur functions. Prerequisite(s): STAT 764 with a grade point of 2.000 or better, or departmental consent.

THEA - Theatre

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

THEA 143. The Art of the Theater (3).
General education fine arts course. Introduction to theatre as an art form emphasizing critical appreciation from the viewpoint of the audience.

THEA 180. Theater Practicum (1).
Practical training in the organization and presentation of plays in the university theatre program. May be organized in the following areas: design and construction of scenery, costumes or properties; the design and execution of stage lighting or makeup; the organization and practice of theatre management; and performance. Repeatable for credit.

THEA 180E. Performing Arts Seminar (1).
Cross-listed as DANC 180E. Interdisciplinary introduction to the School of Performing Arts. Students study performance, design and production of theatre, music theatre and dance. First semester students in the School of Performing Arts interact and collaborate with each other for a greater understanding of performing arts. Students crew one show on the season calendar. Students also break out into individual program areas of department-specific modules when appropriate. Repeatable for credit.

THEA 218. Movement for the Performer (3).
Through neutral mask work, clowning, and viewpoints exploration of time and space, student performers develop their ability to perform with relaxed physical awareness, to exist and respond with physical clarity in the present moment, to create off of impulses and imagination, and to build physically engaging characters and stories.

THEA 221. Oral Interpretation (3).
General education fine arts course. Cross-listed as COMM 221. Designed to enhance speaking skills through the performance of original stories and excerpts from literature. Focuses on aiding the student to become a compelling storyteller. Class works on developing an expressive voice and also developing performance skills such as learning to gesture and express oneself through facial expression. These verbal skills aid the student in being a better communicator.

THEA 222. Improving Voice and Diction (3).
Cross-listed as COMM 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Course is performance oriented, however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.

THEA 228. Script Analysis (3).
Develops students' abilities to analyze scripts in television, theatre and film from the point of view of those who face the task of producing them. Focuses on studying and testing practical methods of analysis. Collective analysis and individual projects are part of the coursework.

THEA 241. Improvisation and Theatre Games (3).
General education fine arts course. For the beginning student in theatre. Through exercises, analyses and readings, the course contributes to the training of the student actor's imagination, his or her sense of stage presence, and ability to explore basic components of playtexts.

THEA 243. Acting I (3).
General education fine arts course. Emphasizes the internal techniques of acting, characterization and the actor's analysis of the play and the role.

THEA 244. Stagecraft: Applied Technology (3).
Lab arr. An “Introduction to Technology” class that explores the theory and practice of technical production as applied to theatre, dance, opera, television and industrial shows. Uses a combination of lectures, demonstrations and applied practices to promote learning in the basic skills required to work as a member of a theatrical production staff. Includes 32 hours of applied processes and materials lab.

THEA 253. Costuming for the Stage and Film (3).
Introduction to the fundamentals of costume technology and design. Emphasizes basic sewing skills, collaboration in the performing

arts, and introduces the design process. Practical experience with university theatre Main Stage and Second Stage productions. Pre- or corequisite(s): THEA 180B.

THEA 254. Stage Makeup (2).
Study and practice of the basic application of stage makeup. Also includes character analysis, anatomy, materials and special makeup techniques and problems.

THEA 260. History of Musical Theatre (3).
General education fine arts course. A survey of the development of musical theatre in America from the late 1880s to present day. Explores the collaboration of composers, directors, choreographers and performers that make this a uniquely American art form.

THEA 272. Stage Management (3).
Introduction to the practice of stage management. Studies basic functions and aspects of stage management in preproduction, rehearsal and performance phases. Focuses on communication strategies, specific skills, practical exercises and applied problem-solving techniques in stage management with emphasis on organization, documentation and dissemination of information. Prerequisite(s): THEA 244, and sophomore standing or instructor's consent.

THEA 285. Period Styles (3).
Study of the architecture, interior decor, furnishings and costume of the major historic periods, with an emphasis on application to scenic, lighting, properties and costume design.

THEA 300. Drafting and Visual Standards for the Theatre (3).
Addresses mechanical drawing as a communication tool. The skills, knowledge and essential learning for this course are developed through application and practice of processes and activities. Topics covered include drafting equipment, mathematics, lettering, symbolic communications, drawing (orthographic, isometric, oblique and sectional), and standards used in theatrical design. Prerequisite(s): THEA 244 and ARTF 145.

THEA 326. Expressive Voice for Stage (3).
Develops the individual's ability to express thought and emotion on the stage through the effective use of the voice. Uses exercises, drills, and poetic and dramatic readings to improve the quality, flexibility and effectiveness of the speaking voice. Prerequisite(s): THEA/ COMM 222.

THEA 330. Musical Theatre Laboratory (2).
Cross-listed as MUSP 330. An interdisciplinary course with opportunities for student performers to refine techniques by performing scenes from a variety of musical genres including operetta, book musicals and rock musicals. Advanced students gain experience in directing and choreographing under faculty guidance and supervision. Prerequisite(s): junior or senior musical theatre, dance and voice majors only, and/or permission of the instructors.

THEA 331. Dialect for the Stage (3).
Familiarizes the student with certain regional American and foreign dialects. Intended to be a practical guide for the student actor who is called upon to reproduce a particular dialect for performance. Prerequisite(s): THEA/ COMM 222.

THEA 342. Advanced Acting (3).
Continued development of methods established in THEA 243 with additional emphasis on contemporary vocal and movement techniques. Prerequisite(s): THEA 243 and sophomore standing.

THEA 344. Scene Design I (3).
Fundamentals of scene design. Emphasizes strong work in perspective rendering, drafting techniques and scale, and playscript and spatial analysis.

THEA 345. Stage Lighting (3).
Lab. arr. Light design and its relation to the production process and other design elements. Emphasizes working knowledge of lighting equipment towards creative implementation. Includes practical work on university theatre Main Stage and Second Stage productions.

THEA 350. Workshops in Theatre (1-4).
Theatre majors only. Repeatable for credit.

THEA 350P. Production Assistant - Theatre (0).
Participation course for exceptional theatre students to spend a semester in an appropriate theatrical production setting assisting a faculty member or guest artist. Meets in conjunction with scheduled course times. *Course includes diversity content*. Theatre majors only. Repeatable. Prerequisite(s): junior standing and/or departmental consent.

THEA 350R. Rehearsal Assistant - Theatre (0).
Participation course for exceptional theatre students to spend a semester in an appropriate theatrical rehearsal setting assisting a faculty member or guest artist. Meets in conjunction with scheduled rehearsal times. *Course includes diversity content*. Theatre majors only. Repeatable. Prerequisite(s): junior standing and/or departmental consent.

THEA 350T. Teaching Assistant - Theatre (0).
Participation course for exceptional theatre students to spend a semester in an appropriate theatre course setting assisting a faculty member to hone their teaching skills. Meets in conjunction with assigned course. *Course includes diversity content*. Theatre majors only. Repeatable. Prerequisite(s): junior standing or departmental consent.

THEA 357. Costume Design I (3).
Fundamentals of costume design. Emphasizes the elements and principles of design; figure drawing; and spatial, script and character analysis. Prerequisite(s): ARTF 145, THEA 253 or instructor's consent.

THEA 359. Directing I (3).
Lab. arr. Basic theories and principles of stage directing and problems of producing the play with practical experience gained by use of the project methods. Prerequisite(s): THEA 243, 244, 272 or departmental consent.

THEA 365. Stage Combat (3).
Focuses on the most primitive mechanism of survival, physical confrontation, and initiates the student performer into the secrets of creating theatrically safe and dramatically effective fights. Through this introductory exploration of the stage fighting styles of unarmed, swordplay and film fighting, students learn to elevate physical conflict into artistic storytelling. Prior movement course recommended but not required.

THEA 370. Professional Practices for the Performing Artist (3).
Cross-listed as DANC 370. For all performing arts majors. Focuses on business practices in performing arts. Discussions and assignments focus on resumes, websites, reels, marketing, business plans, unions, contracts, portfolios, interviews, taxes, etc. Individual concentration areas are also covered in break-out sessions throughout the course.

