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Undergraduate Catalog 2002-2003
This catalog is a guide for information only and is not a contract. This catalog becomes effective Fall Semester 2002 and extends through the Summer Session 2003. The official University address is Wichita State University, 1845 Fairmount, Wichita, Kansas 67260. 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 www.wichita.edu
What you’ll find inside this Catalog

- For new and continuing students, it’s a guide to academic life at WSU.
- For high school and community college advisors, it’s an information source that will help students make the best possible transition from their current educational setting to WSU.
- For WSU personnel, it’s the standard reference for answers to many University policies and procedure questions.

This preface is a guide for students; it highlights some of the subjects covered in the Catalog. For specific topics, see the Catalog’s Table of Contents and Index.

About Our University
The opening pages introduce you to the people who lead our University and our special mission as part of the Kansas Regents’ system of public universities. Next is a profile that will give you a brief overview of our University today. We’ve also provided a short history of WSU. To help you find your way around the University, we’ve included a campus map.

About Becoming a Student
The first step in becoming a student is getting admitted to the University. There are several types of admission to Wichita State’s degree and nondegree programs. Learn about these and find a complete guide to becoming an official WSU student in this Catalog.

The next step is to look carefully at your educational options. Check out the range of WSU’s advising services in this Catalog or online.

If you’re not sure what you want to study, the place for you is the Liberal Arts and Sciences Advising Center. It helps WSU students explore academic and career plans.

If you know what your major will be or if you’ve already chosen a degree plan, you’ll be assigned an advisor within one of the colleges at WSU. Your advisor will help you develop your personal course of study at WSU and assist as you put together your individual semester class schedules. Take a look inside the back cover for a chart of the degrees and academic majors offered at WSU.

To ensure the best possible start for each student, WSU provides special academic success programs. If you’re interested, the Catalog has information to help you connect with the one that’s right for you.

About Getting Started at WSU
After you’ve worked out a plan with your advisor, you’ll be ready to sign up for classes through online, telephone, or in-person registration. Specific policies regarding registration are found in this Catalog, and we’ve included an Academic Calendar that lists important dates in the WSU year.

Each semester, our orientation program introduces new students to academic and campus life. You’ll learn not only what a Shocker is, but how to be one.

By this time, you may be thinking you need some space to call your own. If you’re interested in on-campus living, check out the information on campus housing.

Need financial assistance and scholarships to help cover the cost of your education? You’ll find information about that here, too. Plus, you’ll find a comprehensive fee schedule to help take the guesswork out of figuring your costs.

About WSU’s Academic Advantage
WSU students receive quality instruction from faculty who value students and classroom achievement. All students working toward a bachelor’s degree complete general education courses to gain the background needed for a university education. WSU’s general education requirements are included, along with a worksheet for your use.

Because we emphasize student-centered instruction, WSU maintains a strong support system of academic resources. To help students outside the classroom, we offer math, language, and writing labs. We have computer labs for students and a library study room that’s open 24-hours-a-day. Every WSU student is eligible for an e-mail account and Internet access. The resources of our libraries, the Computing Center, and the Media Resources Center provide major educational and technical support for the entire University community.

As a WSU student, you have many academic options. You may decide to attend a special workshop, or climb a mountain on a field study, study abroad, or “exchange” credits by taking classes at another university in the United States. The Catalog has information on these general academic programs and others including WSU’s Honors Program.

Our University has a long-standing reputation for excellence in basic classroom instruction. Our faculty’s merit is reflected in the ranking of their scholarly contributions and the results of their nationally...
recognized research. You’ll find each of our faculty listed in this Catalog along with their title, academic field, and educational background.

About WSU’s Metropolitan Advantage

Because WSU is the only Kansas Regents’ university located in an urban setting, our students have distinct advantages for experiential learning. One benefit of our urban setting is a strong cooperative education program for students who wish to combine classroom studies with academically related, paid employment.

Convenient classroom locations are another hallmark of our urban university. In addition to our main campus at 21st and Hillside, WSU offers classes in locations in Wichita’s west side, south side, and downtown.

Safety is a priority at every University location, and our well-lighted main campus is rated as one of the safest in the nation.

Child care is available at the main campus child development center. WSU also provides counseling and testing for students. We have special programs for students interested in multicultural affairs and offices for international programs, veterans services, and disability services. Student Support Services, a federally funded program, assists limited income and first generation college students in meeting their academic goals.

The Catalog describes the myriad of student academic services available at WSU. Together these services provide a safety-net for many different students—from those away from home and entering an urban environment for the first time to the adults who are returning to campus to further their education.

About Campus Life

At WSU students can enjoy both our urban setting and traditional campus life. Our time-honored traditions begin each academic year with Welcomefest, followed by Shocktoberfest, a week-long, all-campus, event held each October. Throughout the year, NCAA Division One competition offers the excitement of men’s and women’s basketball, championship baseball, and other varsity sports. Hippodrome is a spring event filled with activities for students. Then faculty, students, and their families relax and enjoy our outdoor movie series before May finals wind down the academic year.

There’s always plenty to do at WSU, whether it’s joining organizations, taking part in the Student Government Association, or experiencing sorority and fraternity life. The Catalog can put you in touch with these and other campus activities including intramural sports and recreation.

If working out is a high priority, the Heskett Center is the place for you. There you’ll find an indoor swimming pool, exercise equipment, walking track, and gym.

The Catalog also can lead you to the heart of the campus, the Rhatigan Student Center, home of the campus bookstore, restaurants, meeting rooms, and a bowling and recreation center.

WSU students get special rates for some events, the Wichita Symphony, and golf at Braeburn, the 18-hole campus course.

Grace Memorial Chapel and other campus facilities such as the Ulrich Museum of Art are open to students. Each day our students enjoy WSU’s diverse outdoor sculpture collection, one of the largest found on any university campus in the United States.

About Your Studies

This Catalog describes our six colleges: W. Frank Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions, and Fairmount College of Liberal Arts and Sciences. The general policies and programs available in each college are included. Each course is listed by number and title together with a brief description of what you can expect to study in that course. As you plan your program, the Catalog can provide information on graduation requirements.

The Catalog also gives specific information about academic policies and procedures University-wide. From access and auditing to exemptions and examinations—from honors recognition to academic probation, it’s the place to go to when you need the rules and regulations.

About Your Life After WSU

As you near the end of your career at WSU, this Catalog will help you transition to the world outside the University. It can guide you to our career services office where you’ll get help in creating resumes and making contacts for employment interviews. It will lead you through Commencement ceremonies and beyond. Our Alumni Association and the WSU Foundation offer opportunities to continue your relationship with Wichita State.

This Catalog was created to assist students. Whether you’ve just enrolled in your first class or you’re about to receive your degree, we hope this Catalog will be a path through our academic world, make your life as a student easier, and help you build strong ties to Wichita State University.
Academic Calendar for 2003-2004

Fall Semester 2003
August 13-20 ..................................... Fall semester registration
August 21 ............................................ Weekday and evening classes begin
September 1 ........................................ Labor Day, holiday
October 16 ............................................ Midterm point
October 19-21 .................................... Fall recess
November 3 ........................................ Final date for withdrawal with nonpenalty grades
November 10-January 8 ........... Web registration period for spring semester
   (exact dates published in the Schedule of Courses)
November 26-30 ................................ Thanksgiving recess
December 11 ..................................... Last day of classes
December 12 ..................................... Study Day
December 13-19 ................................ Final examinations
December 19 ..................................... Fall semester ends
December 14 ..................................... Commencement

Spring Semester 2004
January 13-17 ..................................... Spring semester registration
January 19 ......................................... Martin Luther King, Jr. Day, holiday
January 20 ......................................... Classes begin
March 12 .......................................... Midterm point
March 22-28 ...................................... Spring recess
April 2 ............................................... Final date for withdrawal with nonpenalty grades
April 19-August 6 .......... Web registration period for fall semester
   (exact dates published in the Schedule of Courses)
May 10 ............................................. Last day of classes
May 11 ............................................. Study Day
May 12-18 ....................................... Final examinations
May 18 ............................................. Spring semester ends
May 14,15 ...................................... Commencement

Summer Semester 2004
May 31 ............................................... Memorial Day, holiday
May 24-June 4 .................................... Preession and workshops
June 1-4 .......................................... Summer Session registration
June 7 ............................................... Classes begin, first four-week term and
   eight-week term
July 2 ............................................... Last day of first four-week term
July 5 ............................................... Registration for second four-week term
July 6 ............................................... Independence Day holiday
July 30 ............................................. Classes begin, second four-week term
July 30 ............................................. Summer Session ends

These dates are subject to change.

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 already are enrolled in the University.

Notice of Nondiscrimination: Wichita State University does not discriminate on the basis of race, religion, color, national origin, gender, age, marital status, sexual orientation, status as a Vietnam-era veteran, or disability. Any person having inquiries concerning this may contact the Office of Equal Employment Opportunity, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0145, (316) 978-3001.

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General Information

2003-2004 University and Academic Officers
Donald L. Beggs, President
Robert L. Kindrick, Vice President for Academic Affairs and Research
Roger D. Lowe, Vice President for Administration and Finance
Elizabeth H. King, Vice President for University Advancement
Ronald R. Kopita, Vice President for Student Affairs
Ted D. Ayres, Vice President and General Counsel
Jim Schaus, Director of Intercollegiate Athletic Association, Inc.
Eric Sexton, Director, Government Relations
Susan Kovar, Dean of the Graduate School
John M. Beecher, Dean of the W. Frank Barton School of Business
Jon Englehardt, Dean of the College of Education
Walter Horn, Interim Dean of the College of Engineering
Elaine D. Bernstorf, Interim Dean of the College of Fine Arts
Peter A. Cohen, Dean of the College of Health Professions
William Bischoff, Dean of Fairmount College of Liberal Arts and Sciences
Kathy Downs, Interim Dean of Libraries
Cheryl Anderson, Dean of Students
Christine Schneidt-Luedbe, Dean of Enrollment Services

Kansas Board of Regents
Reggie Robinson, President and CEO
Jack R. Wempe, Little River, Chair
Janice DeBauge, Emporia, Vice-Chair
Richard Bond, OVERLAND PARK
Marvin Burris, Topka
William R. Docking, Arkansas City
Lew Ferguson, Topka
James Grier Ill, Wichita
Fredric A. Kerr, Pratt
Donna L. Shank, Liberal
Deryl Wynn, Kansas City

Mission Statement
In 1991, the Kansas Board of Regents approved the following mission statement for Wichita State University:

Wichita State University is committed to providing comprehensive educational opportunities in an urban setting. Through teaching, scholarship, and public service, the University seeks to equip both students and the larger community with the educational and cultural tools they need to thrive in a complex world, and to achieve both individual responsibility in their own lives and effective citizenship in the local, national, and global community.

High quality teaching and learning are fundamental goals in all undergraduate, graduate, and continuing education programs. Building on a strong tradition in the arts and sciences, the University offers programs in business, education, engineering, fine arts, and health professions, as well as in the liberal arts and sciences. Wichita State has 113 degree programs that range from the associate to the doctoral level; non-degree programs are designed to meet the specialized educational and training needs of individuals and organizations in south central Kansas.

Scholarship, including research, creative activity, and artistic performance, is designed to advance the University's goals of providing high quality instruction, making original contributions to knowledge and human understanding, and serving as an agent of community service. This activity is a basic expectation of all faculty members at Wichita State University.

Public and community service activities seek to foster the cultural, economic, and social development of a diverse metropolitan community and of the state of Kansas. The University's service constituency includes artistic and cultural agencies, business and industry, and community educational, governmental, health, and labor organizations.

Wichita State University pursues its mission utilizing the human diversity of Wichita, the state's largest metropolitan community, and its many cultural, economic, and social resources. The University faculty and professional staff are committed to the highest ideals of teaching, scholarship, and public service, as the University strives to be a comprehensive, metropolitan university of national stature.

Wichita State University Profile
Wichita State University is distinguished from other state-supported schools in Kansas by its urban setting. Wichita State's location in the largest city in Kansas enhances the traditional classroom experience by providing students greater opportunities in resources, contacts with business and government leaders, employment, and internships.

With an enrollment of more than 15,000, Wichita State prides itself on specialized attention to each student. Although the University's students come from almost every state in the Union and 100 foreign countries, 88 percent are from Kansas, representing most counties in the state.

The average age of freshmen at Wichita State is 19; the average age of all undergraduate students is 25. Approximately half of the students at WSU attend full-time, while the other half attend part-time and take advantage of gaining work experience at such local companies as Boeing-Bryan Aircraft; Cessna Aircraft; Coleman, Inc.; Bank of America; Bombardier Aerospace-Learjet; Via Christie Regional Medical Center; Wesley Medical Center; and Koch Industries.

Wichita State students also take advantage of hundreds of campus activities, plus they enjoy the largest selection of malls, shops, restaurants, clubs, golf courses, amusement parks, and movie theaters in the entire state.

Wichita State University offers more than 60 undergraduate degree programs in more than 200 areas of study in six undergraduate colleges: W. Frank Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions, and Fairmount College of Liberal Arts and Sciences. The Graduate School offers an extensive program including 43 master's degrees which offer study in more than 100 areas; a specialist in education degree; and doctoral degrees in applied mathematics; chemistry; communicative disorders and sciences; human factors and community/clinical psychology; educational administration; and aerospace, electrical, industrial, and mechanical engineering. A listing of the programs and degrees offered at Wichita State University is located on the inside back cover of the Catalog.

Committed to fulfilling the needs of each student, WSU offers the traditional fall and spring semesters; it has the largest number of evening and summer course offerings in the Kansas Board of Regents' system. The summer session features a flexible time format with a two-week pre-session and two four-week sessions held concurrently with the regular eight-week session. During the traditional sixteen-week semester, many courses are offered in an eight-week, four-week, or shorter format.

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

An important resource to the Wichita area business community, Wichita State supports business and industry through programs such as those offered by the Mid-America Manufacturing Technology Center. The corporate community utilizes programs offered by the University's Center for Management Development for continuing professional development. The Center for Entrepreneurship encourages development of small businesses, while the Hugo Wall Center for Urban and Public Affairs supports local and state government activities.

The 330-acre campus is modern and accessible and at the same time retains the flavor of the University's 107-year heritage. More than 60 pieces of sculpture by internationally known artists adorn the campus. Personages Omens, a colorful mural created by the great Spanish artist Joan Miro, is displayed on the wall of the Edwin A. Ulrich Museum of Art.

During the past 20 years, Wichita State has more than doubled its instructional space, adding major buildings for art, engineering, health sciences, biological sciences, physical education, music, dance, and liberal arts and sciences.
More than 90 social and special interest clubs provide opportunities for students to meet and work with others who share their interests. Eight national sororities and 10 national fraternities are active on campus.

WSU is a Division I institution and fields teams in tennis, cross-country, basketball, track, golf, crew, soccer, and bowling. Men’s baseball and women’s volleyball and softball.

Wichita State has 480 full-time faculty and 46 part-time faculty. Of the total, 71 percent have earned the highest degree in their field. Of all undergraduate credit hours, 58 percent are taught by full-time faculty. The average age of our faculty is 51; 61 percent are males and 39 percent are females.

History
Wichita State began as Fairmount College, a Congregational Institution, in 1895. The college also continued the college preparatory program of Fairmount Institute which began in 1892. 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.

After 36 years as a municipal university, WSU again changed its status July 1, 1964, when it officially entered the state system of higher education. Now, Wichita State University is one of six state universities governed by the Kansas Board of Regents.

When WSU was established, the Kansas Legislature mandated a city levy of 1.5 mills to constitute a living endowment for the new university, a tax that was later adopted by all of Sedgwick County. To administer this fund and other local assets, the Legislature created the WSU Board of Trustees, thus continuing the tradition of a local board which began as the Fairmount College Board of Trustees in 1887 and continued as the WSU Board of Regents from 1926 to 1964.


University Support Areas
Alumni Association
The WSU Alumni Association is the oldest and largest support organization for 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 fun, too. Scores of exciting Shocker opportunities to participate in programs and events geared for fun prove this point every season.

Many traditional University events, such as WelcomeFest, commencement and the Senior Breakfast, are supported by association dollars and volunteers. Two WSU initiatives that benefit students and rely on alumni participation for their success are the Career Network Experience (CNE) and the “Drive Your Pride” WSU license plate program. CNE is a for-credit student mentoring program. A joint enterprise of the association and Cooperative Education, CNE pairs students with alumni professionals in their fields of study. The license plate program offers alumni and students the opportunity to sport WSUShock on their official Kansas tags, and, at the same time, support student scholarships. The tag program pours thousands of dollars each year into WSU’s general scholarship fund. The association also helps support WSU’s Student Ambassador Society and sponsors its own student organization, the Student Alumni Association.

For more information about the groups, events, projects and publications of the WSU Alumni Association, call 978-3290 or drop by the Woodman
Admission Process—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 or at www.admissions.wichita.edu

High School Students or College Transfers with 1-23 hours of college credit
• Send a completed and signed application.
• Have your official high school transcript (minimum of six semesters) and college transcript(s), if applicable, sent directly to the WSU Office of Admissions.
• Have your ACT, SAT, or GED scores sent directly from the testing agency to the WSU Office of Admissions.
• Submit a nonrefundable $30 application fee.

College Transfers with 24 or more hours of college credit
• Send a completed and signed application.
• Have your official college transcript(s) sent directly to the WSU Office of Admissions. Official high school transcripts are required only if seeking federal financial assistance.
• Submit a nonrefundable $30 application fee.

Guest Students—High School. Students who attend Wichita State before graduation from high school are considered guest students.

Admission requirements
• Completed their junior year of high school. Younger students will be considered on an exceptional basis.
• Submit an application and $30 fee
• Submit an official high school transcript
• Obtain a high school counselor's permission to take college courses while in high school.

High school guest admission must be renewed each semester.

Guest Students—International Students. Students issued a visa for another institution may be admitted as guest students at Wichita State providing they meet all criteria for admission outlined in the International Students section (see below).

International Student Admission

Wichita State University demonstrates its commitment to international education through its Office of International Education, which comprises three smaller units: the Office of International Admissions, the Intensive English Language Center, and the Office of International Programs. These units work together to assist 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 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 under-
graduate 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 TOEFL.
2. Obtain a TOEFL score of 197 or higher on the computer-based TOEFL.
3. Obtain an IELTS overall band score of 6.0 or higher.
4. Obtain a satisfactory score on the WSU English Proficiency Examination.
5. Successfully complete the highest level of WSU’s Intensive English Language Center.
6. Complete at least 30 transferable semester credit hours at a U.S. college or university.

*All TOEFL scores must be sent directly from the TOEFL office in Princeton, New Jersey.

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

1. A completed International Undergraduate Application Form.
2. US $50 nonrefundable application fee.
3. Official copies—in English—of all transcripts from all secondary schools, colleges, or universities attended.

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

Other Requirements. All international students are required to have medical insurance that meets University requirements, including support for repatriation and medical evacuation. If needed, medical insurance may be purchased at the University. All new students are required to be tested for tuberculosis after their arrival in Wichita.

Graduate Student Admission

Specific requirements for either degree or non-degree admission and for all graduate programs are listed in Wichita State University’s Graduate Bulletin.

For further information about graduate admissions requirements or graduate programs or to obtain graduate application materials, contact the Graduate School Office, 107 Jardine Hall, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0004, (316) 978-3095; or order online at webs.wichita.edu/gradsch.

Shocker Connection: Orientation

Orientation is a series of programs prior to the start of classes that help new students become a part of the learning community. At orientation, students have a chance to learn about campus life experiences and opportunities; obtain information regarding cooperative education; tour the campus; make connections with WSU faculty, staff, current students, and other new students; and participate in a community service project.