THEA 375. Directed Projects in Theater (1-4).
Independent research or practical and creative projects in the various areas of theatre including performance, design, technical theatre, management and dramatic literature. Repeatable for credit. Prerequisite(s): departmental consent.

THEA 380. Dance/Theater Practicum (1).
Cross-listed as DANC 360. Practical training in the organization, presentation and technical aspects of production. May be organized in the following areas: design and construction of scenery, costumes or properties; the design, execution and cuing of stage lighting; stage makeup and sound; design and construction of costumes for dancers;

the organization and practice of theatre management; and performance. Repeatable once for credit.

THEA 385. Theatre as a Mirror of Today's America (3).
General education fine arts course. Explores how contemporary drama reflects the issues and perspectives of different cultures and groups within America, including African-Americans, Asian-Americans, Hispanic-Americans, feminists, gays and lesbians. Examines how today's theatre portrays these groups, how it views their lives in this country and how it reflects their differences, fears, concerns and similarities. Focuses on issues arising because of diversity of culture, nationalities, race, gender, ethnicity, class, age, religion and politics. *Course includes diversity content*.

THEA 390. Acting for the Camera (3).
Instruction and practice in the basics of acting for the camera. Assists students in making the transition from the theatre to work in film, TV or the Internet. Introduces students to on-camera performance and addresses the technical requirements of TV and film acting such as playing to the camera, shooting a story out of sequence, different film shots, and other production considerations. Includes on-camera scene work, including audition techniques. Through exercises and scene study, this course familiarizes students with on-camera acting techniques and expands each performer's range of emotional, physical and vocal expressiveness appropriate for the camera.

THEA 395. Voice Acting (3).
Students learn the essentials of voice acting from technique to the business and profession. Topics include how to work with a microphone, recording, setting up a home studio and different types of script copy. In addition, the profession of voice acting is studied, specifically, booking work, invoicing jobs, marketing and voice reels.

THEA 450. Contemporary Theatre and Drama: Topics (3).
General education fine arts course. Investigates the major developments and directions in theatre and drama since WWII. Includes studies in directing, acting, theatre architecture, design and production methods, as well as dramatic literature. Prerequisite(s): junior standing (60 credit hours) or above.

THEA 451. Portfolio Review (1).
Senior level. Helps the technical theatre and design student prepare a formal portfolio in one or a combination of the design areas, a resume and a presentation as an application suitable for either graduate school or future employment. Prerequisite(s): must be taken in graduating year.

THEA 455. Senior Jury (1).
For the graduating student in the performance track of the BFA in performing arts-theatre program. Requires a performance of material in recital circumstances. Prerequisite(s): senior standing.

THEA 480. Theatre Internship (2-15).
Advanced theatre production work as arranged by students in direction, acting, scenery and lighting, costume design and construction, or theatre management with a professional theatre company. Prerequisite(s): junior standing or departmental consent. Maximum of 15 credits of internship activity applicable toward graduation.

THEA 481. Cooperative Education (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a professional environment. Repeatable for credit. Prerequisite(s): departmental approval.

THEA 481I. Noncredit Internship (0).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite(s): departmental consent.

THEA 490. Theatre Audition Techniques (3).
Practicum course to develop audition skills and techniques for monologues, scenes and cold readings. Course aids actors in compiling and preparing audition repertory needed to gain professional employment and placement in advanced training programs. Additionally, course covers business, self-marketing and promotion tools necessary for a professional career. Prerequisite(s): THEA 243, 342 or instructor's consent.

THEA 510. Design Project (1).
Advanced work in the problems of stage lighting design, costume design or scenic design. With the permission and supervision of the appropriate faculty member, the student designs for specific productions for either Main Stage or Experimental Theatre. Repeatable twice for credit if taken in different design areas. Prerequisite(s): instructor's consent.

THEA 516. Scriptwriting I (3).
General education fine arts course. Cross-listed as ENGL 517. Writing scripts for performance. Emphasizes both verbal and visual aspects of scriptwriting. If possible, the scripts are given in-class readings by actors. Prerequisite(s): instructor's consent.

THEA 517. Scriptwriting II (3).
General education fine arts course. Cross-listed as ENGL 518. Writing scripts for performance in theatre, film, television and the Internet. Emphasizes both verbal and visual aspects of scriptwriting. If possible, the scripts are given in-class readings by actors. Prerequisite(s): instructor's consent.

THEA 530. Musical Theatre Scene Study (2).
An interdisciplinary practicum course with opportunities for student performers to refine interdisciplinary techniques by performing scenes from a variety of musical theatre genres including operetta, book musicals and rock musicals. Advanced students may explore opportunities to gain experience in directing and choreographing under faculty guidance and supervision. Prerequisite(s): junior or senior musical theatre, dance or voice majors only; and/or permission of the instructors.

THEA 544. Applied Materials and Process Lab for Production (3).
Lab arr. Advanced stagecraft class. Explores advanced construction techniques for the fabrication of stage scenery and stage properties through applied study in materials and processes. Students complete a research project and presentation/demonstration of research findings. Independent projects relating to materials and techniques studied are pursued in arranged labs. Includes a minimum of 45 hours of applied processes and materials laboratory time. Prerequisite(s): THEA 244.

THEA 546. Scene Painting (3).
Presented with a lecture demonstration-studio arrangement. Explores various theatre painting materials and techniques enabling the student to develop skill as a scenic artist. Prerequisite(s): THEA 244.

THEA 555. Capstone Project (1).
Interdisciplinary course to showcase the talents of graduating seniors to professional producers, agents and casting directors. Students develop and produce a variety show demonstrating their talents in singing, dancing, acting, directing and choreography. For majors only. Undergraduate credit only. Prerequisite(s): instructor's consent.

THEA 559. Directing II (3).
Lab. arr. Staging and rehearsal techniques emphasizing the problems of the period and stylized play. Prerequisite(s): THEA 359 or departmental consent and junior standing.

THEA 575. Capstone Project (1).
Independent research or practical and creative final project for BFA in Performing Arts: Theatre (Performance and Design & Technical Theatre) and BA in Performing Arts: Theatre. Encompasses all areas of study in theatre as well as subjects in the emphasis or designated plan of study and minor. The project results in a work that is presented for evaluation to a panel of faculty or to faculty and an invited audience. The form of the project and manner of presentation is determined in consultation with student's project advisor. For undergraduate majors only. Prerequisite(s): ENGL 102, MATH 111 or 131; senior standing and departmental consent.

THEA 590. Theatre: Special Topics (1-3).
Designed to expand and strengthen the experience of the student academically and professionally. Study of developments in theatre that go beyond, or are related to, courses already offered gives students a much richer preparation for their field of study. Topics include new technology, new materials, contemporary explorations in performance, and in-depth study of production methods.

THEA 610. Directing the Musical (3).
An interdisciplinary course using interdepartmental expertise (theatre, dance, music) to teach the student how to produce a musical. Prerequisite(s): instructor's consent.

THEA 622. Academic Theatre Practicum (2).
The investigation and exploration of the theatrical act in the classroom situation within the university community. Reinforces researching, writing, directing and performing skills. Enrolled students, functioning as a company, produce and perform for various disciplines on campus. Repeatable once for credit.

THEA 623. Theatre History I (3).
The history of theatrical activity as a social institution and an art form from its beginnings to the 17th century. Includes representative plays, methods of staging and theatrical architecture of various periods. Prerequisite(s): THEA 228.

THEA 624. Theatre History II (3).
General education fine arts course. History of theatrical activity as a social institution and an art form from the 17th century to the present. Includes representative plays, methods of staging and theatrical architecture of various periods.