Degree-bound Students: Because orientation and educational planning are not preludes to education, but rather a part of college education itself, new students entering directly from high school and all first-semester degree-bound students with fewer than 24 transfer hours are required to complete Shocker Connection: Advising and Enrollment. After new students have met with their academic advisor who helps them build their class schedule, consider career or life goals, register for classes and obtain their Shocker Card, they are expected to attend orientation. Information about advising, enrollment, and orientation is sent by the Office of Admissions-Orientalion to all students who have been admitted to the University.

Non-degree-bound Students: The Shocker Connection process, including orientation activities, is available and recommended, for non-degree-bound students. LAS-1 100A, Returning Adult Seminar, a class designed for adults who have been out of school for one year or more, is also recommended. Contact the LAS Advising Center, (316) 978-3700 or advising.wichita.edu, for more information about the seminar.

In addition to the Shocker Connection process, new students are encouraged to enroll in a freshman seminar course offered in each college. This course equips students with knowledge and skills about how to be successful in their academic careers. See Student Academic Success, page 11.

For more information about Shocker Connection: Orientation, contact the Office of Admissions-Orientalion, (316) 978-5686.

Academic Advising

Academic advising is a key element in students' success. The location of the different academic advising offices that serve students are outlined in the adjoining box.

Wichita State University believes in the importance of quality academic advising. Each student is paired with a knowledgeable advisor who cares about the student's personal and intellectual development and academic and career success. Through the develop-

Where to Go for Academic Advising

Academic advising is available through individual offices listed below for (1) degree-bound students who have decided to pursue a major or program in a specific college; (2) degree-bound exploratory students who have not yet decided on a major; (3) non-degree-bound students who are enrolled in classes for purposes other than completing a degree; and (4) graduate students. Find the name of your advisor through Shocker One Stop (SOS).

Degree-Bound—Major Decided

Business
W. Frank Barton School of Business
114 Clinton Hall
(316) WSU-3245
business.wsu.edu

Education
College of Education
107 Corbin Education Center
(316) WSU-3300
education.wichita.edu

Engineering
College of Engineering
100 Wallace Hall
(316) WSU-3400
www.engr.wichita.edu

Degree-Bound—Exploratory or Non-degree-Bound

LAS Advising Center
115 Grace Wilkie Hall
(316) WSU-3700
advising.wichita.edu

Graduate Students
Graduate School
107 Jardine Hall
(316) WSU-3095
webs.wichita.edu/gradsch

In turn, students are expected to initiate and maintain contact with their advisors; to discuss information that may affect academic performance, such as work and family commitments; to learn basic University, college, and departmental requirements and to accept responsibility for them; and to seek assistance when needed. A good advising relationship promotes academic excellence, success, and achievement of educational goals.

Student Academic Success
Special courses are offered to assist students in their transition to the University. These courses focus on the necessary academic and life management skills to be successful in college and to prepare for lifelong learning and career development. To maximize their potential for success, all freshmen are encouraged to take the Introduction to the University course which is offered in each academic college. This course focuses on study skills, reading, writing, library usage, critical thinking, memory, note-taking, and test-taking skills. Time management, financial management and values clarification are addressed. Many of these courses also focus on specific career information appropriate to students in a particular area. Other courses designed to assist students in succeeding in the University are Career Exploration, Returning Adult Seminar, and Introduction to Library Research. Our research shows students completing a success course persist at a rate of 12 percent higher than those who do not take the course.

Supplemental Instruction. WSU offers Supplemental Instruction in traditionally “high risk” freshman and sophomore level courses that deal with unfamiliar or abstract concepts. Supplemental Instruction leaders, who have had special training, lead study groups for students in the class. Research shows that students who participate in Supplemental Instruction average a half letter grade higher than students who do not participate. The academic advisor and the Schedule of Courses identify course sections that offer Supplemental Instruction. This program is partially funded from SGA fees.

Housing and Residence Life
On-campus housing is available for more than 1,000 students in Fairmount Towers, Brennan Hall, and Westshoacker Apartments. Housing options include an honors hall, a fine arts floor, smoke-free floors, coed floors, suite-style residence hall rooms, and a variety of apartment units.

Because 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, WSU requires all incoming freshmen to live on campus in designated University housing. Freshmen live their first two semesters in our traditional residence hall, Fairmount Towers, unless they qualify to live in the Honors Hall in Brennan or are exempted from living on campus. 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. 21 years old or older
2. Married
3. Living with a parent, legal guardian, grandparent, uncle, or aunt in Sedgwick County
4. Living in official Greek housing

All freshmen who would like to be exempted from the residency requirement—including those who fall into one of the above categories—are required to complete and submit a Freshman Exemption Form. Exemptions will be reviewed by the Office of Housing and Residence Life and a written reply will be sent to those who requested an exemption.

Admission to Wichita State does not mean automatic room reservation. Each student admitted will receive information concerning housing from Housing and Residence Life. Students need to complete a contract and an application card and pay an application fee and prepayment/deposit to reserve a room or apartment. Students are encouraged to apply early since space is limited.

For more information, contact Housing and Residence Life Wichita State University 1845 Fairmount Wichita, Kansas 67260-0141 (316) 978-3693 web.wichita.edu/housing

For housing and residence life fees, see pages 12, 13 and 14 of the Catalog.

Wichita State University reserves the right to make policy adjustments where the situation demands and to change the residence of any student or deny or cancel residence accommodations of any student in cases where such action is deemed desirable.

Registration
Specific information regarding registration is given in the WSU Schedule of Courses published each semester and summer. Students may register in person, or through the Internet at the designated times.

Prior to registering for classes, all students should contact their academic advisor to assure they are taking the appropriate classes. Preregistration for one semester normally begins about midway through the preceding semester. Registration is not complete without fee payment.

Registration and classes begin and end at varying times so it is important to consult the Schedule of Courses for details. For more information, check our Web site, www.wichita.edu/registrar.

Financial Information
Tuition and fees for Kansas residents cover less than one-third of the cost of an education at Wichita State. The remaining expenses are paid out of donations made to the WSU Foundation and from appropriations from the State of Kansas.

Kansas Residency requirements are described on page 36 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 University's Office of Financial Aid, 203 Jardine Hall, to see what assistance is available for their specific needs. Most financial assistance is based on financial need, but some scholarships are awarded without consideration of financial need.

Scholarships. The Board of Trustees of the University, in cooperation with the Kansas Board of Regents, administers a large number of scholarships and loans coming from endowed property and funds of the University.


Employment. Students enrolled in at least 6 hours may be eligible for part-time employment at the University. Federal work study employment is based on enrollment in at least 6 hours and demonstrated financial need. Students may find employment as academic assistants, clerical assistants, technical assistants, custodial or food service assistants, or library assistants. For information about student employment contact the Office of Career Services, 203 Grace Willkie Hall.

Scholarships
Wichita State University has been fortunate to receive donations from past graduates, faculty, staff, friends, and administrators of the University who wish to assist future graduates in financing their years at Wichita State University. 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 full needs of students requiring financial assistance.

Endowed scholarships are funded from earnings on donor endowment funds. 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.

To apply for general scholarships, contact the Office of Financial Aid. To apply for departmental scholarships, contact the department directly and request an application. Once a scholarship application is received, students are considered for all scholarships for which they qualify.

### Withdrawal and Financial Aid

A student’s eligibility for student financial aid is based upon enrollment. The Higher Education Act of 1998 outlines rules which govern the return of Title IV federal financial aid funds disbursed to a student who completely withdraws from a period of enrollment.

These rules assume that a student “earns” his/her aid based on the time the student remains enrolled. “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% of the enrollment period, a student “earns” aid in direct proportion to the length of time he/she remains enrolled. A student who remains enrolled beyond the 60% point earns all aid for the period.

### 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 financial aid.

### Comprehensive Fee Schedule

Fees given in this Catalog were proposed for 2003-2004 and may be changed by the Kansas Board of Regents or the Kansas Legislature.

### Basic Fees

Basic fees for on-campus regular enrollment and continuing education credit courses are:

<table>
<thead>
<tr>
<th></th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate tuition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per credit hour</td>
<td>$78.22</td>
<td>$304.12</td>
</tr>
<tr>
<td>Designated tuition</td>
<td>1.09</td>
<td>1.09</td>
</tr>
<tr>
<td>Designated tuition</td>
<td>1.09</td>
<td>1.09</td>
</tr>
<tr>
<td>Designated tuition</td>
<td>1.09</td>
<td>1.09</td>
</tr>
<tr>
<td>Total tuition</td>
<td>$117.75</td>
<td>$357.75</td>
</tr>
</tbody>
</table>

*Fees and fees for the Fall and Spring semesters and Summer Session.

### Workshop and Off-Campus Fees

On-campus credit workshops cost $80.40 tuition and $20.30 student fees, both per credit hour, and $10.30 overhead. In addition, there is a $17 registration fee per semester and a parking fee of $5.50 per credit hour. A specific course fee of $100.40 (undergraduate) includes $20 Area fee or $145.75 (graduate); includes $28 Area fee per credit hour is assessed for off-campus regular enrollment and continuing education credit courses or workshops. Non-credit workshop fees are based on costs.

### Departmental or College Fees

Special departmental fees are charged as summarized below:

1. Students are required to reimburse the University for the cost of (a) excess breakage and wastage of materials and (b) materials used in excess of those required for completion of course work.
2. Dance program fees (DANCE 201, 210, 301, 310, 401, 410, 501, and 510)—$12 per semester for course
3. Engineering equipment and maintenance fees—$14 per credit hour for engineering courses
4. Geology Field School—actual cost per semester
5. Kinesiology and Sport Studies (bowling)—$50 per semester
6. Kinesiology and Sport Studies (bowling), RSS 201B—$10 per course
7. Kinesiology and Sport Studies (horsemanship)—$125 per semester
8. Kinesiology and Sport Studies (scuba diving)—$55 per semester
9. Kinesiology and Sport Studies (scuba trip)—$75 per student
10. Kinesiology and Sport Studies (advanced open water diving fee)—$150 per student
11. Kinesiology and Sport Studies (pool/billiards)—$25 per semester
12. Kinesiology and Sport Studies (ice skating)—$80 per semester

### Special Fees, Deposits, and Waivers

Certain other fees are assessed as indicated below:

- Math placement test fee—$4 per student
- Scholarship search fee—$10 per student
- Currently enrolled students—$5 per semester
- Non-WSU student—$15 per semester
- Undergraduate admission application fee, initial enrollment—$30 per person
- Graduate admission application fee, initial enrollment—$35 per person
- Graduate fee to process applications for Admissions into a non-degree status—$35 per person
Registrar's Office $10/document
Career services:
Registration fee
Students $20/semester; $25/year
Non-students $35/semester; $50/year
Counseling
WSU students and alumni who have completed past two months no charge
Family of WSU faculty/staff $20/hour
Alumni $20/hour
Community people $40/hour
Credential mailings $3/mailing
Testing
Campbell Interest: Skill Survey $15/test
Strong Interest Inventory $15/test
Self-Directed Search $15/test
Missouri Card Sort $25/person
Myers-Briggs Type Indicator $15/test

Parking Fees and Fines
Parking fees for students will be assessed at the rate of $5.50 per credit hour, per semester and summer session, up to a maximum of $49.50. Parking fines will be assessed as printed in the University's parking regulations subsequent to the annual public hearing on such regulations.

Auditing Course Fees
Students pay the same tuition and fees per semester hour for audited courses as for credit courses.

Contracts and Compensatory Charges
The schedule of fees reported here does not limit the charges that may be collected under arrangements with other government or private agencies except that such arrangements may not provide for lesser charges. Tuition or other charges to more nearly cover actual costs of instruction are specifically authorized.

No tuition is charged to students enrolled in instructional programs for which the entire cost, including faculty, is financed by governmental or private agencies. Students enrolled in such programs on campus must pay all required student fees.

Department Cost-Recovery Fees
All departmental charges for specific goods and services (i.e., photocopy, optional instructional materials, placement office user fees, building use fees, optional attendance summer orientation sessions, academic transcripts, etc.) not explicitly identified herein will be priced at an amount that approximates actual costs.

Student Health Services Fees
Certain fees for laboratory tests, inoculations, prescriptions, x-rays, physical examinations, and other procedures are charged to users of Student Health Services. These fees reflect direct charges to the University and every attempt is made to keep them below market cost.

A "no show" appointment fee of $5 will be charged each student who does not call at least thirty minutes in advance of their scheduled appointment to cancel their appointment.

Housing and Residence Life Fees
Housing rates at Wichita State University vary with the choice of facility and meal plan. Housing costs for Fairmount Towers, Brennan Hall, and Wheatshocker Apartments are listed below. The listed rates do not include a $35 nonrefundable application fee for noncontinuous contractors. Payments must be made for Fairmount and Brennan before or during the payment of tuition and fees for the entire semester and no later than 5 p.m. the Friday before classes begin.

Contracts signed after classes begin require full payment with receipt of contract. Payment must be made in full even if financial assistance is not available at the time of registration. Wheatshocke Apartments have monthly payments. A $10 late fee will be charged if payment is not received by the fifth business day of each month. Rates include all utilities (water, gas, electricity), local telephone service, basic cable TV service, ethernet connection, and an activity fee. All facilities are air conditioned.

Students who cancel their contracts before July 1 (December 1 for spring semester only contracts) receive a 100% refund of their prepayment. Students who cancel their contracts between July 1 and July 31 (December 1 and December 31 for spring semester only contracts) receive a 50% refund of their prepayment. Students who cancel their contracts on or after August 1 (January 1 for spring semester only contracts) forfeit their prepayment/deposit. Students who cancel their contracts after occupancy are assessed a cancellation fee. Refer to the contract for applicable cancellation fee. The cancellation fee is subject to appeal.

Rates are for fiscal year 2004. Rates may be changed by the Kansas Board of Regents.

Financial Assistance/Room and Board: Students who receive any type of financial assistance (scholarships, Stafford or Perkins Loan, Pell Grant, SEOG, etc.) must apply their financial assistance first to tuition and fees and then to room and board until these obligations for the entire semester are completely met with the University. Housing bills must be paid in full at the time of registration even if financial assistance is not available at that time.

Fairmount Towers*

<table>
<thead>
<tr>
<th></th>
<th>Double</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-max meal plan</td>
<td>$4,620</td>
<td>$5,820</td>
</tr>
<tr>
<td>15-max meal plan</td>
<td>$4,540</td>
<td>$5,740</td>
</tr>
<tr>
<td>10-max meal plan</td>
<td>$4,430</td>
<td>$5,630</td>
</tr>
<tr>
<td>19-basic meal plan</td>
<td>$4,520</td>
<td>$5,720</td>
</tr>
<tr>
<td>15-basic meal plan</td>
<td>$4,440</td>
<td>$5,640</td>
</tr>
<tr>
<td>350 Max Block plan</td>
<td>$4,550</td>
<td>$5,730</td>
</tr>
<tr>
<td>250 Max Block plan</td>
<td>$4,060</td>
<td>$5,260</td>
</tr>
<tr>
<td>350 Basic Block plan</td>
<td>$4,330</td>
<td>$5,530</td>
</tr>
<tr>
<td>250 Basic Block plan</td>
<td>$3,860</td>
<td>$5,060</td>
</tr>
</tbody>
</table>
A $100 prepayment is due upon signing the contract. The prepayment is part of the contract amount, guarantees the reservation of the room and is included in the listed rates. Specialty housing options within Fairmount Towers include a Fine Arts, Honors and Extended Quiet Hours Floors. With the exception of some rooms on the fifth floor North Tower, all floors are smoke and tobacco free. Fairmount Towers is used for Summer School, and camps and conferences housing. Freshmen in Fairmount Towers may choose from the following meal plans: 19 Max, 15 Max, 10 Max, 19 Basic and 15 Basic. Max meal plans include $100 in Shocker Dollars for the year, $50 per semester. A 350 (Max and Basic) Block plan has been created for returning residents and new sophomores through Graduate students. The 350 and 250 Max Block plans include an additional $200 in Shocker Dollars for the year, $100 per semester. Shocker dollars may be used in Fairmount Towers Cafe, Hubbard Hall Cafe, and food venues in the Rhatigan Student Center such as Copperfield’s and Fast Break. Shocker dollars continue after the semester/session for which they were purchased.

**Brennan Halls 11 & 111**

<table>
<thead>
<tr>
<th>Meal Plan</th>
<th>Double</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-meal meal plan, S</td>
<td>$4,160</td>
<td>$5,560</td>
</tr>
<tr>
<td>19-meal meal plan, L</td>
<td>$4,360</td>
<td>$5,560</td>
</tr>
<tr>
<td>15-meal meal plan, S</td>
<td>$4,080</td>
<td>$5,290</td>
</tr>
<tr>
<td>15-meal meal plan, L</td>
<td>$4,290</td>
<td>$5,480</td>
</tr>
<tr>
<td>10-max meal plan, S</td>
<td>$3,970</td>
<td>$5,170</td>
</tr>
<tr>
<td>10-max meal plan, L</td>
<td>$4,170</td>
<td>$5,370</td>
</tr>
<tr>
<td>19-basic meal plan, S</td>
<td>$4,060</td>
<td>$5,260</td>
</tr>
<tr>
<td>19-basic meal plan, L</td>
<td>$4,260</td>
<td>$5,460</td>
</tr>
<tr>
<td>15-basic meal plan, S</td>
<td>$3,980</td>
<td>$5,180</td>
</tr>
<tr>
<td>15-basic meal plan, L</td>
<td>$4,180</td>
<td>$5,380</td>
</tr>
<tr>
<td>350-max block meal plan, S</td>
<td>$4,070</td>
<td>$5,270</td>
</tr>
<tr>
<td>350-max block meal plan, L</td>
<td>$4,270</td>
<td>$5,470</td>
</tr>
<tr>
<td>250-max block meal plan, S</td>
<td>$3,600</td>
<td>$4,800</td>
</tr>
<tr>
<td>250-max block meal plan, L</td>
<td>$3,800</td>
<td>$5,000</td>
</tr>
<tr>
<td>150-max block meal plan, S</td>
<td>$3,110</td>
<td>$4,310</td>
</tr>
<tr>
<td>150-max block meal plan, L</td>
<td>$3,310</td>
<td>$4,510</td>
</tr>
<tr>
<td>150-max block meal plan, L</td>
<td>$3,460</td>
<td>$4,660</td>
</tr>
<tr>
<td>150-max block meal plan, L</td>
<td>$3,600</td>
<td>$4,800</td>
</tr>
<tr>
<td>150-max block meal plan, L</td>
<td>$2,910</td>
<td>$4,110</td>
</tr>
<tr>
<td>150-max block meal plan, L</td>
<td>$3,110</td>
<td>$4,310</td>
</tr>
<tr>
<td>5-max plan, S</td>
<td>$2,950</td>
<td>$4,150</td>
</tr>
<tr>
<td>5-max plan, L</td>
<td>$3,150</td>
<td>$4,350</td>
</tr>
<tr>
<td>Shocker Dollar, S</td>
<td>$2,620</td>
<td>$3,820</td>
</tr>
<tr>
<td>Shocker Dollar, L</td>
<td>$2,820</td>
<td>$4,020</td>
</tr>
</tbody>
</table>

Wheatshocker Apartments*

<table>
<thead>
<tr>
<th>Meal Plan</th>
<th>Double</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two bedrooms, one bath (S)</td>
<td>$840</td>
<td>$7,669</td>
</tr>
<tr>
<td>Two bedrooms, two bath (S)</td>
<td>$1,038</td>
<td>$9,476</td>
</tr>
<tr>
<td>Four bedrooms, one bath (S)</td>
<td>$930</td>
<td>$7,577</td>
</tr>
<tr>
<td>1/2 suite (one apt.)</td>
<td>$415</td>
<td>$3,789</td>
</tr>
<tr>
<td>1/4 unit (with or without window)</td>
<td>$220</td>
<td>$2,009</td>
</tr>
<tr>
<td>Large Corner four bedrooms (S)</td>
<td>$943</td>
<td>$8,608</td>
</tr>
<tr>
<td>Large 1/2 suite (one apt.)</td>
<td>$528</td>
<td>$4,820</td>
</tr>
<tr>
<td>1/4 unit of large apt.</td>
<td>$264</td>
<td>$2,410</td>
</tr>
<tr>
<td>Small 1/2 suite (one apt.)</td>
<td>$415</td>
<td>$3,789</td>
</tr>
<tr>
<td>1/4 unit (with or without window)</td>
<td>$220</td>
<td>$2,009</td>
</tr>
<tr>
<td>Suite, two bedrooms, one bath (1)</td>
<td>$440</td>
<td>$4,017</td>
</tr>
<tr>
<td>Studio, one bedroom, one bath (1A)</td>
<td>$440</td>
<td>$4,017</td>
</tr>
<tr>
<td>Accessible one bedroom, one bath (1A)</td>
<td>$604</td>
<td>$5,514</td>
</tr>
<tr>
<td>Accessible one bedroom, one bath (2A)</td>
<td>$604</td>
<td>$5,514</td>
</tr>
<tr>
<td>Accessible one bedroom, one bath (3A)</td>
<td>$584</td>
<td>$5,332</td>
</tr>
<tr>
<td>Accessible one bedroom, one bath (4A)</td>
<td>$584</td>
<td>$5,332</td>
</tr>
</tbody>
</table>

* A $100 deposit is due upon signing the contract. The prepayment is part of the contract amount but it guarantees the reservation of the room and is included in the listed rates. Residents of Brennan Hall may choose from any of the meal plans listed above. The 19, 15 and 10 Max plans will include $100 Shocker Dollars added for the year, $50 per semester. The 350, 250 and 150 Max Block plans will include $200 Shocker Dollars added for the year, $100 per semester. All meals are served in the Fairmount Towers Cafe. Shocker Dollars may be used at the Fairmount Towers Cafe, Hubbard Hall Cafe, and food venues in the Rhatigan Student Center such as Copperfield’s and Fast Break. Shocker Dollars continue after the semester/session for which they were purchased.

**Period of Payment**

All semester fees, including laboratory fees, must be paid in full at registration.

**Assessment and Collection**

The University Controller is responsible for the assessment and collection of fees. The Controller, two associate deans, the affirmative action officer, and a representative of the Vice President for Student Affairs constitute the Board of Appeals for students who believe their residency status has been incorrectly assessed. The decision of this committee is final. Forms to initiate this process are available in the Registrar’s office.

**Unpaid Fees**

Students who leave Wichita State University without meeting their financial obligations to the University may have their records impounded by the Registrar. Their transcripts or diplomas will not be issued unless their account is cleared and they may not enroll for a new term unless all fees are paid.

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

**Drop/Add Fee Policy**

Students who drop credits and do not add credits will be charged the proportional percentage based on the week they drop the credits. This remains the same as reflected in the Schedule of Courses.

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

a. The drop and add occurs in one transaction.
b. There is an equal number of credit hours added as are being dropped.
c. A course that has been added in accordance with parts a and b, and is subsequently dropped, will retain the same refund percentage as the original course dropped.

**Refund Policy—Complete and Partial Withdrawal**

To withdraw completely from the University, students must process drop forms for all classes in which they are enrolled.

Students are eligible for refunds as published in the Schedule of Courses 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% refunds according to the policy. 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% refund for the class, the student must provide documentation that he/she did not attend more than four hours of the class.

**Summer Session Housing**

The listed rates do not include a $35 nonrefundable application fee for non-continuous contractors. Students have a 10-max meal plan, including $50 in Shocker Dollars. Shocker Dollars continue after the semester/session for which they were purchased.

**Fairmount Towers**

<table>
<thead>
<tr>
<th>Meal Plan</th>
<th>Double</th>
<th>Single</th>
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</thead>
<tbody>
<tr>
<td>Preession (two weeks)</td>
<td>$923</td>
<td>$3,433</td>
</tr>
<tr>
<td>Four weeks</td>
<td>$550</td>
<td>$6,588</td>
</tr>
<tr>
<td>Eight weeks</td>
<td>$1,080</td>
<td>$1,300</td>
</tr>
</tbody>
</table>

* A $50 prepayment is due upon signing the contract. The prepayment is part of the contract amount and guarantees the reservation of the room and is included in the rates.
For classes that begin at times other than the regular term semester, the "first class day" refers to the first day the class meets; thereafter, the "day" refers to the business day.

No other than the Controller's Office in 201 Jardine Hall or the Tuition Refund Board of Appeals is authorized to determine the amount of tuition refund a student will receive.

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 in the Controller's Office. The petition must be filed with appropriate documentation in the Controller's Office within the semester 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.

Federal regulations may require students attending the University for the first time and receiving student financial aid (grants, loans, or work assistance) under Title IV or whose parent(s)/sibling(s) a loan under Title IV on behalf of the student who withdraws from the University will be subject to a different refund policy. Contact the Controller's Office for details.

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 volunteer for military service will be subject to the University's non-military refund policy. Room and board charges will be prorated to the extent that services have been provided.

Tuition Waiver for Kansas Teachers of the Year
Kansas Teacher of the Year recipients are allowed to enroll tuition-free in up to 9 credit hours annually provided they are 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.

Student Fee Waivers
Student fees shall be waived for all Wichita State University employees who have full-time appointments. Student fees shall be waived for adjunct faculty members, lecturers, and benefits-eligible employees who do not have full-time appointments and are not carrying full-time loads (undergraduates, 12 hours; graduates, 9 hours). These University employees must have an appointment for the semester in which the student fee waiver is applicable.

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

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

Senior Citizen Fee Waiver
In accordance with the Kansas Board of Regents' policy, students who are 60 years of age or older may enroll as auditors (non-credit) in any academic course—in which space is available and for which they have the prerequisites—without paying tuition and student fees. Parking fees will be assessed at the regular student credit hour charge. 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).

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 $25 application fee before registering.

Senior Citizens who want to participate in one or more of the Kinesiology and Sports Studies 152 sections, have the following options:
1. Purchase a membership in the Center for Physical Activity and Aging (CPAA), $50 per student.
2. Those who want more complete access to the Heskett Center and Abilah Library privileges, can join CPAA and enroll as auditors, $75.00 per student (the cost includes parking fees).

Members of the CPAA are eligible for functional assessment testing each semester of their ability to perform daily living activities, an annual bone density evaluation, and an educational and informative monthly newsletter.

General University Academic Programs and Areas
General Education Program
The General Education Program seeks to provide each student with a body of knowledge that is both a broad foundation for his or her major field of study, and also the beginning of what is necessary to become a genuinely educated person. The General Education Program provides the opportunity for all students to grow in their knowledge and appreciation of the rich variety of human achievements in the arts, humanities, and sciences.

Goals of General Education
• to understand the humanities and how they explore the complexity of the human experience;
• to understand and appreciate various art forms;
• to understand human functioning and behavior in individuals, groups, institutions, and societies;
• to understand the natural sciences, their application in technological innovation and development, and their impact on society;
• to study and apply basic mathematical principles; and
• to study and apply principles of written and oral communication.

General Education Outcomes
• communicate clearly and effectively;
• analyze and assess information utilizing a variety of information and people resources;
• problem solve and make excellent decisions in personal, career, and community arenas;
• motivate people and develop collaborative work environments;
• articulate issues, options, and consequences of decisions;
• utilize technology to solve problems and facilitate tasks;
• function by examined ethical standards and principles;
• appreciate and apply understandings of the fine arts, humanities, social sciences, natural sciences, and mathematics to life, career, and community challenges;
• understand diverse cultures and relate well with individuals from these cultures; and
• actively engage in the betterment of the community in which they live.

Significant development of oral and written communication, mathematical, and library research skills is expected of all Wichita State University graduates.

Students transferring to Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities are considered to have met the requirements of Wichita State University General Education Program as determined by transcript evaluation. This refers only to students with previous college credit and is not applicable to entering freshmen.

Courses within a student's major department shall not count in fulfilling general education requirements. (This restriction applies only to one major. For students with a double major, courses in the second major could count in fulfilling their requirements.)

General education courses must be at least 3 credit hours and from the approved general education course list. The list below is current as of this printing. For other information and updates, see the Web site advising wichita.edu and click on Information for Students, General Education Courses by Time and Division.

Introductory Courses
An introductory course meets general education objectives and serves as an introduction to the discipline.
### General Education Program Requirements - Worksheet

<table>
<thead>
<tr>
<th>Basic Skills*</th>
<th>ENGL 100 or 101</th>
<th>ENGL 102</th>
<th>COMM 111</th>
<th>MATH 111 or 131**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete each with grade of C or higher</td>
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<table>
<thead>
<tr>
<th>Division</th>
<th>Introductory Course</th>
<th>Further Study/I&amp;P+ Course</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Fine Arts</th>
<th>Humanities</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Art History</td>
<td>Communication***</td>
<td></td>
</tr>
<tr>
<td>Dance (History)</td>
<td>English***</td>
<td></td>
</tr>
<tr>
<td>Musicology-Composition</td>
<td>History</td>
<td></td>
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<tr>
<td>Theatre</td>
<td>Linguistics</td>
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<tr>
<td></td>
<td>Modern and Classical</td>
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<tr>
<td></td>
<td>Languages and Literatures</td>
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<tr>
<td></td>
<td>Philosophy</td>
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<td></td>
<td>Religion</td>
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<tr>
<td></td>
<td>Women's Studies</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Social and Behavioral Sciences</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>Geography</td>
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<tr>
<td>Criminal Justice</td>
<td>Political Science</td>
</tr>
<tr>
<td>Economics</td>
<td>Psychology</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>Sociology</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics and Natural Sciences</th>
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</thead>
<tbody>
<tr>
<td>One class must be from biology, chemistry, geology, or physics</td>
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</tr>
<tr>
<td>Biology</td>
<td>Geology</td>
</tr>
<tr>
<td>Biological</td>
<td>Mathematics/Statistics***</td>
</tr>
<tr>
<td>Anthropology</td>
<td>Physics</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Public Health Sciences</td>
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<tr>
<td>Computer Science</td>
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</tr>
</tbody>
</table>

* Placement into math and English Basic Skills courses is determined by ACT scores, high school background, or departmental placement exam.
** MATH 111 or any advanced math course that requires MATH 111 or 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.
*** Excluding Basic Skills.
+ Students must take one Issues and Perspectives (I&P) course; no more than two I&P courses will count for general education credit.

### Additional College/School Requirements

Academic advising is an important part of your undergraduate experience. **Please meet with an advisor in the college of your major before registering for classes each semester.** These individuals will help you understand your undergraduate experience and assist you in selecting classes that meet your needs and requirements for the degree and major.

**Business** requires MATH 144 or 242 and ECON 201 and 202. MATH 111 or 112 meets the prerequisite for MATH 144.

**Education** requires PSY 111. All teachers who entered WSU as freshmen since Fall 1995 are required to take STAT 370, Educational Statistics, or a higher level math course. MATH 111 is a prerequisite for STAT 370.

**Engineering** students are required to take MATH 242, PHYS 313, and CHEM 111. Students have two options for completing the General Education Program requirements in Fine Arts and Humanities and Social and Behavioral Sciences.

**Fine Arts** students majoring in art education, music education, and special education music are required to take 3 hours of literature, as well as PSY 111. All teachers who entered WSU as freshmen since Fall 1995 are required to take STAT 370, Educational Statistics, or a higher level math course.

**Health Professions** requirements are listed by major. General Education requirements vary.

**Liberal Arts and Sciences** requires the following:
- English or foreign language literature (Humanities)
- HIST 131, 132 (Humanities) or POLS 121 (Social Science)
- One biology course and one physical science course; one must have a laboratory experience.
- Foreign language in all BA degrees and the BS degrees in criminal justice and gerontology.

**Special Ed.** 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 and identify possible majors and remain academically flexible.

All courses which qualify for general education credit have a caret (>) prefix in the Catalog. General education courses offered in a given semester are listed in the Schedule of Courses.
Fine Arts Courses
ART H 121, Survey of Western Art: Ancient
ART H 122, Survey of Western Art: Renaissance and Baroque
ART H 124, Survey of Western Art: Modern
DANCE 140, Art of the Dance
HRSN 104, Seminar I: Fine Arts
HRSN 150, Seminar II: Fine Arts
MUS C 160, The Heritage of Western Music
MUS C 162, World Music
THEA 143, The Art of the Theater
THEA 200, Experience the Performing Arts
THEA 260, History of Musical Theater

Humanities Courses
COMM 111H, Public Speaking (Honors)
COMM 193, Introduction to Human Communication
ENGL 220, The Literary Tradition: English Masterpieces
ENGL 230, Exploring Literature
ENGL 232, Themes in American Literature
FREN 210, Intermediate French (P)
GERM 220, Continuing German (P)
GREEK 223, Intermediate Greek (P)
HIST 100, World Civilization since 1500
HIST 101, Western Civilization to 1688
HIST 102, Western Civilization since 1688
HIST 131, History of the USA: Colonial to 1865
HIST 132, History of the USA since 1865
HRSN 105, Seminar I: Humanities
HRSN 151, Seminar II: Humanities
LATIN 223, Intermediate Latin (P)
LING 151, The Nature of Language
PHIL 100, The Meaning of Philosophy
PHIL 125, Introductory Logic
PHIL 144, Moral Issues
REL 100, Old Testament
REL 115, New Testament
RUSS 210, Intermediate Russian (P)
SPAN 210, Intermediate Spanish (P)
WOM S 190, The American Woman in Popular Culture
WOM S 267, Women in Society: Social Issues

Social and Behavioral Sciences Courses
ANTHR 100, American Culture
ANTHR 102, Cultural Anthropology
ANTHR 103, Introduction to Archaeology
CI 191, Introduction to Criminal Justice
ECON 201, Principles of Macroeconomics
ETH S 100, Introduction to Ethnic Studies
ETH S 210, Fundamentals of Cross-Cultural Communication
GEOG 125, Principles of Human Geography
GEOG 210, Introduction to World Geography
HRSN 106, Seminar I: Social and Behavioral Sciences
HRSN 152, Seminar II: Social and Behavioral Sciences

(Introductory Social and Behavioral Sciences Courses, continued)
POLS S 121, American Politics
POLS S 226, Comparative Politics
PSY 111, General Psychology
SOC 111, Introduction to Sociology

Mathematics and Natural Sciences Courses
ANTHR 101, Biological Anthropology
Biol 102, Microbes and You
Biol 102, The Human Organism
Biol 107, The Human Organism Laboratory
Biol 210, General Biology I (P)
CHEM 101, The Science of Chemistry
CHEM 103, General Chemistry
CHEM 111, General Chemistry
CS 105, An Introduction to Computers and their Applications
CS 210, Introduction to Computer Science
GEOL 102, Earth Science and the Environment
GEOL 111, General Geology
GEOG 201, Physical Geography
HRSN 107, Seminar I: Mathematics and Natural Sciences
HRSN 153, Seminar II: Mathematics and Natural Sciences
MATH 144, Business Calculus (P)
MATH 242, Calculus I (P)
PHYS 111, Introductory Physics
PHYS 131, Physics for Health Sciences
PHYS 195, Introduction to Modern Astronomy
PHYS 213, General College Physics I (without calculus)
PHYS 313, University Physics I (with calculus)
PHYS 315, University Physics Lab I
PHYS 316, University Physics Lab II
STAT 370, Elementary Statistics (P)

Further Study Courses
A further study course is taken in a discipline once a student has completed an introductory course in the same discipline.

Fine Arts Courses
ART H 322, Medieval Art I
ART H 323, Medieval Art II
ART H 325, Art of the Ancient Near East and Egypt
ART H 421, Greek Art and Architecture
ART H 521, Italian Renaissance
ART H 522, Southern Baroque
ART H 523, 18th and 19th Century European Art
ART H 524, 18th and 19th Century American Art
ART H 525, 20th Century Art before 1945
ART H 526, Art since 1945
DANCE 225, Survey of Dance History
DANCE 315, Music for Dance (P)
FA 301, An Introduction to Entrepreneurship in the Fine Arts
FA 310, Arts and Technology
MUS C 161, Music through the Ages
MUS C 346, Styles of Jazz
MUS C 493, American Popular Music
THEA 221, Oral Interpretation
THEA 241, Improvisation and Theatre Games
THEA 243, Acting I
THEA 450, Contemporary Theater and Drama (P)
THEA 516, Playwriting I (P)
THEA 517, Playwriting II (P)
THEA 623, Development of the Theater I
THEA 624, Development of the Theater II

Arts Courses
COMM 221, Oral Interpretation
COMM 302, Interpersonal Communication
COMM 311, Persuasion (P)
COMM 312, Nonverbal Communication (P)
COMM 313, Argumentation and Advocacy
COMM 430, Communication Research and Inquiry (P)
COMM 535, Communication Analysis and Criticism (P)
COMM 631, Historical and Theoretical Issues in Communication (P)
COMM 632, American Public Address
ENGL 252, Modern American Writers
ENGL 254, Modern British Literature
ENGL 272, Origins of Western Literary Tradition
ENGL 275, Studies in Popular Literature
ENGL 290, The Bible as Literature
ENGL 315, Introduction to English Linguistics
ENGL 320, The Nature of Drama
ENGL 330, The Nature of Fiction
ENGL 340, Major Plays of Shakespeare
ENGL 345, Studies in Comparative Literature
ENGL 369, Major British Writers I
ENGL 361, Major British Writers II
ENGL 362, American Writers of the 19th Century
ENGL 365, African-American Literature
ENGL 400, The Literary Imagination: The Tragic, Comic, Heroic, Satirical Modes
FREN 223, Intermediate French Readings I (P)
FREN 300, Intermediate French Readings II (P)
MCLL (FREN) 540, French Literature in English Translation
MCLL (FREN) 541, French Literature of Africa and the Caribbean in English Translation
GERM 223, Intermediate German I (P)
GERM 344, Intermediate German II (P)
GREEK 224, Intermediate Greek (P)
HIST 106, The US Century: Decades of Change
HIST 311, Colonial Latin America
HIST 312, Modern Latin America I
HIST 314, English History II
HIST 315, Modern German History
HIST 317, The Holocaust
HIST 320, Russian History Survey
HIST 321, The Vietnam Conflict
HIST 332, Ethnic America, ca. 1500-1924
HIST 333, Ethnic America in the 20th Century
HIST 340, World War II
HIST 357, Women in the Ancient World
HIST 362, The Roman World
HIST 501, The American Colonies
HIST 502, The American Revolution and Early Republic
HIST 503, Age of Jefferson and Jackson
HIST 504, Civil War
HIST 507, U.S. History: 1900 to 1945
GEOL 574, Special Studies in Paleontology (P)
MATH 243, Calculus II (P)
PHYS 214, General College Physics II (P)
PHYS 314, University Physics II (P)
PHYS 395, Solar System Astronomy
STAT 460, Elementary Probability and Statistics (P)
STAT 471, Probabilistic Models and Statistical Methods (P)
STAT 571, Statistical Methods I (P)
STAT 572, Statistical Methods II (P)
STAT 574, Elementary Survey Sampling (P)
STAT 576, Applied Nonparametric Statistical Methods (P)

**Issues and Perspectives Courses**

An issues and perspectives course is an interdisciplinary class or one that informs students of issues or problems from a disciplinary perspective. Students may take either a further study course in a discipline or an issues and perspectives course from the same disciplinary grouping. For example, an introductory course and an issues and perspectives course are different courses.