THEA 630. Auditions Class-Musical Theatre (3).
Practicum course develops techniques and audition repertory singers need to gain professional employment and/or successfully compete for placement in advanced training programs. Also covers the business skills necessary for a professional career, and brings students into contact with professional guest artists who can provide additional insights and contacts. Prerequisite(s): instructor's consent.

THEA 643. Styles In Acting (3).
Training in, and development of, the special techniques required for period or stylized plays with special emphasis on Greek, Shakespearian and Restoration styles. Prerequisite(s): THEA 243, 342, junior standing.

THEA 647. Scene Design II (3).
Continuation of THEA 344 with more advanced work in designing settings for the stage and including studies in scenographic techniques and exercises in model building. Students design settings for a production having a single set, a production requiring a simultaneous setting and a production using multiple settings. Requires no laboratory work in theatre production. Prerequisite(s): THEA 244, 344.

THEA 649. Stage Lighting II and Theatre Sound (3).
Continues the study and application of the theories and techniques of THEA 345, emphasizing advanced concepts of design, and provides an introduction to theatre sound production. Prerequisite(s): THEA 345.

THEA 651. Scene Study (3).
The synthesis of all previous acting courses. Studies scenes in depth as preparation for performance. Course goal is the presentation of fully realized characterizations in those scenes studied, integrating the elements of the actor's craft learned in the prerequisite courses. Prerequisite(s): THEA 643 and junior standing.

THEA 653. History of Costume (3).
Lab. arr. Historical survey and individual research of dress from ancient Egypt to present day emphasizing social, political, economic and religious influences. Theory and practice of adapting period styles to the stage. Prerequisite(s): THEA 253 or departmental consent.

THEA 675. Directed Study (1-4).
Cross-listed as COMM 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite(s): departmental consent.

WOMS - Women's Studies

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

WOMS 150. Workshop (2).
Topics vary by semester. Past topics have included assertion training (introductory and advanced) and rape information and prevention. *Course includes diversity content*.

WOMS 150A. Women and Compassion Fatigue (1).
Cross-listed as SCWK 150F. High turnover rates in fields associated with caregiving are often associated with burnout or compassion fatigue. Course examines factors that contribute to compassion fatigue, how to recognize it, the ways in which it may interfere with effectiveness, and strategies to combat it. *Course includes diversity content*.

WOMS 150N. Introduction to Domestic Violence (1).
Cross-listed as SCWK 150N. Introductory course examines historical, personal, social and legal perspectives of domestic violence and intimate partner violence. Explores cultural images and messages related to intimate relationships in the media, and analyzes how those messages influence beliefs about relationships. Looks at the consequences of domestic violence, how the community responds to it, and what resources exist to provide assistance. *Course includes diversity content*.

WOMS 150O. Sexual Assault Issues (1).
Cross-listed as SCWK 150D. Introductory course explores cultural myths and stereotypes about rape, law enforcement and legal system issues pertaining to sexual assault and abuse, community resources, providing help, and other related issues. These topics are explored through course readings, lecture, class discussion, films and guest discussions. *Course includes diversity content*.

WOMS 180. Special Topics (1-3).
Topics vary by semester. *Course includes diversity content*.

WOMS 180D. Introduction to Women's Studies (3).
Students analyze the varieties of women's experience in contemporary American society, consider how gender relations may be changing, and investigate the historical social, political, economic, and cultural forces that shape lives relative to gender. Feminist thinking within and across academic disciplines frames the exploration of these topics. Students explore relations of inequality organized along lines of race, ethnicity, nationality, class, sexuality, ability, appearance, age, and other categories of difference, in addition to gender. *Course includes diversity content*.

WOMS 190. Diverse Women in Popular Culture (3).
General education humanities course. Examines how women of various races, classes and ethnicities are represented in a wide variety

of popular media. Encourages the critical analysis of why and how these popular representations are politically and socially significant in shaping society's perceptions of women. Also explores women's popular genres. *Course includes diversity content*.

WOMS 287. Women in Society: Social Issues (3).
General education humanities course. Examines women's efforts to claim their identities from historical, legal and social perspectives. Includes recent laws relating to women, contemporary issues (such as rape, day care, working women, the future of marriage), agencies for change, theories of social change, and the relationship of women's rights to human rights. *Course includes diversity content*.

WOMS 306. Introduction to Gender Studies (3).
General education humanities course. Cross-listed as SOC 306. Introduces the sociology of gender. Explores how gender is socially constructed through culture, everyday interactions, the media, and institutions such as the family, education and work. Considers the consequences of gender for relationships, sexuality, economic opportunity and well-being, with a goal of connecting theory and research on gender to personal experiences. Examines how gender intersects with other forms of social inequality, including race, social class and sexual orientation. *Course includes diversity content*.

WOMS 316. Men and Masculinities (3).
General education humanities course. Cross-listed as SOC 316. Presents the sociological perspective on contemporary masculinities. Students are exposed to developmental changes in masculinity across the life course and such topics as: masculine socialization, race/ethnicity variations, work, relationships, sexualities, media, family and the men's movement. *Course includes diversity content*.

WOMS 325. Women in the Political System (3).
Cross-listed as POLS 325. Examines the political process of policy making using policies of current interest concerning women. Explores the association of societal gender role expectations with existing and proposed public policies that pertain to women's lives. *Course includes diversity content*. Prerequisite(s): 6 credit hours of social sciences or instructor's consent.

WOMS 330. Women's Personal Narrative (3).
Cross-listed as ENGL 336. Explores the literary genre of the journal as practiced by both historical and modern women. Examines works by both well-known diarists and little-known notebook keepers. In-class writing and out-of-class assignments; students are encouraged to do daily work in a journal of their own. *Course includes diversity content*. Prerequisite(s): ENGL 101, 102.

WOMS 338. Philosophy of Feminism (3).
General education humanities course. Cross-listed as PHIL 338. Explores philosophical issues raised by the feminist movement emphasizing conceptual and ethical questions. *Course includes diversity content*.

WOMS 340. Human Sexuality (3).
Cross-listed as SCWK 340. Provides a forum for information and discussion on topics relating to physical, psycho-social and cultural components of human sexuality. Includes female and male sexual attributes and roles, sexual problems, alternate lifestyles, birth control, values, sexuality and cultural components of sexuality. *Course includes diversity content*.

WOMS 345. Gender, Alcohol and Addictions (3).
Provides information about women's dependencies and their relationship to constructions of gender. Examines dependencies on substances and processes (alcohol, street and prescription drugs, eating disorders, and dysfunctional relationships) in their social and personal context. Examines theories of treatment and recovery in relation to feminist theory and women's roles in codependency. *Course includes diversity content*.

WOMS 361. Gender, Work and Culture (3).
General education humanities course. Examines the image and reality of women's employment from minimum wage work to corporate board rooms, as well as women's unpaid work. Explores the impact of cultural values, societal arrangements and public policy on occupations, wages and family life. *Course includes diversity content*.

WOMS 365. Gender and Digital Culture (3).
General education humanities course. The evolution of digital culture and society is transforming many social issues, including those related to gender and sexual orientation. An intersectional approach is used to explore the societal ramifications of digital technology in social media, digital economy, digital activism, Web TV, digital cinema, and computing cultures. Themes include digital materiality and virtually, social equality in the digital age, and science fiction as a form of social theory. Intended for students from multiple majors and disciplines, and satisfies requirements in the Women's Studies Core Area II: Representation and Media. *Course includes diversity content*.

WOMS 370. Women in World Religions (3).
Cross-listed as REL 370. Examines past and present roles and statuses of women in various religious traditions of the world, e.g., Judaism, Christianity, Islam, Hinduism, Buddhism, Confucianism and Taoism. Examines the portrayal of women's roles in various religious and philosophical texts, and the redefinition of women's roles in the modern age within the contexts of these belief systems. *Course includes diversity content*.

WOMS 380. Special Topics (1-3).
Focuses on intermediate topics of interest to women's studies. *Course includes diversity content*.

WOMS 380AA. Women and Diversity (3).
Course includes diversity content.

WOMS 380AB. Black Women in America (3).
Course includes diversity content.

WOMS 380AC. Women in the Middle East (3).
Cross-listed with WOMS 514. Examines Arab women of the Middle East. Focuses on women in the region historically designated as the fertile plains—Egypt, Lebanon, Syria, Jordan and the Palestinian Territories. Covers the impact of Western colonialism and global geopolitics on women's lives; women's activism in relation to nationalism and women's rights; Western racial stereotypes of Arab women and men and their role in foreign intervention in the 20th and 21st centuries. Provides case study in the relationship of nationalism and women's rights as framed by Arab women's studies. *Course includes diversity content*.

WOMS 380AD. Black Women in America II (3).
Course continues and advances the study of questions, issues, themes of WOMS 380AB, Black Women in America. *Course includes diversity content*.

WOMS 380AE. Intro to Black Women's Studies (3).
Black women's history, lives, political thought and cultural practices. Compares black women's own self-perceptions and behaviors with the social norms and ideals about women within the Black community and in the larger society. Examines the racial/sexual politics of black women's lives. *Course includes diversity content*.

WOMS 380AF. Diversity, Human Rights and the Law (3).
Examines the role of gender in shaping public policies, primarily in the United States. Looks at the historical context and processes shaping public policy in a number of areas, such as education, family, work, crime and health. Examines the nature of contemporary policy in

these areas, the role of female activists in shaping these policies, and the impact of these policies on the lives of women. *Course includes diversity content.*

WOMS 380AI. Sex, Lies and Media (3).
In this course, students employ critical perspectives to examine narrow definitions of gender/sexuality constructed in media representations. Students deconstruct norms of masculinity and femininity generated by industries such as television, film and advertising that perpetuate and naturalize the commodification of women's bodies. Special attention is paid to bodies and modes of sexuality.

WOMS 380J. Hip Hop and Feminism (1-3).
Course includes diversity content.

WOMS 380Q. Women and Animal Rights (3).
Course includes diversity content.

WOMS 380S. Black Women Writers (3).
Course includes diversity content.

WOMS 381. Special Topics (1-3).
Course includes diversity content.

WOMS 381A. Women in Other Cultures (3).
Course includes diversity content.

WOMS 381B. Sex, Work and Culture (3).
Course includes diversity content.

WOMS 381C. Writing by Women (3).
Cross-listed as ENGL 536 and WOMS 536. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored, and specific authors studied vary in different semesters. *Course includes diversity content.*

WOMS 381D. Women and Social Action (3).
Course includes diversity content.

WOMS 382. Feminism and Girl Culture (3).
Focuses on the evolving area of feminist scholarship called "girls' studies," and is informed by both the theory/criticism of the idea and the enactment of girlhood within the context of what has been understood as a subculture: girl culture. Girls' studies includes a focus on education, gender equity, psychological development socialization, identity formation, self-esteem, sexuality, political and social activism, and popular culture. Because popular culture greatly influences young girls' processes of self-definition, students focus in large part on how media both shapes and reflects culture, and how current representations of female empowerment are attempting to navigate this supposed "postfeminist" age. Includes a film analysis component that makes it eligible for the film certificate requirement. *Course includes diversity content.*

WOMS 385. Lesbian, Gay, Bisexual, Transgender Studies (3).
General education humanities course. Cross-listed as SCWK 385. Focuses on Lesbian, gay, bisexual, transgender people, their history and culture, considering sexualities and genders as identities, social statuses, categories of knowledge, and as lenses to help us frame how we understand our world. Examines a broad range of contemporary gay, lesbian, bisexual, transgender issues in various contexts including mass media, literary, sociological, political, racial, socioeconomic, biomedical and sexual. Students have the opportunity to develop critical thinking skills and practical academic skills vital to university success. Course includes books, articles, films, guest speakers. *Course includes diversity content.*

WOMS 387. Women in Society: Cultural Images (3).
General education humanities course. Examines the impact of cultural images and ideas in women's lives. Emphasis is on the intersection of gender and race in shaping social experience and political interest. Major topics include ideology as vehicle through which women come to belong to and negotiate society; privilege, intellectual origins of ideas about gender and race, and differences in status among women that impact their lives, their relations with men and with each other. *Course includes diversity content.*

WOMS 389. Gender, Science and Technology (3).
General education humanities course. Using an intersectional approach, course explores how science, technology and gender have influenced one another throughout history and into the present. Students investigate science and technology's social and cultural contexts, particularly in relation to gender, race and ethnicity, socioeconomic class, differing abilities, sexual orientation and geographic region. Themes include the history of scientific experimentation, changing understanding of nature, relationships between knowledge and embodiment, and science fiction as social theory. In addition to satisfying women's studies requirements in Core Area III: Social Issues, this course is designed for STEM and business majors as well as for students majoring in social sciences and humanities. *Course includes diversity content.*

WOMS 391. Women's Global Issues (3).
General education humanities course. Explores women's issues from a global perspective in relation to policies approved by the International Women's Decade conferences of the United Nations. Emphasizes understanding the impact of nationalism, race, class and cultural values in creating obstacles to women's full participation in society. Explores strategies for achieving full human rights for women. *Course includes diversity content.* Prerequisite(s): one course in women's studies and one course in history or political science.

WOMS 392. Gender and Popular Music (3).
General education humanities course. Highlights the global influence of African-American music, emphasizing the role of technology in the history and ongoing development of music. Students develop a variety of social issues related to popular music while foregrounding the crucial significance of women in popular music, especially women of color, LGBT women and working class women. Daily listening experience followed by guided discussion reveals the role of gender and sexualities in blues, country, rock and roll, soul/rhythm and blues, corridor, punk, hip hop and bounce, indie rock, and more. Students gain conceptual resource and precise vocabulary for describing music and its social, economic and political contexts. *Course includes diversity content.*

WOMS 399. Asian American Women and Men (3).
General education humanities course. Cross-listed as ETHS 399. Examines the unity and diversity of historical and contemporary experiences among diverse groups of Asian Americans before and after the passage of the Immigration and Nationality Act in 1965. Analyzes the intersections of race/ethnicity, class, gender, sexual identities, citizenships and native born/immigrant status in shaping the lives of Asian Americans. Relationships between Asian American women and men and their participation in American society are also discussed. *Course includes diversity content.*

WOMS 420. Women and the Bible (3).
General education humanities course. Cross-listed as REL 420. Examines the roles and statuses of women in biblical narrative, poetry and law, as well as the position of women in various Near Eastern societies. Attention may be given to the ways in which later theologians, novelists and artists have refashioned and re-evaluated the

biblical portrayal of women in their works. *Course includes diversity content*.

WOMS 481. Cooperative Education (1-4).
Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. *Course includes diversity content*.

WOMS 481N. Internship (1-3).
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. *Course includes diversity content*. Prerequisite(s): departmental consent.

WOMS 508. Women and the Environment (3).
On completion of this course, students should be able to appreciate and understand: environmental challenges at a local, regional and global scale; gender and environment; the role of women in the environment; case studies of women's leadership and contribution to environmental custodianship; critical analysis and military-industrial discourse in relation to gender; relationships between environment and interactions with different types of global, illicit trade. *Course includes diversity content*.