**Fine Arts/Humanities Courses**

ART E 303, Stimulating Creative Behavior
ART H 326, Architecture
ENGL 343, Great Plains Literature
GERM 341, Germany in the European Context
HIST 308, A History of Lost Civilizations
HIST 330, The Americans, Conflict and Consensus in the Development of American Society and Culture
HNRS 204, Seminar III: Fine Arts
HNRS 205, Seminar III: Humanities
HNRS 420, Seminar in Humanities
HNRS 450, Seminar in Fine Arts
MUS C 310, Interrelated Arts (P)
PHIL 300, Science and the Modern World
PHIL 302, Values and the Modern World
PHIL 385 Engineering Ethics
SCWK 541 Women, Children and Poverty (P)
THEA 385, Theatre as a Mirror of Today's America
WOM S 541, Women, Children, and Poverty (P)
WOM S 586, Gender, Race, and Knowledge

**Social and Behavioral Sciences Courses**

ECON 250, Entrepreneurship and Personal Enterprise
ECON 280, Economics of Social Issues
HNRS 206, Seminar III: Social and Behavioral Sciences
HNRS 430, Seminar in Social and Behavioral Sciences
IB 333, International Business
LAS 1-300, Global Issues
PA 326, Emerging Health Care Issues of the 21st Century
PADM 400, Issues and Perspectives on the City
PHS 508, Leadership in Self and Society
PHS 310, Understanding the U.S. Health Care System

**Mathematics and Natural Sciences Courses**

BIOL 310, Human Reproduction: Issues and Perspectives (P)
BIOL 370, Introductory Environmental Science
GEOL 300, Energy, Resources, and Environment
HNRS 207, Seminar III: Mathematics and Natural Sciences
HNRS 440, Seminar in Natural Sciences and Mathematics
HP 330, Cancer: Perspectives and Controversies
MATH 531, Introduction to the History of Mathematics (P)
Med Tech 430, Bioterrorism/Fact and Fiction
PHYS 320, Scientific Thinking

(P) designates courses with prerequisites

**Emory Lindquist Honors Program**

The Emory Lindquist Honors Program provides an enriched university experience to outstanding students. It welcomes students who are highly motivated and well-prepared. The program offers seminars, honors colloquia, and honors sections of regularly scheduled courses. Each course is limited to 25 or fewer students. The program also extends opportunities for independent study and sponsors academic enrichment activities such as lectures, field trips, and participation in regional and national honors organizations.

The program promotes academic excellence at the undergraduate level by offering a challenging honors track within the University's General Education Program, opportunities to earn academic distinction in a student's departmental major, and various support services. The honors curriculum features small class sizes, highly committed faculty, and an approach to study that emphasizes participation over passive learning. Support services provided by the program include academic advising and counseling and facilities where students can study, meet with friends, or just relax. The student-led Emory Lindquist Honors Society sponsors a variety of academic and non-academic activities.

Broad program policy is established by the Faculty Honors Committee and is subject to approval by the vice president for academic affairs. The honors director, in conjunction with the Student Honors Executive Council, makes policy recommendations and sponsors student activities.

Generally, freshmen are admitted to the program if they have achieved a minimum grade point average of 3.250 in university-level studies and if they satisfy other transfer and admission criteria established by the program. Students who satisfy the minimum grade point average requirements but who are not members of the program may enroll in honors courses if they have the permission of the honors director. To be admitted to the program, a student needs to submit an Honors Program Application and meet with a program representative.

Students in the Emory Lindquist Honors Program are expected to remain in good standing by maintaining at least a 3.250 grade point average overall, a 3.000 grade point average in honors course work, and by making regular progress toward completion of the honors curriculum. Students whose performance falls below these expectations will be placed on probation with the honors program.

**Probation**

A student whose overall or honors grade point average falls below program requirements will be put on probation for the next semester of enrollment.

In the semester following that, the student's overall and honors grade point averages must satisfy program requirements or the student will be dismissed from the program. Students may appeal dismissal to the Faculty Honors Committee by demonstrating compelling reasons why they should be permitted to continue as an honors student.

**Normal Progress**

Normal progress towards completion of the honors curriculum is defined as follows:

- complete one seminar within the first 15 credit hours at WSU
- complete two seminars within the first 30 credit hours at WSU
- complete three seminars within the first 45 credit hours at WSU
- submit a Senior Project Study Proposal
- complete the required honors curriculum
- achieve an overall grade point average of at least 3.250
- achieve a grade point average of at least 3.250 in all honors courses.

**Graduation Requirements**

To graduate with the notation "Honors Program Graduate" on his or her transcript, a student must satisfy the following requirements:

- complete the required honors curriculum
- achieve an overall grade point average of at least 3.250
- achieve a grade point average of at least 3.250 in all honors courses.

**Graduation Honors**

In addition to recognition awarded by the University to all students achieving outstanding academic records, honors program graduates are eligible for additional recognition.
Students who satisfy honors graduation requirements receive the notation “Honors Program Graduate” on their transcripts and are recognized at Commencement.

The highest ranked honors program graduates each year are named Emory Lindquist Scholars and are recognized at Commencement.

With departmental approval, honors program participants completing a senior project earn departmental honors at graduation.

Honors Curriculum
Adopted in 1996, the honors curriculum offers students an honors track for completing University general education requirements. A student is also required to complete an approved senior project in their major department.

Freshmen/Sophomore Seminars. In each of their first three semesters at the University, honors students substitute an honors seminar for one of their required general education distribution courses. Enrollment in seminars is limited to 15 students.

Seminars are offered in fine arts, humanities, social and behavioral sciences, and natural sciences and mathematics. Each seminar has a specific topic.

In honors seminars students can expect to work closely with fellow students and the professor. Seminars are designed to stimulate learning by introducing students to basic questions in various fields of study, the methods of inquiry developed to deal with these questions, and the connections between different branches of knowledge. Many seminars are interdisciplinary. Seminars emphasize the development of learning skills, including writing, oral communication, library research, and laboratory methods.

Honors Upper-Division Courses. Students must also complete two upper-division courses for honors credit. These may be honors sections of further study or issues and perspectives courses in the University’s General Education Program, courses in the student’s major, elective courses, or a combination of these.

Senior Project. To complete honors requirements, a student designs a 6-hour senior project in consultation with his or her major department. A senior project may take the form of a senior paper, laboratory research project, independent study project, internship, departmental seminar, other appropriate studies, or a combination of these. Each department determines what is appropriate for its majors. Students submit a Senior Project Study Proposal approved by their major department when they become seniors.

Additional Honors Courses. Additional honors courses are offered regularly, including honors sections of English composition, oral communication, and calculus. Students are strongly encouraged to enroll in these sections as they complete other University requirements. Grades earned in these classes are included in a student’s honors grade point average.

Honors Option. Students may take regular courses for honors credit with the permission of the course instructor and the Honors Program. Generally such honors option arrangements involve doing some additional work connected with the course. Specific arrangements are worked out between student and instructor and submitted to the honors office on an Honors Option Contract. Failure to complete an honors option carries no penalty.

Lower-Division Courses

>HNRS 104. Seminar I: Fine Arts. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>HNRS 105. Seminar I: Humanities. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>HNRS 106. Seminar I: Social and Behavioral Sciences. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>HNRS 107. Seminar I: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>HNRS 150. Seminar II: Fine Arts. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>HNRS 151. Seminar II: Humanities. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>HNRS 152. Seminar II: Social and Behavioral Sciences. (3-4). General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

>HNRS 153. Seminar II: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of honors director.

Upper-Division Courses

>HNRS 204. Seminar III: Fine Arts. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 104 and 150 and 12 additional credit hours, or permission of honors director.

>HNRS 205. Seminar III: Humanities. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 105 and 151 and 12 additional credit hours, or permission of honors director.

>HNRS 206. Seminar III: Social and Behavioral Sciences. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 106 and 152 and 12 additional credit hours, or permission of honors director.

>HNRS 207. Seminar III: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education issues and perspectives course. Topics vary. Prerequisites: HNRS 107 and 153 and 12 additional credit hours, or permission of honors director.

HNRS 310. Honors Tutorial. (1). Repeatable to a maximum of 3 hours of credit.

HNRS 400. Honors Seminar. (1-4). General education further study course. Cross-listed as ENGL 421 and PHIL 400.

HNRS 410. Independent Study. (1-4). Repeatable to a maximum of 6 hours of credit.

HNRS 420. Seminar in Humanities. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 205 or permission of honors director.


HNRS 440. Seminar in Natural Sciences and Mathematics. (3-5). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 207 or permission of honors director.

HNRS 450. Seminar in Fine Arts. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 208 or permission of honors director.

Honors Mentor Program
Much of the excitement of college learning comes through informal discussions with faculty and other students. HNRS 310, Honors Tutorial: Selected Readings offers such an opportunity. This course features informal discussions between groups of five or six students and a faculty mentor. While four or five books are read and discussed during the semester, the primary purpose of the course is to personalize the educational experience and give students an opportunity to talk about other education concerns they may have.

Certificate Programs
Certificate programs are available at the undergraduate and graduate levels. These programs are a group of related courses that address a special topic and completion of these courses indicates achievement in a specialized area. Certificates 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. Certificate programs are reviewed by the faculty on a three year rotation. Many of these programs exist for limited time periods depending on their demand. Certificate programs are further described in the various departmental sections.
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 places students both locally and nationally.

By using off-campus resources and expertise, cooperative education places students in business, government, industry, and social agencies. Programs are individually designed, enabling students to work directly with professionals in their field while expanding upon knowledge learned in the classroom. Opportunities may occur for students to refine research methods, apply theories in actual field settings, work with advanced technology, and design original projects and research.

Students hired in cooperative education positions must enroll in specially designated Co-op courses and work with a faculty advisor from within the appropriate departments. Each placement is assessed by the faculty advisor for its potential to provide learning experience relevant to the student's professional and educational goals.

Academic credit may be earned through Co-op placements as determined by the student's faculty advisor. During the work period, students are expected to meet project requirements assigned by their advisor. Academic credit generally counts toward University degree requirements.

Cooperative education offers both alternating and parallel placements. Students who select the alternating option must complete a semester of full-time enrollment in course work before entering a second alternating position. Alternating placements carry the status of full-time students and enjoy the accompanying privileges.

Students selecting the parallel option are required to carry a minimum of 6 hours of course work in addition to their Co-op course. Students may enroll in parallel Co-op positions during consecutive semesters so long as faculty sponsors determine that meaningful learning experiences exist.

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 and satisfactory academic standing. Interested students should contact the Cooperative Education and Work-Based Learning Office, 223 Grace Willie Hall, or call (316) 978-3688. Students are required to complete an application for registration in the office and an online orientation. Students also are expected to attend a professional practice workshop prior to meeting with the appropriate college coordinator. For additional information, check our Web site: www.wichita.edu/coop

Internships

A wide variety of internship opportunities are available for WSU students who want to have a short work experience that is connected to their area of study. Internships relate to a student's area of study or major. Most internships are paid but there are also excellent unpaid opportunities.

Internships are pre-defined in length, often lasting only one semester for the summer. Opportunities are available within the Wichita area and across the country. Some internships offer housing assistance through stipends or directories. Students accepting an internship enroll in specially designed internship courses and work with a faculty advisor from within the appropriate department. Academic credit is earned after completing all project requirements assigned by the advisor.

Requirements for internships vary within different colleges and departments and for various employers. Generally the requirements for registering in the internship office include completion of 24 credit hours and satisfactory academic standing.

Interested students should come to the office of Cooperative Education and Work-Based Learning, 223 Grace Willie Hall, or call (316) 978-3688. Students complete a brief orientation, attend a professional practice workshop, prepare an appropriate resume and meet with an experienced coordinator for their college. Additional information may be obtained from our Web site: www.wichita.edu/coop

Exchange and Study Abroad Programs

National Student Exchange

The National Student Exchange (NSE) is an exciting opportunity to attend one of more than 170 colleges and universities across the country while paying your regular WSU tuition. Costs of room, board, and books are paid at the host campus. You will continue to have your financial aid information sent to WSU. Most financial aid and scholarships will still be applicable; your aid must first be applied to your tuition bill at WSU, and the balance can be taken to pay costs at your host campus.

The program is open to undergraduate, domestic students who are (1) enrolled in at least 9 hours at WSU at the time of application to NSE as well as in the semester prior to exchange and (2) have a 2.00 cumulative grade point average at the time of application and at completion of the semester prior to exchange. You should apply for the program during the fall before the year you want to exchange.

Prior to the exchange, you and your academic advisor will complete an advising agreement. You will receive full credit for work satisfactorily completed on exchange.

For more information, call the NSE coordinator, (316) 978-3085.

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 in programs operated by other institutions and organizations.

WSU students who wish to study abroad should first visit the Office of International Education to talk with an advisor about studying overseas. Interested students can look at a variety of study abroad programs in the Study Abroad Library on the second floor of the James Sutherland Garvey International Center.

In addition to the three programs in France and Mexico listed below, the university offers spring break programs in Belize through the Anthropology Department and the Geology Department; exchange agreements with universities in Japan, Germany, and Australia; a special study abroad opportunity with King Alfred's College in England; and participation in consortia such as the International Student Exchange Program (ISEP) and the Maastricht Center for Transatlantic Studies. Students may also use the National Student Exchange program described above to participate in overseas study programs sponsored by those universities.

Wichita State also offers organized study abroad programs in Mexico and France, described below.

Exchange Program with the University of Orleans

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

Summer Program in Strasbourg, France

Students of French can improve their fluency and broaden their understanding of French culture in the five-week summer program in Strasbourg, France. Students with a minimum of one year of university French or the equivalent are eligible to participate. Students live in university housing and attend intermediate through graduate level courses in French language, culture, and literature. Up to 6 hours of credit may be transferred to WSU. 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 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.

Midwest Student Exchange Program (MSEP)

This program enables residents of Michigan, Minnesota, Missouri, Nebraska, and North Dakota to enroll at a reduced rate of tuition in designated programs at Wichita State. Tuition for MSEP students is
equal to 150 percent of regular in-state tuition, which is substantially less than students would pay as nonresidents. Programs approved for the MSEP at Wichita State are international business, aerospace engineering, industrial engineering, manufacturing engineering, music—instrumental or vocal, criminal justice, communication, English—creative writing, minority studies, women's studies, and medical technology.

To qualify for admission to MSEP, students must:
- have an ACT score of 24 or higher or an SAT score of 1,100 or higher.
- complete the 13-unit college preparatory curriculum as defined by ACT, including four units of English and three units each of social science, natural science, and mathematics.
- rank in the top 25 percent of their high school graduating class.
- submit an eight-semester high school transcript.

If students meet the criteria and are approved by the college dean, they will be offered a position in MSEP. Students in the program must maintain satisfactory progress toward their degree with a grade point average of 3.00 or higher.

For more information, call (316) 978-5060 or e-mail Martha.Shawver@wichita.edu

Field Studies and Workshops

Workshops
Workshops devoted to current topics are offered throughout the summer. 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. A list of the workshops being offered each summer is included in the Summer Schedule of Courses. Special fees are charged for workshops. (See the Financial Information section of the Catalog.)

High School Students

High school students between their junior and senior years may enroll as guest students for college credit in many WSU classes (see page 9). Other summer opportunities at Wichita State for high school students include sports camps in basketball, baseball, and volleyball; a drum major and twirler camp; and enrichment courses for career exploration.

Field Geology

Wichita State offers a summer field course in geology. The base camp is Beulah, Colorado, on the east flank of the Wet Mountains. The summer course consists of five weeks in the field, for which students receive 6 hours of credit.

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

Academic Resources

Libraries
The University's libraries consist of Ablah Library, the main library, and chemistry and music branch libraries. Through a wide range of materials, facilities, and services, the University libraries support teaching and research at WSU. The collections include more than three million books and periodicals, microforms, government publications, corporate annual reports, scores, videotapes, audio recordings, and more than 90 electronic databases. In 1991, Ablah Library became an official United States Patent and Trademark Depository Library, the only such depository in Kansas. Ablah Library facilities include an open stack arrangement, seating for more than 800 people, group and faculty study carrels, electronic carrels containing listening and viewing equipment, microform reading and printing equipment, and photographers. PC workstations and printers are provided to access the library's online catalog and electronic databases. A 24-hour-study room with a vending area and work stations offering access to the Internet and all library databases as well as word processing programs and a spreadsheet program is also maintained for student use.

The University's libraries offer students a variety of services, including convenient hours as well as remote access to the online catalog and most of the library's electronic resources. Reference librarians are available to help students locate information and use the computerized systems. These librarians also perform literature searches in numerous remote computerized databases. When materials are not owned, interlibrary loan services will locate and borrow materials from other institutions.

The Department of Special Collections houses the University Archives, rare books, historical Kansas maps, and a rapidly growing manuscript collection of more than 700,000 documents, many of which are available via the Internet. This collection includes papers of the abolitionist William Lloyd Garrison, the Kantor Collection of the Civil War Sanitary Commission, and local history collections, all of which can be helpful for student research.

More details about library resources and services are listed on the libraries' web site at:
www.library.wichita.edu

University Computing
The University Computing and Telecommunications Services (UCATS) organization provides the informational backbone for campus communications. In addition to the network infrastructure, UCATS supports the programs and technology for the administration of the University. Responsibilities include phone services, network connectivity, application support and training, programming support, desktop diagnosis and repair, network administration, and security, operations and technological consulting. You will find more details about these and other services online.
See www.wichita.edu/ucats

Open Student Computer Labs
UCATS maintains two open computer labs in Jabara Hall, Rooms 120 and 122. These labs are configured with up-to-date personal computer systems and an abundance of software applications. Other services that are available are Macintosh systems, scanning, laser printing, and color printing. There are lab assistants and professional staff available to support the use of these applications, systems, and other services like e-mail support, Internet use, and class project assistance.

Due to varying schedules of students, the labs have generous hours of operations that are always posted on the lab entry doors or on the web site listed under Public Labs at www.wichita.edu/user_services

Shocker One Stop (SOS)
Shocker One Stop is a web site, maintained by UCATS, that allows every student to view and edit their own WSU information. Examples are: Register for classes, view class schedules, current grades, transcript, financial aid information, edit personal e-mail and address data, and locate your academic advisor. For more information about this service and how to activate the account, go to www.wichita.edu/sos

Jabara Computer Laboratory Hours
Jabara Hall 120
Monday-Thursday, 7 a.m.-midnight
Friday, 7 a.m.-8 p.m.
Saturday, 10 a.m.-8 p.m.
Sunday, 1 p.m.-8 p.m.
Jabara Hall 122 (24-hour lab)
Open continuously, Monday, 7 a.m.-Friday, 8 p.m.
Saturday, 10 a.m.-8 p.m.
Sunday, 1 p.m.-8 p.m.

Internet Access (Shocknet2)
A dial-up connection service (56k) to the Internet is provided by UCATS. Shocknet2 is provided at a nominal fee and there is assistance available to support anyone who has problems getting a proper connection. Application, installation instructions, and other information about Shocknet2 is available through the staff at the Jabara Computer Labs, WSU-HELP (978-4357) or www.wichita.edu/shocknet2

Campus Network Access
All residence hall students are provided a direct connection to the campus network. This includes a high-speed access to the Internet. Students can also register their wireless network cards through their SSO account that will authorize wireless access in the
Library and Rhatigan Student Center. Other buildings will soon be added for additional wireless access connections.

E-mail (@wichita.edu)

Every WSU student is automatically assigned an e-mail account with the @wichita.edu suffix. This electronic mailbox will allow you to send and retrieve communication at your convenience. The use of e-mail is provided to you as a supplementary source of communication for your academic pursuits. Application, instructions, and other information about your e-mail account are available at the online WSU E-mail Center: www.wichita.edu/email

Media Resources Center

The Media Resources Center (MRC) is a comprehensive media and video communications organization serving the instructional, research, and service missions of Wichita State.

The MRC operates the University's cable television station, WSU-TV, and programs three other channels: channel 22, the College Television Network (CTN); channel 17, the International Channel; and channel 20, the Campus Information Channel (CIC). The MRC oversees the radio station licensed to the University, KMUW 89.1 FM. A public radio station, KMUW also operates the Wichita Radio Reading Service.