WOMS 510. Hollywood Melodrama: The Woman's Film (3).
Melodrama, as a "woman's genre," is important to the development of feminist film criticism, which interrogates the contradictory meanings of motherhood and family within this culture. Through readings and films, this course provides a stylistic, literary and cultural/historical background for this 19th-century form with a specific focus on the woman's film and the family melodrama which highlight woman's position within the home. Uses textual analysis and some psychoanalytic criticism to explore and critique the fantasies and desires expressed in the visual excesses of film melodrama. *Course includes diversity content.*

WOMS 511. Women in Early America, 1600-1830 (3).
General education humanities course. Cross-listed as HIST 511. Focuses on women and gender in U.S. history between 1600 and 1830 by examining the lives, experiences, and interactions with social, political and economic systems of women. Students read articles, books and primary documents that examine women’s experiences from the first colonial contact with Native Americans to the dawn of the first women’s movement in the 19th century. Focuses specifically on colonization, regionalism, the roles of race and ethnicity in the construction of gender, women in religious life, the impact of the American Revolution, Republican Motherhood, and women’s contributions to the public sphere and market economy. In the end, students should walk away with an understanding of women in early U.S. history and of the major historical debates concerning women’s and gender history. *Course includes diversity content.*

WOMS 513. Issues and Perspectives on African Women and Globalism (3).
General education humanities course. Cross-listed as WOMS 383, ETHS 381AC. For those whose primary notions of Africa derive from little or unconfirmed information. Uses research, writing and other expressions by African women to present women dealing with their postcolonial and globalized national contexts. When possible, a teleconference with an author is arranged for a more global learning experience. Learning through local African communities, dramatic/artistic expressions and group projects is encouraged. Aims to help students develop critical and independent thinking about Africa, African women and their global engagement. *Course includes diversity content*.

WOMS 514. Women in the Middle East (3).
Cross-listed with WOMS 380AC. Examines Arab women of the Middle East. Focuses on women in the region historically designated as the fertile plains—Egypt, Lebanon, Syria, Jordan and the Palestinian Territories. Covers the impact of Western colonialism and global geopolitics on women's lives; women's activism in relation to nationalism and women's rights; Western racial stereotypes of Arab women and men and their role in foreign intervention in the 20th and 21st centuries. Provides case study in the relationship of nationalism and women's rights as framed by Arab women's studies. *Course includes diversity content*.

WOMS 516. Sociology of Gender (3).
General education humanities course. Cross-listed as SOC 516. Focuses on historic and current gender issues within a national and global context. Students explore both the individual and structural-level factors that influence the experience of "doing gender" within a variety of social institutions including potential avenues for change and collective action. *Course includes diversity content*.

WOMS 523. Feminist Film Criticism (3).
Applies critical methods of analysis from the field of feminist film studies (such as psychoanalysis, ideology critique, close textual analysis, narrative and genre criticism) to the representation of women in film. Emphasizes historical development of feminist film theory and criticism as it relates to classical Hollywood narrative, film genres and avant-garde film. *Course includes diversity content*. Prerequisite(s): 3 hours of upper-level humanities or 3 hours of upper-level women's studies.

WOMS 530. The American Woman in History (3).
General education humanities course. Cross-listed as HIST 530. Examines the history, status and changing role of women in American society. *Course includes diversity content*.

WOMS 532. Women in Ethnic America (3).
Cross-listed as HIST 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender and sexuality in women's lives. *Course includes diversity content*.

WOMS 534. Psychology of Women (3).
General education humanities course. Cross-listed as PSY 534. Psychological assumptions, research and theories of the roles, behavior and potential of women in contemporary society. *Course includes diversity content*. Prerequisite(s): PSY 111.

WOMS 536. Writing By Women (3).
Cross-listed as ENGL 536 and WOMS 381C. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored, and specific authors studied vary in different semesters. *Course includes diversity content*.

WOMS 541. Women, Children and Poverty (3).
General education humanities course. Cross-listed as SCWK 541. Addresses the problem of poverty among women in the U.S. today, and examines existing and proposed public policies designed to alleviate the problem. Explores theoretical models of poverty policy analysis and the role of values in their formulation and implementation. Discusses issues of age, race and family; special attention is given to poverty among Kansas families. *Course includes diversity content*. Prerequisite(s): 6 credit hours of social science.

WOMS 542. Women in Other Cultures (3).
Cross-listed as ANTH 542 and ANTH 397R. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies. *Course includes diversity content*.

WOMS 570. Directed Readings (1-3).
For students who wish to pursue special reading or research projects not covered in coursework. Prerequisite(s): instructor's consent. *Course includes diversity content*.

WOMS 571. Contemporary Issues and Perspectives: LGBTQ (3).
General education humanities course. Cross-listed as SCWK 571. Explores contemporary issues within the lesbian, gay, bisexual, transgender and queer communities. Explores personal attitudes regarding the social context for LGBTQ persons as well as other issues which have emerged as matters of concern and celebration with LGBTQ individuals and communities. Empowerment principles are employed and used to highlight a positive and affirming framework of the LGBTQ community. Students acquire basic skills in understanding issues of diversity and other contemporary conditions of life and culture. *Course includes diversity content*.

WOMS 579. Asian Women in Modern History (3).
Cross-listed as HIST 579 and ETHS 579. Examines women's historical and contemporary experiences in Asian America and eight major countries in modern Asia. Covers topics on Asian women's activism in relation to nationalism and women's rights. Investigates Asian women's roles and statuses in the family and society and their educational attainment and contributions to the export-oriented industrialization of the Asia-Pacific region. Examines the intra-regional migration of female guest workers among various countries in Asia. Traces the ways in which the changes in immigration laws during the 20th century affect patterns of Asian women's migration to the United States. Introduces writing that integrates Asian women's lives and Asian American experiences into the discourses on ethnicity, national origin, class, gender and sexual orientation in the United States and the Asia-Pacific region. *Course includes diversity content*.

WOMS 580. Special Topics (1-3).
Focuses on advanced topics of interest to women's studies. *Course includes diversity content*.

WOMS 580J. Domestic Violence (3).
Cross-listed as SCWK 590, CJ 522 and CJ 381V. Deals with the roots of domestic violence embedded in family roles, legal systems, religious beliefs, and the psychology of women, children and men. Also covers the consequences and prevention of family abuse. Includes discussion of literature and films. *Course includes diversity content*.

WOMS 580T. Women and Aging (3).
Cross-listed as AGE 515. Introduces students to issues in aging that are unique to women, to women's diverse developmental patterns, and to research methods appropriate for studying aging women and their life experiences. Topics include physical change, role transitions and adaptation from a life span perspective. *Course includes diversity content*.

WOMS 580X. Sex, Work and Culture (3).
Course includes diversity content.

WOMS 580Z. Dangerous Women in Film (3).
The cinematic body of the woman has long been the central focus for theories of spectatorship and psychoanalytic film theory as well as feminist media and cultural studies. As such it provides rich material for an interdisciplinary conversation not only about socio-cultural and psychological constructions of gender, sexualities, and power; but also on the disparate (oftentimes simultaneously depicted) images of woman as both positively empowering and negatively demeaning. By focusing on the role of empowered female iconography expressed visually and thematically, this course explores various filmic representations of "dangerous" women, and examines how and why these representations are politically, socially, and theoretically significant. We apply various critical methods of analysis (psychoanalysis, ideology critique, close textual analysis, narrative) to approach women's representation, in particular, the Femme Fatale (dark lady, evil seductress) and the Fighting F-toy (action chick, latex killer) to examine the influential role of the male/ spectator gaze on the creation of the empowered female icon. Because this course is for both new and experienced film students, the curriculum includes both introductory and advanced content. *Course includes diversity content*.

WOMS 585. The Femme Fatale In Film Noir (3).
From the 1970s to the present, feminism has exerted a profound influence on theories of cinema. By focusing on film noir as a genre expressed visually and thematically, this course explores various filmic representations of women, and how and why these representations are politically, socially and theoretically significant. We apply various critical methods of analysis (psychoanalysis, ideology critique, close textual analysis, narrative, style/genre) to approach women's representation, in particular, the femme fatale (dark lady, evil seductress) within the classic film noir era which occurred between 1944 and 1958. *Course includes diversity content*.

WOMS 587. Theories of Feminism (3).
Because feminism is not a single ideological stance or perspective, course examines a variety of ideas underlying feminist cultural critiques and visions for social change. Discusses the contribution of women's studies to various academic disciplines. *Course includes diversity content*. Prerequisite(s): WOMS 287, 387, or 6 hours of women's studies courses, or instructor's consent.