Facilities and resources at the MRC include an interactive television (ITV) classroom, a multimedia lab, and a professional television production studio. The MRC has designed and installed and maintains master classrooms across campus.

A wide array of media equipment is available for classroom use by students and faculty. This includes video recording systems and projection equipment.

Cable Television

Wichita State University operates WSU-TV, which is carried on more than 20 cable television systems in the Wichita area. Programming is provided by The Research Channel, a consortium of research universities, which promotes greater public awareness of research activities in progress around the world.

Additional programming consists of telecourses offered each semester for academic credit. Local programming is also produced, featuring a monthly magazine, faculty profiles, distinguished guest speakers, and other campus events.

Language Labs

The Salaviano-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 mathematics tutoring for WSU students enrolled in the following courses: 007, Arithmetic 001; Beginning Algebra; 012, Intermediate Algebra; 111, College Algebra; 112, Precalculus Mathematics; 123, College Trigonometry; 144, Business Calculus; 242, Calculus I; and 370, Elementary Statistics. Students may spread out their books and study math knowing that help is available when needed. Numerous mathematics faculty members volunteer time in the lab and it is staffed by graduate students and exceptional 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 Web site, www.math.wichita.edu

Writing Center

The WSU Writing Center, in 601 Lindquist Hall, is free and open to all WSU students. In the Writing Center, all students meet with a tutor who is either an undergraduate or graduate student assistant. Tutors offer assistance with all aspects of writing, including brainstorming, organization, style, and revision. A tutoring session lasts 30-45 minutes and focuses on self-editing strategies and the specific writing concerns voiced by the student. No appointment is necessary, but appointments may be scheduled by contacting the center at (316) 978-3173.

The Writing Center is open 9 a.m.-3 p.m. Monday through Friday and 5-7 p.m. Monday through Thursday. 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 or during finals.

Student Services

The Division of Student Affairs is responsible for enrollment services, student life and development, and student services. The Student Handbook, available to every student, describes relevant policies and procedures and the Student Code of Conduct. Students may receive copies of the code or bring their concerns about student life to 105 Grace Willkie Hall. This office oversees many of the student services described in the following sections.

Career Services

The Career Services office provides services to students, alumni/alumnae, and community members. Individual career counseling is available to assist students and community members seeking career advice or employment-related assistance.

Individual career counseling is available to assist students, alumni/alumnae, and community members with planning and decision making. Assessment instruments, including the Strong Interest Inventory, are offered for self-assessment. Workshops, presentations, and classroom instruction are offered to enable people to learn about the responsibilities of various career fields, to prepare job resumes and letters of application, to conduct effective employment interviews, and to make informed decisions.

Occupational and career information, employer directories, information on employment trends, annual salary survey reports, and information on graduate and professional school opportunities are available on the Career Exploration and Resource Center (CERC). The CERC also houses a lab which provides computers for students to prepare job search documents such as resumes and cover letters. The computer also provides access to the World Wide Web for career research, as well as for online registration and interview sign-up.

Degree candidate and alumni/alumnae job search services include computerized resume referral to career employment vacancies; web resume books; on-campus interviews with employer representatives; and on-line position listings. A bi-weekly e-mail newsletter provides career-related tips and information on programs and events.

Employment services also include online listings of part-time and summer employment opportunities.

Contact Career Services in 203 Grace Willkie Hall, at (316) 978-3435, or online at: http://careers.wichita.edu

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, alumni, and community. A diverse staff of qualified lead teachers and WSU student assistants facilitate 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 a.m. to 6 p.m. for children six weeks to six years old. Full- and part-time care is available in addition to a school-age program during the summer.

Enrollment is limited so arrangements for child care must be made prior to the beginning of the semester in which services are needed. Child care assistance is available for WSU student parents who demonstrate financial need; applications may be obtained at the Center.

For more information, call (316) 978-3109, or online at studentaffairs.wichita.edu/cdc.html

Counseling and Testing

The Counseling and Testing Center provides psychological services and counseling for personal and career/life planning issues. Professional counseling is available on a cost-shared basis to all members of the University community—students, their families, faculty, and staff. Individual, couple, family, and group counseling are aspects of the professional counseling services. Testing services also are part of the center’s function. The credit by exam pro-
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, voice
(316) 978-3114, fax
web@wichita.edu/dsserv

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.

Disability Support Services

The Disability Support Services (DSS) program provides opportunities for academic development, assists students with basic college requirements and motivates students with disabilities towards 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 DSS include academic advising, individualized tutoring, career exploration and referral, study skills improvement, scholarship opportunities, computer lab usage, financial aid search, graduate school selection and information, course selection and degree planning assistance, and campus and community involvement opportunities. For information, contact DSS at (316) 978-5949, stop by 174 Grace Wilkie Annex, or visit our web site at web@wichita.edu/dsserv.

Office of International Programs

International Programs serves the special needs of approximately 1,500 international students from more than 100 countries enrolled at Wichita State. For international student admission requirements, see page 9. An orientation program specially designed for new international students prepares them for entrance into the American academic systems and way of life.

International Programs also sponsors the Friendship Family Program, the Cultural Ambassador, and other activities that promote interaction between American and international students.

In addition, International Programs houses a Study Abroad Reference Center which provides information to American students on study, work, and travel opportunities abroad.

For more information, contact International Programs at 978-3730.

Rhatigan Student Center

The Rhatigan Student Center (RSC) is the community center for Wichita State University. Through its facilities and services, the student center serves students, faculty, staff, alumni, and guests of the University. The RSC has several dining areas to provide a variety of atmospheres and menus as well as a catering department to meet further needs.

The University Bookstore, on the first floor of the RSC, stocks all required textbooks, computer software and hardware at educational prices, art supplies, general reading materials, greeting cards, Shockers souvenirs, and gifts. Visit the bookstore on the Internet at www.wsubooks.com or call 978-3490.

The RSC has a Recreation Center on the lower level for leisure use. It includes pinball, video games, bowling, billiards, snaks, locker rental, an engraving shop, laminating services, and a barber/beauty shop. The RSC also has a meeting facility for parties, is available for campus and non-campus groups at reasonable group rates. The RSC is also the home of the nationally ranked Shockers men's and women's bowling teams.

The Student Activities Council (SAC), in the RSC, provides students an opportunity to learn and develop leadership skills while planning a variety of programs for the campus. The Student Activities Council is the largest event-planning organization on campus; it sponsors more than one hundred events annually, including Shocktoberfest and Hippodrome.

The RSC is also home for the Student Government Association, Student Ombudsman, Shocker Card Center, Commerce Bank, University Dining Services, WSU Campus Ministries, the Center for Student Leadership, and the Rhatigan Student Art Gallery. Additionally, the RSC has a 450-seat theater and a variety of meeting rooms that can be scheduled for meetings, special events, and conferences.

The Reservations Office schedules the use of all facilities in the RSC as well as most University facilities for out-of-classroom use. Additionally, the Reservations Office manages the University Information Center (UIC) on the first floor of the RSC. Call the UIC at (316) 978-INFO (4636) for any information about WSU.

The RSC is supported through revenues generated from within the operation and student fees. Visit the RSC on the Web at rsc.wichita.edu.

Sports and Recreation

Numerous sports and recreation programs exist at the University. Wichita State is a member of the Missouri Valley Conference; WSU men compete in basketball, baseball, track, tennis, and golf. WSU women compete in basketball, softball, track, tennis, and volleyball. The University fields teams in bowling and crew as independent sports.

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

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

Facilities

Sports and recreation facilities for WSU students include a regulation 18-hole golf course; the 10,529-seat Charles Koch Arena which is used for intercollegiate basketball games, volleyball matches, and major entertainment events; Cessna Stadium, a 31,500-seat football and track and field facility which hosts high school and community events; the 7,808-seat Eck Stadium-Tyler Field, home to the Shockers baseball program, which recently underwent a $7.8 million renovation and ranks among the finest college baseball facilities in the country; the Shelden Coleman Tennis Complex with eight lighted courts, home to WSU's men's and women's intercollegiate tennis programs; and the new 1,000-seat A. Howard Williams Softball Facility for intercollegiate softball for women.

The Heskett Center, a multipurpose, dance, physical education, and recreation complex, contains instructional, research, and recreational areas. Activity areas consist of a weight room, circuit training room, combatives room, 25-meter indoor swimming pool with separate diving well, seven handball-racquetball courts, indoor climbing wall, and a 200-meter indoor jogging track which surrounds five basketball courts. The outdoor area contains a six-court lighted tennis complex and two large lighted playing fields. Students must show a current Shockers ID card to use the activity areas for recreation or for classes. Check our Web site: web@wichita.edu/heskett.

Student Development and Multicultural Affairs

The administrative office of Student Development and Multicultural Affairs can be reached at (316) 978-3078. The Center for Student Leadership is in 108 Rhatigan Student Center, (316) 978-3022, and the Multicultural Resource Center is in 158 Grace Wilkie Annex, (316) 978-3004. Visit us online at www.wichita.edu/sema.

The mission of the Office of Student Development and Multicultural Affairs is to foster an environment that promotes multiculturalism while building community and to coordinate services and programs that allow students and student organizations to participate in leadership, awareness, involvement, and volunteering opportunities.
The Office of Student Development and Multicultural Affairs has five components:
- Greek affairs—formal recruitment, fall and spring all-greek assemblies, greek leadership retreat, and greek convention;
- Multicultural affairs—minority student mentoring program, cultural theme-month programming, Jaunmara: A Night of Creativity, students of color graduation ceremony;
- Student organizations and leadership—student organization registration and support, leadership institutes, student awards and recognition day;
- Volunteerism—alternative spring break, Building Up Dreams in Urban Youth (BUDUY) mentoring program, Shockers United; and
- Women's programming and resources—women's history month events, women's Brown Bag Lecture and Film Series.

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 150 student organizations, and allocates approximately $6 million annually in student fees to campus agencies ranging from the Heskett Center, Rhatigan Student Center, and Student Health Services. SGA also provides opportunities to fund your education through the Rhatigan Leadership Scholarship and provides financial assistance for child care through the Child Care Assistance Program. The cabinet executes the decisions of the senate and the officers. The supreme court issues opinions on constitutional questions and also serves as an appellate court for traffic and academic appeals. Each of these entities also participates in the determination of University policy.

Each student is automatically a member of SGA and is eligible to vote in the annual elections in April. Throughout the year, opportunities 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, Room 202, Rhatigan Student Center, Wichita State University, (316) 978-3480.

Student Health Services
Student Health Services, the on-campus health care facility for students, is located in 209 Ahlberg Hall. Ambulatory health care is provided for students with illness, injury, questions, concerns, or problems. Staffed by professional nurse practitioners, nurses, and physicians, SHS offers a wide range of services. Information about insurance plans is available, however insurance is not a requirement to be seen.

For more information, call (316) 978-3620.

Student Rates
Special rates for students are available for some campus activities. The following offices have ticket and price information: Rhatigan Student Center—on-campus movies and Wichita Symphony Orchestra; Fine Arts Box Office (Duerksen Fine Arts Center)—dance, music, opera, and theatre; Charles Koch Arena—athletic events; Braeburn Golf Club—student golf rates.

Student Support Services,
Talent Search—Project Discovery,
McNair Scholars Program,
Upward Bound/Wichita Prep,
Upward Bound/Galaxy Experience
Student Support Services, Project Discovery, McNair Scholars Program, and Upward Bound’s Wichita Prep and Regional Math-Science Center/The Galaxy Experience are special programs designed to help students prepare for University life and successfully complete their courses of study.

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 more information, contact us online at webs.wichita.edu/sga/.

Talent Search—Project Discovery, a federally funded Talent Search Program, was established at Wichita State University in July 1977. The project assists approximately 1,500 low-income and/or first generation individuals in gaining admission to postsecondary institutions throughout the nation and preparing them for secondary school. The program provides assistance to middle school students, high school students, dropouts from secondary and postsecondary schools, and adults. 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 is provided. The project's two offices, at Wichita State and in Parsons, Kansas, serve middle (WSU only) and high schools and community agencies in Wichita and eight counties in southeast Kansas. The WSU office is located in Brennan I, third floor. Our Web site is webs.wichita.edu/talentsearch/.

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 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 and 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, see us online at:
webs.wichita.edu/mcnair

The Upward Bound programs are federally funded programs that have been at WSU since 1966 (Wichita Prep) and 1991 (The Galaxy Experience). Wichita Prep assists high school students from limited-income backgrounds and 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 55 students each year. The six week 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 course work. Our Web site is webs.wichita.edu/ubwp.

The mission of the Upward Bound Regional Math-Science Center/The Galaxy Experience is to stimulate and advance interest in mathematics, science, and computer technology; challenge students to perform; provide a unique residential, academic, exploratory, hands-on experience; and encourage high school students to realistically consider attaining a postsecondary degree in mathematics or the sciences. The program offers high school students from limited-income backgrounds and first generation university students the opportunity to interact with a highly qualified staff and faculty, as well as industry and peer mentors. Fifty participants are drawn from public and private high schools in a four-state area—Kansas, Missouri, Nebraska, and Iowa. Ten of the 50 participants spend a week in the Future Astronaut Space Camp in Hutchinson, Kansas. The program focuses on three themes important in the discipline of science: Space Science and Aerodynamics—emphasizes how and why this country puts both human being and machine into outer space.

Environmental Concerns—examines conservation and pollution issues in the nation and in immediate surroundings.
Human Health issues—focuses interests in biological science on issues most pertinent to students.
Our Web site is web.wichita.edu/ubms

The Educational Opportunity Center (EOC) program seeks to provide free counseling and assistance on college admissions for qualified adults who want to improve their job opportunities through entering or re-entering an educational program beyond high school. The program assists clients with a broad spectrum of comprehensive services. Assistance is given to individuals age 19 and over in applying for admissions to institutions that offer programs of post-secondary education, including assistance in preparing the necessary applications for use by admissions and financial officers. Services include: assistance with completing college admissions applications; completing financial aid applications; career guidance and other specialized workshops; academic advice, personal counseling and study skills assistance; General Educational Development (GED) English as a Second Language (ESL), or Adult Basic Education (ABE) test preparation; and community referrals.

The Disability Support Services (DSS) program provides opportunities for academic development, assists students with basic college requirements, and motivates students with disabilities towards 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 also include: academic advising, individualized tutoring, career exploration and referral, study skills improvement, scholarship opportunities, computer lab usage, financial aid searches, graduate school selection and information, course selection and degree planning assistance, and campus and community involvement opportunities.

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)
Wichita State University hosts a five-year statewide federal grant, Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP), funded by the U.S. Department of Education, with the educational assistance to students in foster care as the focus. The overall goal of Kansas Kids @ GEAR UP is to increase the number of students graduating from high school and are prepared for enrollment in post-secondary education, thereby fostering and enabling foster children to reach their full potential and consequently improving educational and social outcomes.

The Kansas Kids @ GEAR UP will work to expand existing efforts to enhance student achievement by partnering with SRS, privatized agencies, USD 259, Kansas Board of Regents, Kansas State Department of Education, TRIO programs, and other community and state agencies. Key components of the Kansas Kids @ GEAR UP are academic development through tutoring and workshops, enhancing computer skills and access, mentoring and counseling (personal, academic, career growth), post-secondary access education, and providing scholarships for post secondary education.

Veterans Services
The Office of Veterans Services, 203 Jardine Hall, provides services to veterans and active duty people. The services span the entire range of benefits and include certification for benefits to the VA, tutorial assistance, financial assistance information, and work-study for veterans.

Wichita State University is designated a Service-mand’s Opportunity College. Our Web site is financialaid.wichita.edu/veteran/vethome.htm

Student Organizations

Registration
Student organizations may be granted the privileges of University recognition if they are registered with the Center for Student Leadership and approved by the Student Government Association (SGA). To be approved, each organization must provide a completed WSU Student Organization Registration form, lists of officers with addresses, copies of constitutions and bylaws, and an advisor’s name and address to the Center for Student Leadership. 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 rooms or grounds for meetings, post announcements on University bulletin boards, request funds from student fees in accordance with established procedures and guidelines of SGA statutes, and be listed on a WSU organization in the Undergraduate Catalog, Campus Directory, and other University publications. Records of recognized organizations are maintained in the Center for Student Leadership.

For more information regarding student organization registration, contact the Center for Student Leadership, 008 Kshagin Student Center, (316) 978-3022.

Student Organizations

Academic
- A Cappella Choral Society
- Alpha Kappa Psi
- American Association of Petroleum Geologists
- American Production and Inventory Control Society
- American Society for Quality
- American Society of Mechanical Engineers
- Anthropology Club
- Association for Computing Machinery
- Association of Collegiate Entrepreneurs (ACE)
- Association of Information Technology Professionals
- Beta Alpha Psi, Epsilon Tau Chapter
- Collegiate Music Educators National Conference
- Decorative Arts Guild
- English Graduate Student Association
- Fine Arts Student Association
- Geology Club

Health Careers Opportunity Program
- Hugo Wall Public Administration Society
- Institute of Electrical and Electronics Engineers
- Institute of Industrial Engineers
- International Business and Studies Association
- Japanese Language Organization
- Kansas Association of Nursing Students
- Master of Physical Therapy Student Association
- Philosophy Society
- Physician Assistant Student Society
- Pi Delta Phi
- Pi Mu Epsilon
- Potters’ Guild, WSU
- Premedical Student Association
- Russian Kruzhok, The Russian Club
- Social Work Organization of Graduate Students
- Society for the Biological Sciences
- Society of Automotive Engineers
- Society of Automotive Engineers Aerodock Club
- Society of Physics Students
- Society of Traditional Printmakers
- Society of Women Engineers
- Student Association for the Master of Business Administration
- Student Music Teachers Association
- Student Society for the Advancement of Exercise Science
- Student Speech-Language Hearing Association
- Students in Free Enterprise (SIFE)
- Tau Beta Pi Engineering Honor Society
- Tutoring Association
- Women’s Studies Scholars and Allies
- Wu Crue (WSU K-12 Physical Education)

Community Service
- Campus Girl Scouts
- Community Service
- Emerging Leaders
- Pay Back Society
- Student Ambassador Society
- Student Health Advisory Committee

Cultural/International
- African Student Association
- Associated Malaysian Students of Wichita
- Association of Hindu Students in America
- Association of Thai Students
- Black Student Union
- Chinese Student Friendship Association
- Hispanic American Leadership Organization
- Indian Students Association
- International Student Union
- Japanese Student Association
- Korean Student Association
- Laotian Student Association
- Mi Pueblo (Latin American Union)
- Muslim Students Association
- Nepalese Student Association
- Pakistani Students Association
- Philippine Friendship Organization
- Sri Lankan Student Association
- Student Association of Bangladesh
- Taiwanese Student Association
Turkish Students Association
Vietnamese Student Association

Fraternities and Sororities
Alpha Kappa Alpha
Alpha Phi
Alpha Phi Alpha
Beta Theta Pi
Cultural and Traditional Sisterhood
Delta Delta Delta
Delta Gamma
Delta Sigma Theta
Delta Upsilon
Gamma Phi Beta
Kappa Alpha Psi
Kappa Delta Chi
Kappa Sigma
Phi Beta Sigma
Phi Delta Theta
Pi Kappa Alpha
Sigma Delta Pi
Sigma Gamma Rho
Sigma Lambda Beta
Sigma Phi Epsilon
Zeta Phi Beta

Governing/Representative Councils
Engineering Council
Interfraternity Council (IFC)
International Student Union
National Pan-Hellenic Council
Non-Traditional Student Association
Student Activities Council
Student Government Association
Women's Panhellenic Association

Honorary
Alpha Psi Omega/University Players
Eta Kappa Nu
Golden Key International Honor Society
Kappa Kappa Psi
Lambda Alpha National Anthropology Honors Society
Mortar Board
National Residence Hall Honorary
Pinnacle National Honor Society
Psi Chi
Sigma Delta Pi
Sigma Gamma Epsilon
Tau Beta Sigma

Political
College Republicans
Green Shockers

Recreation/Sports Club
Aikido Club
Dance Team
Flying Club
Mystery Science Theater 3000 Club
Rowing Team (Crew)
SAE Mini-Baja Team
Spirit Squad

Wushu and Chinese Martial Arts Club

Religious
Association of Hindu Students in America
Baha'i Club
Campus Crusade for Christ
Chi Alpha Christian Fellowship
Intervarsity Christian Fellowship
Latter-Day Saint Student Association
Orthodox Christian Fellowship
SHOCKWAVE
St. Paul Parish/Newman Center
University Lutheran Center
Young Life

Residence Hall
Fairmount Towers Activities Council
Residence Housing Association

Special Interest
Academic Quiz Team
Anime Club
Bowling Teams (women and men)
Future Health Care Professionals
Model United Nations
Photography Guild
Sculpture Guild
Student Alumni Association
Student Physical Therapy Association
That Gay Group

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 Hughes Metropolitan Complex, located at 29th Street North and Oliver, is considered part of the main campus. Continuing education classes and special services including the Speech-Language-Hearing Clinic and the Wichita Radio Reading Service are available at the Hughes Metropolitan Complex, 978-3259. Some of the University’s facilities are described below.