WOMS 588. Gender, Race and the West/East Divide (3).
General education humanities course. Examines critically the role of gender and race in the making of a supposed essential divide between the West and the East. Students are introduced to Edward Said's concept of Orientalism and the field of critique that targets how Europe and the U.S. craft an identity the West via its other, called variously, the Orient, Islam, the Muslim world, and the Arab world. Questions explored include: What is Orientalism? What is the relationship between colonialism/imperialism and the representation of the Orient or the East? How, for whom, and for what purposes do gender and race matter in this construct of a divide between West and East? These questions are examined across genres and media — i.e., in travel accounts, film, literature, policy making and news reportage. *Course includes diversity content*.

WOMS 701. Selected Topics in Women's Studies (3).
Repeatable for credit up to 6 hours. *Course includes diversity content*. Prerequisite(s): departmental consent.

WOMS 701A. Map Intersections of Gender (3).
Course includes diversity content.

WOMS 701B. Women and the Environment (3).
Course includes diversity content.

WOMS 701E. Feminism and Girl Culture (3).
Course includes diversity content.

WSUA - WSU First-Year Seminar: Liberal Arts

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

WSUA 101. Introduction to the University - LAS (3).
Designed especially for first-year students in their first semester at WSU, this course prepares students to succeed in college. Helps students form connections with each other, with faculty, with campus services and with the institution as a whole. It assists students in developing intellectually, emotionally and socially. It provides information and training about: college expectations, academic majors, careers and life planning; study skills and test taking, teaching and learning styles, respecting diversity of thought and culture, critical thinking, leadership, university policies and procedures, managing time and money, health and wellness, and the benefits of engagement in student organizations. Encourages and supports students as they adjust to college life and promotes reflective learning. In addition to other course projects, students create an individualized graduation plan through a collaborative process that involves academic advisers, the course instructor and peer mentors assigned to the course. Students who successfully complete this course have greater academic success and an improved rate of graduation compared to students who do not take this class.

WSUA 101BA. WSU 101 Badge: College 101 (0.5).
Online badge course designed to help high school students prepare for college and begin working on college skills for the classroom including writing, time management and becoming an online learner. Participation and success in this course depend on the ability to successfully manage time and priorities. All activities and assignments in this class are completed and submitted online through Blackboard and consist of reflection papers, written assignments, discussion boards and quizzes. Students are expected to take responsibility for their own learning, and should contact the instructor if they have a question about the class or an assignment. Graded Bg/NBg.

WSUA 101BB. WSU 101 Badge: Academic Success (0.5).
Online badge course designed to help high school students prepare for college and begin working on college skills for the classroom including writing, time management and becoming an online learner. Participation and success in this course depend on the ability to successfully manage time and priorities. All activities and assignments in this class are completed and submitted online through Blackboard and consist of reflection papers, written assignments, discussion boards and quizzes. Students are expected to take responsibility for their own learning, and should contact the instructor if they have a question about the class or an assignment. Graded Bg/NBg.

WSUA 101BC. WSU 101 Badge: Degree Planning and Career Development (0.5).
Online badge course designed to help high school students prepare for college and begin working on college skills for the classroom including writing, time management and becoming an online learner. Participation and success in this course depend on the ability to successfully manage time and priorities. All activities and assignments in this class are completed and submitted online through Blackboard and consist of reflection papers, written assignments, discussion boards and quizzes. Students are expected to take responsibility for their own learning, and should contact the instructor if they have a question about the class or an assignment. Graded Bg/NBg.

WSUA 101BD. WSU 101 Badge: Financial Wellness: Choosing the Best College You Can Afford (0.5).
Online badge course designed to help high school students prepare for college and begin working on college skills for the classroom including writing, time management and becoming an online learner. Participation and success in this course depend on the ability to successfully manage time and priorities. All activities and assignments in this class are completed and submitted online through Blackboard and consist of reflection papers, written assignments, discussion boards and quizzes. Students are expected to take responsibility for their own learning, and should contact the instructor if they have a question about the class or an assignment. Graded Bg/NBg.

WSUA 102. First-Year Seminar - LAS (3).
General education humanities course.

WSUA 102A. First-Year Seminar: Energy Science and The Environment (3).
General education math and natural sciences course. Discusses the science of energy, its impact on the environment and long-term climate change on our planet. Studies some basic science using simple calculations that are no more difficult than balancing a checking account, but are simple ways to track energy usage, potential change in saving money and reducing the impact on the environment. Studies long-term change from across the ages on the environment, what results can be expected from using these past experiences to predict future outcomes in 10, 50 or 100 years. Critical questions such as whether energy usage can alter the course of humans' present impact on the environment, and that other options could be pursued to reduce past adverse impacts on the environment. *Course includes diversity content*.

WSUA 102C. First-Year Seminar: Powerful Narratives: Storytelling and Social Justice in the Hispanic World (3).
General education humanities course. Fictional texts can generate awareness and empathy about contemporary problems. Course analyzes oppressive situations portrayed in literature, media and the arts from Colonial times to present. Includes texts from at least 10 Hispanic countries to give the reader a variety of cultural information. *Course includes diversity content*.

WSUA 102D. First-Year Seminar: Cross Cultural Communication (3).
General education humanities course. Teaches students to appreciate the cultural diversity located on the Wichita State campus. Students meet people from other cultures to help the students understand the world perspective of those other cultures. In addition, students learn speaking and writing skills to improve their own communication with people from other cultures. *Course includes diversity content*.

WSUA 102E. First-Year Seminar: World Cultures in Popular Media (3).
General education humanities course. Examines ways in which various cultures are depicted in popular media and how stereotypical depictions may contrast with reality in areas such as East Asia, Africa, the Middle East, Latin America and Europe. *Course includes diversity content*.

WSUA 102F. First-Year Seminar: Cooking Communities: Food and Culture in the Hispanic World (3).
General education humanities course. Analyzes food and food representation as potential national symbols and examines their cultural meanings. Studies examples of the importance of Hispanic and Latino foods and culinary traditions through the years with particular attention to the diasporic communities and the impact of immigrant food. *Course includes diversity content*.

WSUA 102G. First-Year Seminar: Latinos in the US and the Midwest (3).
General education humanities course. Introduces the history of the diverse Latino subgroups and the collective and individual experiences of Latinos and Latinas in the U.S. and the Midwest. *Course includes diversity content.*

WSUA 102I. First-Year Seminar: World Comics, World Cultures (3).
General education humanities course. Studies world cultures through comics and graphic novels. Special attention is paid to the characteristics of diverse national or regional comics traditions and their corresponding aesthetic, social, historical and political values. *Course includes diversity content.*

WSUA 102J. First-Year Seminar: Fundamentals of Diversity (3).
General education humanities course. Designed to facilitate students' success particularly in understanding the basics of diversity – its construction, perception and possibilities. Students learn the meaning of diversity in terms of being different and special according to societal norms. Focuses on gender and race, but issues of class, sexuality and ability are also included in the study. Seminars/discussions of readings, videos, Office of Diversity and Inclusion (ODI) events, and group projects provide the basis for skills development and competence that help students to engage diversity within and outside the classroom. Active participation in class blogs and/or diversity events/sites is required. *Course includes diversity content.*

WSUA 102K. First-Year Seminar: Contemporary Civil Rights Movements in the United States (3).
General education humanities course. The civil rights movement of the 1950s and 1960s helped create a rights revolution in the United States, but these movements' drive toward equality and justice continues today. Course examines two contemporary civil rights issues that have become public policy flashpoints: mass incarceration and immigration. Approaches each issue by studying the historical backgrounds and the legislative, judicial and public policy developed around these movements, and considers how to apply this knowledge in class, around the university, and in the larger community. Through examining mass incarceration and immigration, students consider how contemporary movements address long-standing inequity in American society, conversations that will affect their lives going forward. In addition, students learn critical thinking and foundational communication skills that will help them navigate the university, their courses and their future endeavors.

WSUA 102M. First-Year Seminar: History and Rock 'n' Roll (3).
General education humanities course. Investigates the emergence and development of rock 'n' roll in the Anglo-American world through a variety of different lenses and disciplinary perspectives by examining how political, economic, social and cultural trends have informed the production and consumption of popular music-making from its origins in the 19th-century until the present day. Particularly focuses on how popular music can be used to investigate historical trends and developments, and how historical developments have influenced popular music. In doing so, students come away with a better appreciation of both popular music and history, as well as the skills necessary to be successful at the university level. *Course includes diversity content.*

WSUA 102N. First-Year Seminar: World Food and Foodways (3).
General education humanities course. Analyzes food and foodways of the world paying attention to how cultural components work for each society and how they influence our perception of others. Analyzes literature, films, art and overall food representation. *Course includes diversity content.*

WSUA 102O. First-Year Seminar: Career, Life and the Humanities Geek! (3).
General education humanities course. Introduces students to the range of areas and opportunities to which they can apply the skills found in the humanities. This is more than just a discussion of jobs; although it is that. It is about the skills and tools that enhance civic engagement and establish a better quality of life. This seminar helps students think about how they can make a difference by applying their love of the humanities.

WSUA 102P. First-Year Seminar: Imagining Climate Change (3).
General education humanities course. Seminar considers how imaginative literature might help inform students about a scientific and social topic like climate change, engaging in debate about it and promoting an ethic of climate change awareness based on critical reflection and shared responsibility.

WSUA 102Q. First-Year Seminar: Criminalistic Methods: What Would Sherlock Holmes Do? (3).
General education social and behavioral sciences course. Encourages students to explore the use of analytical thought and scientific methods in their daily lives. Students examine how bias affects perceptions, decisions and outcomes of events. Using the concept that "every contact leaves a trace," students learn to assess, perceive and base philosophical decisions with an open mind.

WSUA 102R. First-Year Seminar: Exploring WSU In Your Photos and Words (3).
General education humanities course. Explores much of what WSU has to offer and documents the student's experiences using photographs and words to create an illustrated journal. Learn about the helpful people, places and policies for thriving in college. Includes class discussions, guest speakers, technology Q&As, campus tours and visits to WSU locations to learn more about available resources. Attend other first-year seminar events during the semester as they are announced. Discusses other general topics such as: understanding and using syllabi, how to talk to teachers, responsibilities as a good student, getting good and frequent advising, effective time management, effective studying techniques, campus organization and athletic resources, understanding diversity on campus, campus culture, the importance of attending classes, use and abuse of social media, understanding grading systems and professorial policies, getting physical and mental health help, diversifying class choices, and using OneStop and Blackboard.

WSUA 102S. First-Year Seminar: On Humor (3).
General education humanities course. Seminar on humor which takes a broad interdisciplinary approach to humor. Along the way, participants philosophize all the funny out of humor, muck into the politics of the absurd and get down to some funny business. Is humor quintessentially human? Is someone's bank balance a joke? Does laughing at fart jokes demonstrate poor character? The course asks all these questions and more, but answers none! Warning: the professor is not funny. Side effects are typically mild to moderate. *Course includes diversity content.*

WSUA 102T. First-Year Seminar: This Is Us, Who Are You? Family in Modern America (3).
General education social and behavioral sciences course. Seminar helps students critically examine how family is a fundamental part of American life and society. Students look at the diversity of families in America. Family is defined broadly to include, but not limited to, blood, marriage, adoption and the desired connection among people to form a close familial bond. Students are asked to think and talk about how the notion of family has played a role in their own life and formation, as well as reflect upon the literature and research regarding family and current debates/dilemmas. *Course includes diversity content.*

WSUA 102U. First-Year Seminar: Building a Sustainable Planet (3).
General education math and natural sciences course. Provides the basic concepts needed to understand current environmental issues and to evaluate actions students can take as individuals and as part of the larger community. As an informal seminar, it also provides an introduction to college life and resources while giving students an opportunity to interact with a broad range of people and points of view.

WSUB - WSU First-Year Seminar: Business

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

WSUB 102. First Year Seminar-Business (3).
General education social and behavioral sciences course.

WSUB 102A. First-Year Seminar: Solutions by Design: An Introduction to Design Thinking (3).
General education social and behavioral sciences course. Immerses students in the design thinking experience by introducing them to the basic elements of design thinking, then guiding them through the process while addressing a real-world challenge. Students cycle through observing, brainstorming, synthesizing, prototyping, and implementing. Course explores using the design thinking philosophy to assist students in solving problems. Students from all disciplines are encouraged to enroll. *Course includes diversity content*.

WSUB 102B. First-Year Seminar: The Business of You (3).
General education social and behavioral sciences course. Explores how society has grappled with ideas such as fostering a culture of innovation, creating a culture where everyone who wants to work hard has an opportunity to succeed, and promoting civil debate and the free exchange of ideas. Develops an appreciation for the market process, and its limitations, as it affects individuals, businesses and society in an evolving economy with diverse cultures and ways of living.

WSUD - WSU First-Year Seminar: Education

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

WSUD 101. Introduction to the University - Education (3).
Designed especially for first-year students in their first semester at WSU, this course prepares students to succeed in college. Helps students form connections with each other, with faculty, with campus services and with the institution as a whole. It assists students in developing intellectually, emotionally and socially. It provides information and training about: college expectations, academic majors, careers and life planning; study skills and test taking, teaching and learning styles, respecting diversity of thought and culture, critical thinking, leadership, university policies and procedures, managing time and money, health and wellness, and the benefits of engagement in student organizations. Encourages and supports students as they adjust to college life and promotes reflective learning. In addition to other course projects, students create an individualized graduation plan through a collaborative process that involves academic advisers, the course instructor and peer mentors assigned to the course. Students who successfully complete this course have greater academic success and an improved rate of graduation compared to students who do not take this class.

WSUD 102. First Year Seminar - AS (3).
General education social and behavioral sciences course.

WSUD 102A. First-Year Seminar: Superheroes Go to School (3).
General education social and behavioral sciences course. Designed for freshmen/first-year students. Includes examinations of common superhero attributes and narratives, specifically in school or educational settings. Content is applied to projects related to personal development, synergetic collaboration, service outreach, and strategic preparation for ongoing learning and growth. *Course includes diversity content*.

WSUD 102B. First-Year Seminar: Race and Ethnicity in Modern America (3).
General education social and behavioral sciences course. Examines race as a fundamental part of American life and society. Discusses race as a result of how people divide and categorize themselves and others based on physical differences which then take on nonphysical meanings (intelligence, worth, morality). Students are asked to think and talk about how the concept of race has played a role in their own lives and formative years, as well as to reflect on scholarship on race and current debates/dilemmas. *Course includes diversity content*.

WSUD 102C. First-Year Seminar: Creativity and Problem Solving (3).
General education social and behavioral sciences course. Focuses on key understandings and elements related to the creative process and the relationship of creative thinking and problem solving. Develops an understanding of creative thinking processes to explore how those processes can impact change in themselves, in others and in career contexts. The course has an experiential focus and draws from creative strategies used in education, business, science and the arts. Content is applied to projects related to personal development, synergetic collaboration, service outreach and strategic preparation for ongoing learning and growth.

WSUD 102D. First-Year Seminar: Finding Fitness, Fun and Food as a WSU Freshman (3).
General education social and behavioral sciences course. Gives freshmen at WSU an overview of campus life, the culture of WSU, college expectations and how to succeed academically. Explores various places on campus or within walking distance to get exercise, find ways to acquire and make food that's healthy, and create plans to stay mentally healthy as the challenges of the semester accumulate.