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.

Rhatigan Student Center
See description of the Rhatigan Student Center on page 23.

Satellite Locations

WSU offers classes and limited enrollment services at three full-service satellite locations: WSU Downtown, 127 North Market, 978-6555; WSU Southside at the Southside Education Center, 4501 East 47th Street South, 978-6647; and WSU Westside, 7011 West Central, 978-6777. Students may register for classes at any of these sites. Tuition and fees are the same as those on the main campus.

Course locations are listed in the Schedule of Courses.

Sports Facilities
See description of the University’s sports and recreation facilities on page 23.

Ulrich Museum of Art

The Ulrich Museum of Art, an integral part of Wichita State University, was established in 1974 to enhance and support the University’s educational and service mission. Since its founding, the museum has served as Wichita’s premier venue for contemporary works by established and emerging artists of national and international significance. A lively schedule of temporary exhibitions is complemented by an important collection of 20th-century painting, sculpture, and works on paper by such key historical figures as Milton Avery, Alexander Calder, Robert Henri, Willem de Kooning, Jacob Lawrence, Joan Miró, Robert Motherwell, Robert Rauschenberg, and Andy Warhol, and more contemporary, 21st-century artists including Jennifer Bartlett, Enrique Chagoya, Neil Jenney, David Levinthal, Nic Nicosia, Alan Rath, Peter Sarkisian, Jessica Stockholder, and Kara Walker. The museum is also well known for its outdoor sculpture collection, a group of more than sixty 20th-century monumental works installed across WSU’s 330-acre main campus that includes important pieces by Scott Burton, Luis Jimenez, Henry Moore, Louise Nevelson, Claes Oldenburg, George Rickey, and Auguste Rodin. The museum also presents a growing collection of new media works.

The museum was named in honor of Edwin A. Ulrich, a Hyde Park, New York, businessman who donated his collection of more than 300 works by the early 20th-century painter Frederick Judd Waugh and set up an endowment to support the new institution. The founding of the Ulrich coincided with the construction of a modern facility that is shared with the WSU School of Art and Design. The museum, which occupies two floors of the McKnight Art Center, is clearly identified at the main entrance by a colorful 50 x 70 foot glass and marble mosaic designed by Joan Miró, which has become the museum’s signature work and a campus landmark. A 1995 renovation created additional gallery and office space and a terraced sculpture court at the entrance that further enhances the museum’s distinctive visual identity.

Exhibiting artists are frequently brought to campus for public lectures and student workshops. Income from the Ulrich Museum Alliance for Contemporary Art is used to support this outstanding visiting artist program and other special events, which benefit both campus and community. Alliance members, in turn, enjoy special opportunities to meet some of the nation’s leading artists and learn more about contemporary art. Museum membership
Academic 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 college 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 to all written notices from advisors, faculty, deans, and other University officers.
7. To file an Application for Degree card in the dean’s office of the appropriate college at least two semesters before the expected date of graduation.
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 responsibilities 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, probation, or suspension, consistent with campus provisions for due process.

The Student Code of Conduct provides guidelines for students’ behavior as well as an overview of the discipline process. The code is published in the Student Handbook, which is available in the Office of Student Life, 105 Grace Wilkie Hall. It is also available through the WSU Student Affairs’ Web site: studentaffairs.wichita.edu.

Academic Honesty

Opportunities for learning at Wichita State University involve the students’ rights to express their views and to take reasonable exception to the views of the faculty; to examine all questions felt to be appropriate to a course of study; to be protected from improper disclosure of their views and beliefs; to be examined in a fair and impartial manner; and to be treated with dignity and respect. Students are responsible, however, for learning the content of any course of study outlined by their instructors, regardless of any views or judgments privately held and for demonstrating their attainment in an honest manner.

A standard of honesty, fairly applied to all students, is essential to a learning environment. Students violating such standards must accept the consequences and penalties are assessed by appropriate classroom instructors or other designated persons.

Serious cases may result in discipline at the college or University level and may result in suspension or dismissal. Students accused of abridging a standard of integrity may protect themselves through established academic appeal procedures and are assured due process and the right of appeal from accusations or penalties felt to be unjust.

A. Student Academic Integrity Policy Statement

The faculty, staff, and administration of Wichita State University will not condone or tolerate academic misconduct, including breaches of academic integrity. The policy of the Kansas Board of Regents, as adopted in June 1994, is as follows:

The Board of Regents believes that student academic dishonesty is inimical to the fundamental ideals of public higher education. Furthermore, the board believes that public higher education has a mission to develop the moral reasoning abilities of students and to promote the importance of integrity in all aspects of student life, but particularly in academics. Therefore, it is the policy of the Kansas Board of Regents that student academic dishonesty should not be tolerated on the campuses of the Regents' institutions.

Each Regents’ university shall implement and promote specific policies, procedures, and programs which seek to (i) identify prohibited academic conduct by students; (ii) educate all students, faculty, and administrators with regard to the nature, impact, and consequences of student academic dishonesty; (iii) effectively report and seek to reduce such behaviors; (iv) provide for due process for students accused of academic dishonesty; (v) set forth clear sanctions, ranging from reprimand to dismissal from the University, for students who are determined to have committed dishonest acts; and (vi) implement a comprehensive and integrated plan to promote academic integrity among students, faculty, and administrators.

B. Definitions

The terms faculty member or faculty as used in this policy statement shall include not only persons of professorial rank (full, associate, or assistant), but also instructors, adjuncts, GTAs, lecturers, and unclassified professionals and administrators who teach.

A student is a person enrolled in any class at the University on any campus and at any time pertinent to conduct by the individual covered by this policy statement.

Academic misconduct, which includes academic dishonesty, is behavior in which a deliberate means is employed to gain undeserved intellectual credit or advantage, either for oneself or another, which is disruptive of a course of study or abuse toward members of the University community. Some examples of academic misconduct are:

1. Plagiarism, intentionally using the printed/published data, distinctive ideas, or language of someone else without specifically acknowledging the original source, for example, copying another student’s paper, creative work, article, or computer work and submitting it as one’s own original work.

On the other hand, the use of “common knowledge” or of ideas that are not distinctive to a single source does not require acknowledgment. Subject to the foregoing, the particular circumstances under which acknowledgment is required may vary among the different disciplines which make up the University; in addition, the manner or style used to acknowledge a source will vary among disciplines. In a particular course, students must follow the acknowledgment/citation customs and standards of the discipline offering the course and acknowledge sources in the manner expected by that discipline. The respective college’s Academic Conduct Committee is charged with articulating such customs and standards, if any, and the instructor in any given course is responsible for making these standards clear.

2. Unauthorized collaboration on out-of-class projects. Students may not present work as individual when, in fact, the work was done with other students.

3. Cheating on exams, defined as the unauthorized or inappropriate use of information about the exam (questions/answers) and/or the taking of an exam with the assistance of unauthorized materials such as notes, textbooks, crib sheets, etc. It is the responsibility of each instructor to inform students which
information aids, if any, may be used on exams.
4. Unauthorized access to exams in advance of the examination. Students who in any unauthorized manner obtain exams in advance of the date and hour of the examination are committing an act of academic dishonesty. Unauthorized access to an exam does not include obtaining copies of exams given in previous semesters and returned to students, but it does include a sharing of information about an unreleased exam between a student in an earlier section of a class and a student in a later section.
5. Fraudulent alterations of academic materials. A student who alters documents or other information (such as grade reports, course withdrawal slips, or research data) to provide undeserved credit or advantage has committed an act of academic dishonesty.
6. Aiding and/or abetting an academically dishonest undertaking. A student is responsible for ensuring that his/her work is not misused by other students. Students are required to protect the integrity of their own work by, for example, not allowing knowingly or through carelessness, another student to plagiarize a term paper or copy answers to an exam.
7. Sabotage of students/faculty/University work or property. Sabotage is any act by a student which intentionally or recklessly damages and/or destroys others’ work. For example, students who destroy computer programs written by other persons are committing acts of sabotage. Students who steal, destroy, or mutilate library materials also commit sabotage.
8. Bribery, blackmail, or intimidation attempts. Academic misconduct is present in gaining an unfair advantage over other students by giving money or gifts to other students, faculty, staff, etc.; by threatening in any way other students, faculty, staff, etc., with exposure of a personal or professional incident; by threatening other students, faculty, staff, etc., with bodily or other types of harm; or in any attempt to do any of these things.

C. Responsibility for Academic Integrity
The fundamental responsibility for the maintenance of the standards of integrity rests upon the student. It is each student’s responsibility to be familiar with University policy on academic integrity and to uphold standards of academic honesty at all times in all situations.
Faculty members are responsible for clarification to their classes of those standards of honesty for class assignments or projects where such standards may be unclear or where such standards vary from the accepted norm. Each faculty member shall also make clear to each class early in the semester the faculty member’s own policy toward penalties he or she gives for breaches in academic integrity. In addition, it is anticipated that faculty members will be the persons who will discover most instances of academic misconduct. Accordingly, faculty need to be aware of the possibility that academic misconduct might occur, watchful for any instances of misconduct, and diligent in addressing those who act dishonestly. If a faculty member disciplines a student for academic misconduct, that information may be reported in writing to the chair of the faculty member’s department.

Students accused of abridging a standard of honesty may protect themselves through established academic appeal procedures and are assured of due process and the right of appeal from accusations or penalties felt to be unjust. See Court of Student Academic Appeals, page 32.

Academic Progress and Recognition

Academic Progress Reports
Reports on a student’s progress are given in several ways.
Midterm Down Reports. At midterm, a Down Report may be sent to students doing below average work, and to their academic advisor, as an indication that their grades need to be improved. Students should meet with their instructor and/or college advisor to discuss the problem.

Absence Letters. Faculty members who make regular attendance checks may inform the dean of a student’s college when the student is absent excessively. The dean may either process an administrative withdrawal or request that the student initiate an official withdrawal or make arrangements with the instructor to complete the course. Students failing to take either course of action will receive an F at the end of the semester.

Informal Warning. Students with an overall grade point average above the level required by their college for graduation but below this level for one semester may receive a letter from the dean of their college warning of the consequences of continued substandard performance. Such warnings do not appear on a student’s transcript.

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 Emory Lindquist Honors Program.
The Dean’s Honor Roll is published each semester and is composed of students enrolled in 12 or more semester hours of graded work who achieve a grade point average of 3.50 or higher for the semester.
Students enrolled in 6-11 hours of graded work per semester who achieve a grade point average of 3.50 or higher for the semester will receive Academic Commendation. The list of such students will be published each semester.
See page 33 for information about degrees conferred with academic distinction.

Departmental Honors
Outstanding students may enroll in their junior or senior years in independent study which leads to a degree with departmental honors if the work is satisfactorily completed. Students with junior standing and a cumulative grade point average of 3.250 are eligible to conduct projects in their major area of study. A student considering such a project should begin planning the work well in advance of the semester during which the work is to be done. In order to enroll in Honors 410, Independent Study, the student must consult with the honors director and obtain the approval of the instructor in the student’s major department who will be the advisor for the project. The written application must then be approved by the chairperson of the department and by the dean of the student’s college. The completed application form must be filed with the honors director no later than the second week of the semester during which the student desires credit for the work.
An independent study project should consist of original research or creative work. To graduate with departmental honors, a student must complete the independent study project and write the results according to specifications established by the honors director. The student must be examined on their project and other aspects of the major field of study. A three-member faculty committee conducts the examination and determines the student’s eligibility for graduation with departmental honors. Students failing to secure such a degree even though they complete their projects or fail in the examination will receive academic credit toward the regular degree for the credit hours completed, with the grade determined by the instructor under whom the work was performed. In no case may any student receive more than 6 hours of credit for independent study.

Probation and Dismissal Standards (Academic)
Specific regulations governing probation and dismissal standards are 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 their appropriate section of the Catalog for these standards.
Since 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 cumulative or overall WSU 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 WSU 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 hours and their WSU 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, W, Cr, NCr, I, S, or U.
Transfer students admitted on probation must complete at least 12 semester hours at Wichita State with a 2.000 average before probation may be removed.
A student on academic probation is limited to a maximum of 12 semester hours in the fall and spring semesters.
Probation is removed when both the cumulative and WSU grade point averages reach the 2.000 level.
Dismissal standards are set by the various colleges of Wichita State in conformance with the following policy.

Students will not be dismissed if either their WSU grade point average or their last semester's grade point average equals the minimum graduation level of their college. They will remain on probation as long as their cumulative or WSU grade point average is below the minimum University or college graduation standard and their semester grade point average meets the minimum college or division standard.

Students will be dismissed at the end of the semester in which they accumulate 12 attempted credit hours with a semester and WSU grade point average below the minimum required after being placed on probation. 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 student whose grade point average qualifies him or her for admission to another college may apply to the Committee on Exceptions of that college.

Withdrawal

Voluntary Withdrawal. Students encountering special problems during a semester may voluntarily withdraw from their classes during the first ten weeks of a regular semester or the first week of an eight-week summer session and have a W recorded for the course(s). After the official drop deadline (which is posted in the Schedule of Courses for each semester), students may withdraw from one or more courses with a W only if they petition the dean of their college and if their petition is approved. Without that approval, a late withdrawal is considered an F.

Students are advised to consult with their course instructors and academic advisors before they initiate withdrawal procedures. Procedures for withdrawing from a class can be acquired from the student's college or school office or the Registration Office in Jardine Hall.

Administrative Withdrawal. Administrative withdrawal may be initiated by the dean's office of the college in which a student is enrolled, the business office, Division of Student Affairs, or other appropriate University offices for the following reasons:

1. The student's class attendance is so poor that in the instructor's opinion full benefit cannot be derived from the course.
2. The student fails to complete successfully all prerequisites for those courses in which the student is enrolled.
3. The student violates the provisions of the student responsibility statements in the University Catalog (See the Student Responsibility section, page 28.)

The office initiating administrative withdrawal will notify the dean of the college in which the student is enrolled when withdrawal proceedings are initiated. The student is then notified by the dean's office that he or she may be withdrawn administratively so that the student may explain his or her position before final action is taken. If official notices from the dean's office are ignored or returned because the address given by the student at the time of enrollment is incorrect, administrative withdrawal will take place 15 days after the initial notice. A grade of W or F will be officially recorded on the student's permanent record for a course or courses from which the student is administratively withdrawn. The grade of F will be recorded only if the administrative withdrawal is for academic reasons.

Enrollment

Auditor

Students are permitted in credit courses on a non-credit 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.

Classification of Students

Students are classified according to the following scheme:

Freshmen: less than 30 semester hours earned.
Sophomores: 30 to 59 semester hours earned.
Juniors: 60 to 89 semester hours earned.
Seniors: 90 or more semester hours earned.

As a general rule, a student taking 12 hours during the fall or spring semester is considered a full-time student. For graduate students, 9 graduate credit hours are considered a full load. (Graduate students who are full-time teaching assistants are considered full time if they take 6 or more hours. Graduate students taking all or a majority of courses which carry undergraduate credit must meet the 12-hour requirement to be certified as full-time students.)

During the Summer Session, 6 hours are full time for both undergraduate and graduate students, with graduate teaching assistants full time with 3 hours. Students receiving federal financial aid may need to enroll in more hours to be considered full time.

In order to graduate with a bachelor's degree in eight semesters, a student must take an average of 16 credit hours per semester.

Course Numbers

Courses numbered 99 or below do not count toward a bachelor's 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 if they satisfy the course prerequisites given in the Wichita State University 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 also 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.

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. (See the Catalog section on graduate credit for seniors for special conditions under which seniors may be admitted to graduate courses.)

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 parenthesized on the student's transcript and the credit hours are excluded from credit toward graduation. Such courses are 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. This designation is included in the course description of such courses in the Wichita State University Catalog.

If students withdraw from a Cr/NCr course before the end of the tenth 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 tenth 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 Committee on Admissions and Exceptions.

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 policy, page 33.

Credit by Examination

Advanced standing credit may be obtained by examination. The credit-by-examination program at Wichita State is designed to enable those who have achieved college-level education through independent study, correspondence, television instruction, past experience, or other traditional or nontraditional means to demonstrate their level of achievement. The test results may be used to gain college credit in undergraduate courses. Credit by examination will not be awarded for duplication of credit or to replace course grades. Students should check with their academic advisor before attempting any test. There are four means by which such credit may be earned:
1. Credit may be earned through an Advanced Placement (AP) examination administered by the College Entrance Examination Board (CEEB) through the student's high school. The AP program is administered by CEEB in cooperation with participating high schools. The tests are graded under the supervision of CEEB and the scores, which range from a high of five to a low of one, are sent to the college or university chosen by the student. Credit by AP examination is awarded at Wichita State in the areas of biological sciences, chemistry, English, French, German, history, Latin, mathematics, physics, Russian, and Spanish. Under the AP program, credit at Wichita State is granted for specific courses. The titles of the specific courses for which credit is granted and the scores necessary for such credit are available from the Wichita State admissions office.

2. Credit may be earned by examination through the College Board's College-Level Examination Program (CLEP). CLEP examinations are administered through the Wichita State Counseling and Testing Center. General CLEP examinations are intended for entering freshmen; a student with divisional credit will not receive additional hours by taking general CLEP examinations. Information about the dates and times at which CLEP examinations are given is available from the Counseling and Testing Center.

3. Credit for certain specified general education courses may be earned through examinations administered by the Wichita State Counseling and Testing Center. Information concerning the specific courses for which these tests are available and the standards applied in granting credit are available from the Counseling and Testing Center.

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 in the areas given above. Students should apply directly to the chairperson of the department offering the course and consult with the Counseling and Testing Center 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 relevant information.

The grade recorded for credit earned by examination is Cr, and it is recorded on a student's transcript after enrollment in the University. 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. Credit earned by examination is treated exactly like that earned by class enrollment for internal purposes at Wichita State (class standing, completion of course prerequisites, college requirements, etc.).

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 the Counseling and Testing Center.

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 course work 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 that available to students at Wichita State.

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. Reexaminations shall be permitted only with the consent of the faculty and University requirements for graduation. However, in no case may a transfer student receive more credit than that available to students at Wichita State.

Grading System


A Distinguished achievement. Credit given; four credit points per semester hour.
B Superior achievement. Credit given; three credit points per semester hour.
C Average achievement. Credit given; two credit points per semester hour.
D Below average achievement. Credit given; one credit point per semester hour.
F Failing work. No credit earned toward graduation; zero credit points per semester hour. Counted as a course attempted and completed and included in computation of grade point average.
W Withdrawal from course. No credit given; no credit points. Does not affect grade point average.
WU Audit. No credit given; no credit points. Does not affect grade point average. See Auditor, page 30.