WSUD 102E. First-Year Seminar: Monsters in Movies: Disability in the Horror Genre (3).
General education social and behavioral sciences introductory course. Helps students critically examine how the horror genre contributes to bias against people with physical, mental, cognitive and social disabilities. Students are asked to reflect and discuss how promoting fear with villains and characters portraying characteristics of, and in some cases explicitly stated, exceptionalities can lead to unintentional bias, ableism and a lack of public acceptance. Students are also asked to read relevant scholarship on ability representation, exploitation of people with exceptionalities, and current debates/dilemmas. *Course includes diversity content*.

WSUE - WSU First-Year Seminar: Engineering

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

WSUE 102. First-Year Seminar: Engineering (3).
General education math and natural sciences course.

WSUE 102A. First-Year Seminar: Introduction to Technology and Innovation (3).
General education social and behavioral sciences course. Uses instruction and hands-on projects to guide first-year freshmen through

the design thinking process to develop innovative and creative problem-solving skills. The design thinking process is a methodology for innovation that combines creative and analytical approaches and requires collaboration across disciplines and diverse backgrounds. It focuses on empathy as a way to understand the user and design to meet their needs. Students work in multi-disciplinary teams throughout the course. In the final project, students apply design thinking to build a working prototype that addresses a specific identified need in the community, third-world country, or society at large. *Course includes diversity content*.

WSUE 102B. First Year Seminar: Innovations of World War II (3).
General education humanities course. The women and men of WWII banded together to create one of the biggest innovation/invention booms of our time, but how did they pull it off? Class examines many of the inventions that are still in use today — radar, penicillin, the precursors to Bluetooth and WiFi, and more — and their impact on modern society. Students learn about specific inventors, top secret laboratories, learn from failed inventions, and see Wichita's contribution to the war effort. Helps students learn how they can use the same teamwork skills, courage and other traits to fight their own battles, whether personal or in a war yet to come.

WSUE 102C. First-Year Seminar: Community Connection: Teamwork Makes the Dream Work (3).
General education social and behavioral sciences introductory course. Uses a hands-on project to guide first year students through the engineering design thinking process, a value-creation mindset and teamwork skills. Students collaborate with engineering professionals from industry. They demonstrate skills and knowledge by working in a collaborative team, assessing economic and societal impact, and participating in a formal project presentation. FYS student success topics contribute to overall achievement in this course and throughout a student's college career. Lessons and activities on these topics are graded. Student success topics include: time management, strengths' assessment, campus resources, campus involvement, information literacy and library skills, career development, student organizations, campus read, convocation, and a volunteer project.

WSUF - WSU First-Year Seminar: Fine Arts

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

WSUF 102. First Year Seminar - Fine Arts (3).
General education humanities course.

WSUF 102A. First-Year Seminar: Music Really Does Make You Smarter (3).
General education fine arts course. Provides students with an opportunity to articulate a current music advocacy philosophy while developing leadership skills for a variety of music activities and scenarios.

WSUF 102B. First-Year Seminar: Music As My Key To Success (3).
General education fine arts course. Combines performance in one of WSU's music ensembles (Symphony Orchestra, Symphonic Wind Ensemble, Concert Band, Jazz Arts, Concert Chorale, A Capella Choir, Madrigal Singers or Women's Glee Club) with classroom components that help leverage the student's music experiences into future success in their chosen field. Freshmen explore best practicing and studying techniques, focus and time management, the connections between history and art, teamwork, stage presence, and developing a personal brand.

WSUF 102C. First-Year Seminar: Seminar in Creativity and Play: Yes, Really (3).
General education fine arts course. First year seminar helps students better understand and appreciate the process of creativity and the value of play. Focuses on developing new ways of thinking creatively through play and practice. Provides opportunities to develop more creative thinking through exercises, projects and discussions. Learn techniques for improving flexibility and originality in thinking through hands-on activities and, if done right, have fun.

WSUH - WSU First-Year Seminar: Health Professions

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division;* 500 to 799 = *undergraduate/graduate*.

WSUH 101. Introduction to the University (3).
Designed especially for first-year students in their first semester at WSU, this course prepares students to succeed in college. Helps students form connections with each other, with faculty, with campus services and with the institution as a whole. It assists students in developing intellectually, emotionally and socially. It provides information and training about: college expectations, academic majors, careers and life planning; study skills and test taking, teaching and learning styles, respecting diversity of thought and culture, critical thinking, leadership, university policies and procedures, managing time and money, health and wellness, and the benefits of engagement in student organizations. Encourages and supports students as they adjust to college life and promotes reflective learning. In addition to other course projects, students create an individualized graduation plan through a collaborative process that involves academic advisers, the course instructor and peer mentors assigned to the course. Students who successfully complete this course have greater academic success and an improved rate of graduation compared to students who do not take this class.

WSUH 102A. First-Year Seminar: Food, Culture and Privilege (3).
General education social and behavioral sciences course. Examines food, culture and privilege in the United States. Includes exploration of where food and beverages come from, how they are produced and by whom, and what they mean to consumers. Gives special attention to (1) industrialized food production and distribution and its environmental and human impact, and (2) privilege related to consumption. Course format includes minimal lecture and maximum discussion from a variety of print and visual media. An eclectic collection of readings is selected from a broad range of scholarly and popular sources designed to enlighten and provoke discussion about what Americans eat and why. Warning: this course may be triggering for students in therapy for or healing from eating disorders and/or disordered eating. *Course includes diversity content*.

WSUH 102B. First-Year Seminar: Leadership and Self Discovery (3).
General education social and behavioral sciences course. Explores leadership through self-discovery, using Gallup's CliftonStrengths Inventory and the perspective from Astin and Astin (2000) that… "an important leadership development challenge for higher education is to empower students, by helping them develop those special talents and attitudes that will enable them to become effective social change agents." As students prepare their college journey, and ultimately

the working world, this course helps them identify and embrace their leadership potential.

WSUN - WSU First-Year Seminar: Honors

WSUN 102. First Year Seminar - Honors (3).
General education social and behavioral sciences course.

WSUN 102A. First-Year Seminar: Election 2020 (3).
General education social and behavioral sciences course. Examines current presidential and congressional elections as examples of democracy and citizen engagement. Studies the election from the perspective of political science scholarship, and from the perspective of citizen involvement. Students learn how the contemporary election process functions, why it matters, and consider what the results mean for the United States and the broader world. Topic is the foundation for engagement with the learning environment of Wichita State University, the community in which we live and the journey toward graduation and personal development. Prerequisite(s): honors student or permission of the Cohen Honors College.

WSUN 102B. First-Year Seminar: Honors Law and Politics Postelection 2016 (3).
General education social and behavioral sciences course.

WSUN 102C. First-Year Seminar: Honors Creative Discovery (3).
General education fine arts course. Based on the concept that all humans are creative beings who are involved in the creative process. Explores this concept through creative exercises inspired by the core text, Discovering the Creative Impulse by Harold Popp. Students review creative processes and products with an eye to the uniqueness of human needs, drives and activities. Diverse perspectives are integral to the creative endeavor not only in art and in science, but across disciplines, cultures, ages and experiences. Fulfills a general education introductory course in the fine arts and an honors seminar requirement. *Course includes diversity content*. Prerequisite(s): honors student or permission of the Cohen Honors College.

WSUN 102D. First-Year Seminar: Honors Discovering Humanity (3).
General education humanities course. Devoted to discovering humanity by placing personal and fictional narratives about justice, anger and identity in dialogue with classic texts and historical contexts. Students begin and end the semester by writing a personal statement and, throughout the semester, engage in service learning, library research, and various strategies for academic success. Fulfills a general education introductory course in the humanities and an honors seminar requirement. *Course includes diversity content*. Prerequisite(s): honors student or permission of the Cohen Honors College.

WSUN 102E. First-Year Seminar: Me and My Place in the World (3).
General education social and behavioral sciences course. Invites students to explore their own roots and the experiences that have shaped who they are today. Students engage with others who have different stories from their own and examine shared interests and concerns about issues facing the world today. Students consider how they can make a difference locally and globally. *Course includes diversity content*. Prerequisite(s): honors student or permission of the Cohen Honors College.

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