Cr Credit (A, B, or C). Used only in the transition semester and for courses defined as CR/NCR in the Catalog. Credit given; no credit points. See Credit/No Credit Courses, page 30.

NCR No Credit (D or F). Used only in the transition semester and for courses defined as CR/NCR in the Catalog. No credit given; no credit points. See Credit/No Credit Courses, page 30.

S Satisfactory (A, B, or C). Credit given; no credit points assigned.

U Unsatisfactory (D or F). No credit given; no credit points assigned.

I Incomplete. Temporarily recorded as a grade when a student is granted an extension of time to complete course work. Credit is postponed and the course is not included in the student's grade point average until it is completed and a regular letter grade is assigned. An incomplete course must be satisfactorily completed by the end of the next semester in which the student enrolls, summer excluded, or the I reverts automatically to an F. Students may not enroll in the course in which they received the I unless they do not enroll at WSU for one calendar year.

The following conditions govern incompletes:

1. If students do not enroll at Wichita State within one calendar year following an incomplete and if their work is not completed within that calendar year, they must enroll in that course as a repeat during their next semester of enrollment or the grade will be changed to F. If they do enroll in the course again, the I is changed to F and the grade earned during the repeat semester becomes the grade of record. (If the course is not offered when they resume academic work, they must request that an exception be made by the chairperson of the department offering the course. The department chairperson may authorize a substitute course, postpone action for a semester or authorize a grade of W.)

2. If students receive an incomplete on the third enrollment in the same course, they may not enroll in the course again (enrollment becomes subject to the regulations concerning the repeating of courses).

3. Incompletes are not counted when computing grade point average.

4. When students receive a grade of incomplete, they are informed of the policies and procedures governing the removal of incompletes.

Repeat. A prefix to other grading symbols indicating that the course is a repeat of one taken earlier, such as RA, RB, RC, RD, RE, or RI. The R prefix has no evaluative function but is used for information only. The following provisions concern repeats:

1. No course may be attempted more than three times. For this policy a repeat of an audit does not count as an enrollment, but a W
counts as an enrollment. Exceptions may be made in writing by the chairperson of a student’s major department.

2. Any course may be repeated.
(a) Beginning June 1, 1987, for students first enrolling at a college or university on or after that date, all grades will be included in the computation of the grade point average through Summer 1994.
(b) Beginning with the Fall 1994 semester, for all students, a grade of A, B, C, D, or F received at completion of a repeated class at WSU will automatically replace all previous grade(s) received for that course in computation of the student’s cumulative grade point average. A student may use the option of repeating a course for the purpose of grade replacement for five (5) different courses during the student’s academic career. Grades received in courses taken at another institution may not be used to replace grades in courses taken at WSU.

3. Students may audit the same course any number of times.

CrE Credit by examination or by credentials in lieu of formal enrollment in college course work. The symbol CrE is used for College Board Advanced Placement (AP) credit, for College-Level Examination Program (CLEP) credit, for course credit awarded on the basis of the American College Test (ACT), for credit by departmental examination and for credit by credentials (military and similar background).
Credit given; no credit points. See Credit by Examination, page 30.

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.

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

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 semester hours completed for which regular letter grades (A, B, C, D, and F) are assigned.
Grades A, W, I, Cr, NCr, S, U, and CrE are always excluded from grade point average computations.

Credit Points. For each hour of work the student takes, credit points are assigned regular letter grades (A, B, C, D, and F) to permit averaging of grades A=4, B=3, C=2, D=1, and F=0.

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

Course Completed. A completed course is a course in which a letter grade of A, B, C, D, F, Cr, NCr, S, or CrE has been assigned.

Credit Hours Earned. Credit hours earned means that credit is given (A, B, C, D, Cr, S, 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.

Graduate Credit for Seniors (Senior Rule)
Seniors at Wichita State University or neighboring bachelor’s degree-granting institutions who have an overall grade point average of 3.000 or above in their major field and in upper-division courses and who are within 10 hours of completing the bachelor’s degree may take work for graduate credit under the Senior Rule. This work must go beyond the requirements for the undergraduate degree and the degree must be completed within the semester in which a student takes the graduate courses. Students also must be admitted to the Graduate School. Application for the Senior Rule is made to the Graduate School and must be approved by a student’s major advisor, chairperson for the department in which the course is taken, undergraduate dean, and the dean of the Graduate School before any courses can be taken for graduate credit.

Transfers Within the University
Students may transfer from any undergraduate degree granting college to another provided they meet, as a minimum, the admission requirements of the second college.
For specific information about probation standards and admission requirements of individual degree granting colleges, refer to the individual college sections of the Catalog.

Exceptions

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 Committee on Exceptions to be admitted to a degree program with no college credit and no grade point average.
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 special non-degree-bound status under the open admission policy.

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 may also be made by the chairperson of the department that offered the course, but only if the instructor is not in residence.

The approval of the dean of the college of the department concerned is needed to have the change in grade entered on the student’s transcript. The dean must then notify the chairperson of the department concerned that the grade has been changed.

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, department chairperson, and dean concerned 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 year 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 dean of the college for a retroactive withdrawal from all courses in the semester in question. The student must provide verifiable evidence of the causes for failing to withdraw properly. If the petition is granted, the grades are changed to W through the usual withdrawal procedure.
If a student requests a change more than a year after the original grades were posted, the student’s petition also must be approved by the University’s Committee on Admissions and Exceptions. 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 or in an instructor’s charges of plagiarism, cheating, or similar offenses. The court is designed to help resolve differences that cannot be settled in 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 reserves the right, in exceptional circumstances, to suspend this rule.
Any student may use the appeal procedure. Forms are available in the Division of Student Affairs, 105 Grace Wilkie Hall. The general procedure is explained to students when they pick up the forms.

Exceptions Committee
The University has an Exceptions Committee to review petitions from people seeking admission to
the University who otherwise do not qualify. The committee also considers petitions from students seeking exceptions to specific academic rules and regulations. Students are advised to begin the petitioning process by consulting with academic advisors in their college of enrollment.

Exemptions for Superior Achievement
Students who have completed a minimum of 12 hours at Wichita State and have a cumulative 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, no student shall enroll in more than 21 hours without the permission of their college dean.
3. They may have permission to have course prerequisites waived with the consent of the instructor of the course and the head of the department in which the course is taken.

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 included). Students who have enrolled at another institution of higher learning in a regular term (summer term excluded) before enrolling at Wichita State are not entitled to 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 (NC). These designations have no impact on the student's grade point average. College-level courses (numbered 100 and above) with a grade of CR 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, Credit, or Satisfactory.
3. After grades have been issued for that next semester, students must complete a form in their college/advising center office requesting a transition semester. This request must be made before completion of any further college courses.

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

Graduation Academic Distinction
Degrees are conferred with distinction upon students who have shown excellence in scholarship. The minimum standard for graduating summa cum laude is a cumulative grade point average of 3.900. The minimum standard for graduating magna cum laude is a cumulative grade point average of 3.750. The minimum standard for graduating cum laude is a cumulative grade point average of 3.500.

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 also may graduate under the requirements of any subsequent Wichita State Catalog. 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. 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 non-degree-bound students and open admission students, have had their college program interrupted by more than two consecutive years, they will be subject to the program requirements in effect when they reenter, or, if they elect, the requirements of a later Catalog.

The Wichita State 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
Wichita State holds two commencement ceremonies a year. Fall graduates are invited to attend the December ceremony. Spring and summer graduates are invited to the individual college commencement ceremonies in May.

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

Students are required to file an Application for Degree card in the office of the dean of their college at least two semesters before their expected date of graduation.

Students must have credit for 124 acceptable semester hours toward their degree. Hours of credit earned toward a degree do not include courses with grades of F, W, Au, NC, or I. In order to graduate in eight semesters, a student must take an average of 16 credit hours per semester.

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

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

Students transferring from a two-year college must complete at least 60 hours of four-year college work and 45 hours of upper-division work in order to qualify for graduation from Wichita State.

At least 30 semester hours of course credit (A, B, C, D, or F) must be earned at Wichita State. Also, at least 24 of the last 30 semester hours or 50 of the last 60 semester hours must be completed at Wichita State. Exception to this regulation may be made by the University's Exceptions Committee.

Students may transfer credits earned in correspondence or extension courses with the approval of their dean. However, no more than 30 semester 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 semester hours.

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

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 hours in residence, provided that none of the 30 WSU hours is counted in the first degree and provided that all Wichita State college and department graduation requirements are met.

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

Policies and Procedures General

Release of Student Information Policy
The Family Educational Rights and Privacy Act of 1974 (FERPA) is a Federal law which provides that the institution will maintain the confidentiality of student education records.

Wichita State University accords all the 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 the 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; (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; and (5) the right to obtain a copy of Wichita State University's student records policy. A complete copy of the policy may be obtained by contacting the Registrar's office or the Dean of Students' office.

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(s) except to personnel within the institution who have a legitimate educational interest, to persons or organizations providing students financial aid, to accrediting agencies carrying out their accreditation function, to persons in compliance with a judicial order, and to persons in an emergency in order to protect the health or safety of students or other persons. All these exceptions are permitted under the Act.

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, Controller, 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.

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.

Public Notice Designating "Directory Information"

At its discretion the institution may provide "Directory Information" to anyone in accordance with the provisions of FERPA.

Wichita State University hereby designates the following student information as public or "Directory Information".

- Name, addresses, email address, telephone number(s), dates of attendance, classification (freshman, sophomore, etc.), enrollment status (full-time, half-time, less than half-time), class type (day, day/ evening, weekend only) previous institution(s) attended, major field(s) of study, awards, honors (includes Dean's list, degrees conferred including dates), past and present participation in officially recognized sports and activities, physical factors (height, weight of athletes). 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.

Currently enrolled students may withhold disclosure of "Directory Information" (on an all or none basis) to non-institutional persons or organizations. You have an option to protect your privacy and not have such information as your address and telephone number released. Forms requesting the withholding of this information are available in the Registrar's Office, 117 Jardine Hall, and are returned to that office. Otherwise, the University assumes that you approve of disclosure of that information. The completed form must be received at the Registrar's Office by the end of the second week of the fall semester if you do not want to be included in the printed Campus Directory, which is published each fall and which is available to people outside WSU. A Student Phone Book is also available on the WSU Web site; your name and phone number will appear there unless you complete and return the above-mentioned form.

Family Educational Rights and Privacy Act

1. Definitions

A. Consent: Consent shall be in writing and shall be signed and dated by the student giving consent. It shall include: (a) specification of records to be released; (b) purposes for such release; and (c) parties or class of parties to whom such records may be released.

B. Directory Information: That information described in Section 99.3 of the "Final Rule on Education Records, Privacy Rights of Parents and Students." The information is defined as: "Information contained in an education record of a student which would not generally be considered harmful or an invasion of privacy if disclosed. It includes, but is not limited to the students name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, height and weight of members of athletic teams, dates of attendance, grades and awards received, and the most recent previous educational agency or institution attended.

C. Disclosure: Permitting access or the release, transfer, or other communication of education records of the student or the personally identifiable information contained therein, orally, or in writing, by electronic means, or by any other means to any party.

D. 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. Excluded from the category of "education records" are the following and to which the law does not guarantee the right of student access:

1) Records created by an individual staff member that are not revealed to any other individual except to a person who might substitute for, or replace, the original staff member.

2) Medical and psychological records that are maintained only in connection with provision of treatment to the student and that are not available to persons other than those providing treatment except that 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.

3) 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.

4) Records that contain only information relating to a person after that person was no longer a student at the University. An example would be information collected by the University or the Alumni Association pertaining to the accomplishments of its alumni.

5) Employment records of any person if maintained in the normal course of business and used only for purposes relating to the employment, unless the person is employed at the University only because of her/his status as a student (that is, student hourly). In such cases, student employment records are education records but are to be maintained separately from other education records.

E. 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 vice president for student affairs.

F. Parent: Includes a parent, a guardian, or an individual acting as a parent of a student in the absence of a parent or guardian.

G. Personally Identifiable Information: Includes the name of the student, the student's parent(s) or other family member(s); the address of the student, personal identifiers, such as social security or student numbers; personal characteristics or other information that would make the student's identity easily traceable.

H. School Official: Faculty, staff, student employees or committees (when the members of the committee are appointed or elected to an officially constituted committee) that perform a function or task on behalf of, and at the request of, the University, its facility, colleges, schools or divisions.

I. Student: For purposes of this policy, 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.

J. Unit Custodian of Student Records: Except as otherwise designated in this policy, the head of each academic or administrative unit is responsible for the education records within the unit.

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:

(1) Financial records of the student's parents submitted as part of the financial aid process;

(2) Confidential letters and statements of recommendation that were placed in the student's educational 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;

(3) 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: (a) admission to this or any other educational institution or agency; (b) application for employment; or (c) 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;

D. An individual who is an applicant for admission to the University, or to one of its component parts, or who is a student in attendance at the University, may waive his or her right to inspect and review confidential letters and confidential statements of recommendation, except that the waiver may apply to confidential letters and statements only if:

(1) The applicant or student is, upon request, notified of the names of all individuals providing the letters or statements;

(2) The letters or statements are used only for the purpose for which they were originally intended; and

(3) Such waiver is not required by the University as a condition of admission to or receipt of any other service or benefit from the University.

All waivers under this paragraph must be executed by the individual, regardless of age, rather than by the parent of the individual. All waivers must be in writing and signed by the student.

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

3. Waiver of Rights

The University may request, but not require, students to waive rights under this policy; the 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:

(1) The applicant or student, upon request, is notified of the names of all persons providing letters;

(2) The letters are used only for the purpose for which they were originally intended;

(3) The waiver is not required as a condition of admission or for any other service or benefit of the University.

Waivers may be made with respect to specified classes of education records and/or persons or institutions.

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 the education records of a student, other than directory information, except as otherwise provided in this policy.

The University may, without the consent of the student, disclose directory information, as described earlier. If a student wishes to have such information withheld, he/she must notify the Office of the Registrar. If a student wishes to prevent the publication of such information in the University telephone directory, he/she must notify the Office of the Registrar.

The University may disclose personally identifiable information without the consent of the student to school officials within the institution determined to have legitimate educational interests; to authorities to comply with a judicial order or subpoena, provided the University makes a reasonable effort to notify the student in advance of compliance; to financial aid personnel in conjunction with an application for financial assistance; to organizations conducting studies for accrediting functions; and to appropriate persons in a health or safety emergency. Disclosure of personally identifiable information without the consent of the student may also be made when required by law or governmental regulation.

The University may disclose personally identifiable information from the education records of a student without a student's consent in connection with a student's request or receipt of financial aid, provided the disclosure is needed: (1) to determine the eligibility of the student for financial aid; (2) to determine the amount of financial aid; (3) to determine the conditions which will be imposed; or (4) to enforce the terms or conditions of the financial aid.

The University may disclose personally identifiable information from the education records of a student to appropriate parties in connection with an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals. Disclosures for this purpose shall take into account: (1) the seriousness of the threat to the health or safety of the student or individuals; (2) the need for the information to meet the emergency; (3) whether the parties to whom the information disclosed are in a position to deal with the emergency; and (4) the extent to which time is of the essence in dealing with the emergency.

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. Release of a Student's Grades

Board of Regents policy provides that the University may not withhold the written record of grades earned by any dependent student when the University receives a written request for any such grades from a student, a student's parent, or a student's legal guardian. The student will be notified in writing of any disclosure of his or her grades made to his or her parents or legal guardian. Dependency for this purpose is defined by the Internal Revenue Code of 1954, Section 152. Should the student be financially indebted to the University, the transcript request will not be honored and the person submitting the request will be so notified.

6. 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.

7. 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.

8. Destruction of Records

Each office which maintains education records shall adopt its own policy with regard to destruction of education 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.

9. Maintaining Records of Request and Disclosures

The unit custodian shall maintain records 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:

(1) for requests made by the student him/herself; (2) for requests for which the student has not been granted consent; (3) for requests made by school officials with legitimate educational interests; (4) for requests for directory information.

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 by the vice president for student affairs.

10. Students' Right to Challenge Information Contained in Education Records

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:

(1) The student has the right, upon reasonable request, for a brief explanation and interpretation of the record in question from the respective unit custodian.

(2) 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.

(3) 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.

(a) All requests for formal hearings by the student shall be directed to the vice president for student affairs, and shall contain a plain and concise written statement of the specific facts constituting the student's claim.

(b) 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 vice president for student affairs or his/her designee. 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.

(c) At the hearing the student shall be afforded a full and fair opportunity to present evidence relevant to his/her claim and may, at his or her expense, receive assistance or be represented by any individuals of his/her choice.

(d) 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 vice president for student affairs or his/her designee 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 vice president for student affairs or his/her designee shall notify the student in writing of the decision. The decision must include a summary of the evidence and the reasons for the decision.

(1) In the event the decision of the vice president for student affairs is adverse to the student's request, the student shall be notified of the opportunity to place 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.

(2) If a student challenge to the content of a given record is successful, the University shall amend the education record accordingly and inform the student. The student's specific written request to the vice president for student affairs, 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.

11. Complaint Procedure

If a student believes that the University is not in compliance with the Privacy Act, he/she should first check with the office involved and/or the Office of the Vice President for Student Affairs.

If a student wishes to file a complaint with the federal government concerning the University's failure to comply with the Privacy Act, he/she must submit the complaint, in writing, to the Office of the Family Educational Rights and Privacy Act, Department of Health, Education and Welfare, 330 Independence Avenue, S.W., Washington, D.C. 20201. The FERPA office will notify the student when the complaint has been received. The FERPA office will investigate the complaint and may require further information of its findings and basis for such findings. If 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 guidelines concerning this hearing procedure, see Section 99.64 and following of the Privacy Act.

Human Relations

Notice of nondiscrimination. Applicants for admission and employment, students, parents, and employees are hereby notified that Wichita State University does not discriminate on the basis of race, religion, color, national origin, gender, age, sexual orientation, marital status, status as a Vietnam-era veteran, or disability. Any person having inquiries concerning Wichita State University's compliance with the regulations implementing Title VI, Title IX, or Section 504 is directed to the Office of Equal Employment Opportunity, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0145. The Office of Equal Employment Opportunity has been designated by Wichita State to coordinate the institution's efforts to comply with the regulations implementing Title VI, Title IX, Section 504, and Americans with Disabilities Act. Any person also may contact the Assistant Secretary for Civil Rights, U.S. Department of Education, regarding the institution's compliance with these regulations.

The WSU Catalog is available online at the University's Web site, www.wichita.edu. Inquiries should be addressed to the Office of Disability Services for large print, Braille, and audio tape versions.

Injury or Accident

The State of Kansas and Wichita State University do not insure against 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.

Residence Defined

The residence of students, for tuition and fee purposes, is determined by acts of the Kansas legislature, rather than University policy. 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 the law and regulations, a resident, for tuition purposes, is someone who has resided (been physically present) in Kansas for 12 consecutive years prior to enrollment/re-enrollment and who has demonstrated, during those 12 months, the intent to make Kansas their permanent home. Intent is evaluated in light of (1) the person's statement about why they 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/reenrollment."

Residents of Kansas (for fee purposes) who leave the state retain their residency as long as they return to Kansas permanently within 12 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 specific exceptions are authorized by state law: The following people, and their spouses and dependent children, are authorized to pay the equivalent of resident fees immediately: (a) regular employees of the University (does not apply to student assistants or graduate assistants); (b) people on full-time active military duty, stationed in Kansas; (c) people discharged or retired from active military service within the last thirty days under conditions other than dishonorable and who served at least two years in Kansas; (d) people who graduated from a four-year program at an accredited Kansas high school within 6 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; (e) dependent students as long as at least one parent is a Kansas resident for fee purposes; and (f) people who were recruited to, or transferred to Kansas within the last 12 months for a full-time job, and their spouse and dependent children.

Students applying for residency should contact the Registrar's Office, 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 non-resident, thinks he/she meets these residency requirements, then he/she must apply for residency using a form available from the Registrar's Office. Lower fees do not mean that someone has been classified as a resident—there are no non-resident fees, for example, for workshops or off-campus courses.

The responsibility of registering under proper residence is placed on the students. 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, since it will be the one to which all correspondence from Wichita State is sent. Any change in residence must be reported within three days to the Registrar's Office. More complete information on the residence law and regulations can be obtained from the Registrar's Office.

Safety
Campus safety is a priority at Wichita State, and based on FBI statistics reported by universities nationwide, WSU is one of the safest campuses of its kind in the state and nation. Our well-lighted campus and parking lots are regularly patrolled by WSU police officers and student cadets. Beginning at 5:30 p.m., the University provides shuttle bus service from residence halls to the academic buildings, and student cadets are available to escort 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 campus police station are strategically placed around the campus.

Campus crime statistics are reported in the Schedule of Courses and on the Web. Contact the Campus Police Department at (316) 978-3450.
W. Frank Barton School of Business

John M. Beehler, PhD, Dean
100 Clinton Hall • (316) WSU-3200
business.twsu.edu

Mission statement: The W. Frank Barton School of Business prepares individuals to be business leaders in the global entrepreneurial marketplace. In this effort, it:

- provides quality undergraduate, graduate, and professional educational programs in business that encourage lifelong learning.
- engage in scholarly research to develop business and economic knowledge and enhance its applications.
- practice good citizenship by serving our constituencies and the University community.

The vision of the W. Frank Barton School of Business is to be a preferred source for recruiters of high quality business school graduates in this region.

Consistent with the University's role as the Regents' urban institution, the Barton School aggressively pursues regional and national prominence for its academic and professional programs.

This mission is influenced by the location of the school in the largest economic and cultural center in the State of Kansas. As an integral part of the state's designated urban university, the faculty of the Barton School of Business is committed to programs and activities that will help sustain the contribution that this urban center makes to the economic, professional, and cultural health of the state and nation.

Within this context, the faculty of the school have adopted the following educational goals of the Barton School which are listed below under the headings of Students, Faculty, Programs. For each grouping, a preamble states the basic values of the Barton School faculty.

Students: Students are the reason for the Barton School's existence. It is the faculty's responsibility to create programs and a learning environment that ensure the ultimate success of students. We, the faculty, want our students to evaluate positively their Barton School experiences, both while enrolled in courses and afterwards.

Goals: To ensure that students completing Barton School programs possess skills that make them competitive with students from the best business programs in the region. To increase quality and quantity of students.

Faculty: Faculty are the means by which the University creates a learning environment. The quality of the faculty and the opportunities provided to faculty for continuous improvement are of paramount importance to the success of the Barton School.

Goal: To have faculty who are widely recognized for their commitment to students and scholarship.

Programs: The programs offered by the Barton School link it to its multiple constituencies. The rich diversity of these programs reflects the University's unique metropolitan mission.

Goal: To increase the recognition of the Barton School through programs that are relevant, competitive, and up-to-date.

The school is a member of AACSB International — The Association to Advance Collegiate Schools of Business; its undergraduate and graduate programs are accredited by this organization. The School of Accountancy has separate accreditation from AACSB for the undergraduate and graduate programs in accounting. We are one of only 156 schools globally to have both accreditations from AACSB.

Three of the centers sponsored by the Barton School are described below.

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 of 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 Entrepreneurship, housed in Devlin Hall encourages entrepreneurial thinking and activities through quality education, research, and community involvement to better serve its customers and stakeholders. The center provides a comprehensive curriculum in entrepreneurial studies at both the undergraduate and graduate level.

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.

Degrees Offered

Undergraduate

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 and entrepreneurship.

Students may obtain a second bachelor's degree in the Barton School of Business if they (1) complete a minimum of 30 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.

Graduate

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 Bulletin and the Barton School of Business—Master of Professional Accountancy section of the Catalog.

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, business administration, economics, entrepreneurship, finance, management, and marketing. Students in the College of Education may minor in economics or accounting. A minor in business administration 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 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.

The Barton School of Business provides the organizational administration course work for the Health Services Management and Community Development program. This program prepares students to be qualified health care administrators in one of the many types of health facilities.

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 hours of English composition, 3 hours of communication, and 3 hours of college algebra with a grade of C or better in each within their first 24 hours of enrollment in the Barton School of Business. Failure to complete this requirement will bar a student from enrolling in business courses.

Advanced standing in the Barton School of Business is available to students who have (1) completed 60 semester hours; (2) a cumulative grade point average of 2.250; (3) completed 6 hours of elementary accounting, 6 hours of elementary economics, business statis-
Probation and Dismissal

Students are placed on probation at the end of any semester in which they do not have a cumulative and WSU grade point average of 2.250. Probation is removed when their cumulative and WSU grade point averages reach the 2.250 level. Students remain on probation if they earn a 2.250 or better grade point average in the semester during which they are on probation, but their cumulative and WSU grade point average remains below 2.250.

Students on probation will not be academically dismissed until they accumulate 12 or more attempted hours after being placed on probation, failed to earn at least a 2.250 semester average and if their cumulative and WSU grade point average remains below 2.250.

Students on probation are dismissed from the Barton School of Business if they fail to meet the requirements of their probationary status. When dismissed, students must apply to the Barton School of Business Exceptions Committee to be considered for readmission on a final probationary status. Application should be made in the student records office, 106 Clinton Hall.

Extension or Correspondence Work

Not more than 6 hours of the last 30 hours or ten of the total number of hours required for graduation may be in extension or correspondence courses. Permission of the dean must be secured before a student may take such courses. No extension or correspondence courses are allowed that (1) duplicate courses required for any degree granted by the school, (2) are required for any emphasis within the school, or (3) are offered at the junior or senior level in the school.

Limitations on Student Load

Initially admitted Barton School of Business students are limited to a maximum of 16 hours, to which may be added 1 hour of elective. Students admitted to advanced standing in the college are limited to a maximum of 18 hours, to which may be added 1 hour of elective.

All Barton School of Business students are limited to enrollment in one course during a summer 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.

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 hour of Co-op per semester with a 2.250 cumulative grade point average as early as their sophomore year. Students enrolling in 2 or 3 hours of Co-op during a single semester must have junior standing and at least a cumulative GPA of 2.250.

Co-op placements must be approved by the student's faculty sponsor. Participation in the Co-op program requires enrollment in designated courses having prerequisites. More information is available from the business coordinator in the Cooperative Education office.

Adviceing

The focus of advising in the Barton School of Business is to help students progress toward their educational objectives. The school's advising system offers:

1. Transcript evaluation for transfer students and continuous monitoring of degree progress for all students;
2. Suggestions of specific courses to be selected in a given semester or summer session;
3. Program planning designed to outline an entire course of study; and
4. Referral to appropriate University resources for students seeking career guidance, personal counseling, or other types of assistance.

Advising is designed to provide assistance where desired and appropriate. Students, especially those nearing graduation, are encouraged to make full use of the system.

Types of Advising Assistance Available

Transcript Evaluation. Two aspects of transcript evaluation affect students: (1) the evaluation of course work 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 the school's student records office, 106 Clinton Hall, working in conjunction with the dean's office and the various departments within the school.

The student records office also keeps a current record of each student's progress at Wichita State University. Many students will be able to take advantage of the school's automated degree audit system.

This online system provides students a personal copy of their academic record, including work in progress.

Schedule-Building. Schedule-building is the determination of specific courses a student should take in a given semester. Students should refer to the Wichita State University Schedule of Courses and Catalog in consultation with a faculty advisor or staff of the school's advising center to determine a specific course of study. Selection of specific sections and times of courses is the student's responsibility. The tentative schedule must be approved by an advisor.

Program Planning. Students are encouraged to outline an entire plan of study early in their academic career. This program planning activity is provided by the advising center and includes suggested model programs for each of the major fields of study offered by 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.

Where to Find Advising Assistance

Office of the Dean (106 Clinton Hall). Students should come to the Office of the Dean for special advising assistance that cannot be resolved at locations described below and to file appeals and waiver requests relative to school and University regulations. The dean's office also will refer students to the appropriate office should the student be unsure as to where to find assistance.

Undergraduate Academic Advising Center (114 Clinton Hall). The Academic Advising Center is staffed to provide assistance in understanding degree program requirements, planning an entire academic course of study, designing a course schedule for a particular semester, and providing referrals to other University offices for assistance as appropriate.

Student Records Office (106 Clinton Hall). The Student Records Office maintains a complete and up-to-date file for each student admitted to the Barton School of Business.
State, (c) all business and economic courses, (d) all relevant courses in the legal assistant Program. Important points are added as important majors are added.

The faculty of the Barton School of Business strongly endorse the statement on academic honesty appearing in the general information section of this Catalog.

Graduation Requirements
Bachelor of Business Administration

Candidates for the Bachelor of Business Administration degree must satisfy the following Barton School of Business requirements:

1. Complete at least 62 hours (63 hours for accounting majors) of course work offered outside the school (ECON 201, 202, 231, and 232) as courses outside the school). Any course that is cross-listed with a business course is considered to be a business course and does not count as non-business hours. Students may, however, choose to have one upper-division economics course count as a non-business course.
2. Complete at least 50 semester hours of course work offered by the Barton School of Business.
3. Complete the set of core requirements specified for the Bachelor of Business Administration, given later in this section.
4. Complete the requirements for a major in the Barton School of Business.
5. Complete at least 50 percent of the total hours required by (3) and (4) above at Wichita State University. (The following core courses are excluded in computing the 50 percent requirement: MATH 111 and 144 (242); ECON 201, 202, 231, and 232.)
6. Achieve a grade point average of 2.250 or better on (a) all college work; (b) all work taken at Wichita State; (c) all business and economics courses; (d) all business and economics courses at Wichita State; (e) all courses counted toward the student’s major emphasis; and (f) all courses counted toward the student’s major emphasis taken at Wichita State.
7. Complete a minimum of 45 credit hours at the upper division level.

Three levels of requirements must be completed to receive a BBA: (1) University general education and graduation requirements, listed in the Academic Information section of the Catalog, (2) general requirements in the Barton School of Business, and (3) school major requirements. Students should complete the requirements in the order listed, with some overlap and duplication of courses among the three levels.

The following sequence of required courses is recommended:

**Freshman Year**

- MATH 111, College Algebra
- MATH 144, Business Calculus

**Sophomore Year**

- ENGL 101, College English I-II
- COMM 111, Public Speaking
- General education electives

**Junior Year**

- MATH 242, Calculus I will be accepted in lieu of MATH 260, Introduction to Information Processing Systems for Business.
- ECON 201-202*, Principles of Macroeconomics and Microeconomics
- ECON 231, Introductory Business Statistics
- ECON 232, Statistical Software Applications for Business
- General education electives

**Senior Year**

- MATH 260, Introduction to Production and Operations Management
- MGMT 681, Strategic Management
- Major courses
- Nonbusiness electives

Students graduating from the Barton School will take at least one behavioral science course from the following list: MGMT 362, 462, 601, 662, 663, 680; MKT 403; PSY 111; SOC 111.

Students planning to enroll in upper-division business courses (courses numbered 300 to 600) must have completed 60 semester credit hours and met the requirements for advanced standing. Accreditation of the school by AACSB stipulates that students should be classified as juniors to enroll in upper-division courses. Exceptions are made to this requirement for either of the following:

1. Students who have completed at least 60 semester credit hours and have enrolled in the required lower-division (100-200 level) courses may enroll in introductory upper-division courses to complete a full schedule.
2. Students with a cumulative grade point average of 3.250 or above may have the junior standing prerequisite waived with the consent of the instructor of the course and the chairperson of the department in which the course is taken.

The suggested sequence of courses includes classes which are part of the Barton School of Business core requirements. The core courses required for the BBA are:

**Foundation Knowledge for Business**

- Accounting
  - ACCT 210, Financial Accounting*
  - ACCT 220, Managerial Accounting*
  - ACCT 260, Introduction to Information Processing Systems for Business*
- Behavioral Science
  - MGMT 360, Management and Organizational Behavior
- Economics
  - ECON 201-202*, Principles of Macroeconomics and Microeconomics
- Mathematics and Statistics
  - MATH 111, College Algebra*
  - MATH 144, Business Calculus*
  - MATH 242, Calculus I will be accepted in lieu of MATH 144*
- Statistics
  - MATH 242, Calculus I will be accepted in lieu of MATH 242*

**Academic Honesty**

The Barton School of Business strongly endorses the statement on academic honesty appearing in the general information section of this Catalog.

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**Roll Numbers**

(3) and (4) above at Wichita State University. (The following core courses are excluded in computing the 50 percent requirement: MATH 111 and 144 (242); ECON 201, 202, 231, and 232.)

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**Roll Numbers**

(3) and (4) above at Wichita State University. (The following core courses are excluded in computing the 50 percent requirement: MATH 111 and 144 (242); ECON 201, 202, 231, and 232.)
Major/Minor Areas
Candidates for the BBA degree must satisfy the additional requirements of one of the following curricular majors. All students may avail themselves of the indicated minors. The minimum grade point average for a minor field of study shall be the same as the minimum grade point average required for graduation with a major in the same field.

School of Accountancy
Two degree programs are offered by the School of Accountancy—the Master of Accountancy (MACC) and the Bachelor of Business Administration with an accounting major. In addition, a minor in accounting is available to students who are not accounting majors. For information about the Master of Accountancy degree, see the Barton School of Business—Master of Accountancy section of the Catalog. Undergraduate students may begin work leading toward the MACC degree early in their academic career.

MACC—Preprofessional Program Major
For a description of the undergraduate course work in the preprofessional component of the MACC degree program, see the Barton School of Business—Master of Accountancy section of the Catalog.

BBA—Accounting Major
Requirements for a major in accounting within the Bachelor of Business Administration degree are as follows:

Required Courses:  

Course | Hrs.  
--- | ---  
ACCT 210, Composition: Business, Professional and Technical Writing | 3  
ACCT 310, Financial Accounting and Reporting: Assets | 3  
ACCT 320, Accounting for Decision Making and Control | 3  
ACCT 410, Financial Accounting and Reporting: Equities | 3  
ACCT 430, Introduction to Federal Income Tax | 3  
ACCT 560, Accounting Information Systems | 3  
FIN 304, Managerial Economics | 3  
FIN 340, Money and Banking | 3  
FIN 620, Investments | 3  
FIN 631, Money and Capital Markets | 3  
FIN 632, Bank and Financial Institution Management | 3  
MGMT 362, Managing People in Organizations | 3  
MGMT 462, Leading and Motivating | 3  
MGMT 464, Communicating Effectively in Organizations | 3  
MGMT 680, Designing Effective Organizations | 3  
HRM 466, Fundamentals of Human Resource Management | 3  
IB 600, International Management | 3  
MKT/ENTRE 403, Marketing Research | 3  
MKT/ENTRE 420, Developing a Marketing Plan | 3  
MKT 405, Consumer Behavior | 3  
MKT 607, Promotion Management | 3  

Note: Students may substitute up to 6 credit hours within the five areas listed above with academic advisor's consent.

Electives: Selected from any of the above or other upper-division courses in the Barton School of Business. These may be “concentrated” or spread over a number of different disciplines.

Accounting Minor
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 ACCT 210, 220, 260, and 9 hours of upper-division accounting. All accounting course work must be completed with a GPA of 2.250 or better, and 9 hours of accounting course work must be completed at WSU.

Business Administration Major
Required Courses:  

Course | Hrs.  
--- | ---  
ACCT 210, Composition: Business, Professional and Technical Writing | 3  
ECON 201, 202 | 6  
B LAW 431 | 3  
FIN 340 | 3  
MGMT 360 | 3  
MKT 300 | 3  

Economics Major
Department of Economics
A major requires a minimum of 21 upper-division hours in economics beyond the college core. Students who plan to major in economics should consult with the undergraduate advisor in the Department of Economics. The following courses are required and must be included in the 124 hours:

Course | Hrs.  
--- | ---  
ECON 301, Intermediate Macroeconomics | 3  
ECON 302, Intermediate Microeconomics | 3  
ECON 304, Managerial Economics | 3  

Upper-division electives (at least 9 hrs in economics, other 6 with advisor's consent) | 15  

Economics Minor
A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of a minimum of 15 hours of economics including ECON 201 and 202 (or equivalent) and 9 hours of upper-division economics. A minimum of 9 of the 15 hours must be completed at WSU and a GPA of 2.250 are required.

Teaching of Economics: Kansas Department of Education regulations governing the certification 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 Education for program planning.

Entrepreneurship Major
Department of Marketing and Entrepreneurship
The entrepreneurship major requires 21 upper-division hours beyond the college core. Students who plan to major in entrepreneurship should contact the Center for Entrepreneurship for special counseling and scholarship information. The major requires 9 hours of required courses, 3 hours of a directed elective, and 9 hours from the list of approved elective courses. Credit will be awarded for ENTRE 403, 608, or 610 as either directed or approved electives.

Required courses  

Course | Hrs.  
--- | ---  
ENTRE 420, Developing a New Venture Marketing Plan | 3  

E-Business Emphasis
Within the business administration major an emphasis in E-business may be obtained by completing 9 hours of E-business-oriented courses. These courses may be taken as 9 hours of electives or as substitutes for courses listed in the 15 hours distributed over four of the five areas listed in the business administration major. See advisor for current offerings.

Business Administration Minor
A minor in business administration is available to any student who is not pursuing a degree in the Barton School of Business. A minimum of 15 hours in residence and a GPA of at least 2.250 are required.
ENTRE 620, Growing and Managing an Entrepreneurial Firm ........................................ 3
ENTRE 668, Developing a Successful Business Plan ..................................................... 3
Directed elective—one of the following—ENTRE 403, Marketing Research ................. 3
ENTRE 608, Selling and Sales Force Management ......................................................... 3
ENTRE 610, Short-Term Financial Management ......................................................... 3
Electives (9 hours)
ACCT 320, Accounting for Decision Making and Control ........................................ 3
B LAW 436, Law of Business Associations ..................................................................... 3
ENTRE 403, Marketing Research .................................................................................... 3
ENTRE 481, Cooperative Education ............................................................................... 3
ENTRE 491, Independent Study in Entrepreneurship .................................................... 3
ENTRE 492, Internship in Entrepreneurship .................................................................. 3
ENTRE 606, New Product Marketing ........................................................................... 3
ENTRE 608, Selling and Sales Force Management ......................................................... 3
ENTRE 610, Short-Term Financial Management ......................................................... 3
ENTRE 690, Special Topics in Entrepreneurship ............................................................ 3
ENTRE 6905, Project SITE—Students in Free Enterprise ............................................ 3
FIN 440, Financial Management II ............................................................................... 3
HRM 466, Fundamentals of Human Resource Management ......................................... 3
MGMT 462, Leading and Motivating ............................................................................ 3
MKT 403, Marketing Research ....................................................................................... 3
MKT 404, Retail Management ......................................................................................... 3
MKT 601, International Marketing ................................................................................. 3
MKT 607, Promotion Management ............................................................................... 3
RE 310, Principles of Real Estate ................................................................................... 3

Emphasis in Real Estate
Within the entrepreneurship major an emphasis in real estate may be obtained by taking 21 hours beyond the college core, as follows:

Entrepreneurship core—9 hours
ENTRE 420, Developing a New Venture Marketing Plan ................................................ 3
ENTRE 620, Growing and Managing an Entrepreneurial Firm ....................................... 3
ENTRE 668, Developing a Successful Business Plan ....................................................... 3

Real estate core—9 hours
RE 310, Principles of Real Estate .................................................................................... 3
RE 619, Urban Land Development .................................................................................. 3
One upper-division real estate course chosen from:
RE 438, Real Estate Law ................................................................................................. 3
RE 611, Real Estate Finance .......................................................................................... 3
RE 614, Real Estate Appraisal ...................................................................................... 3
RE 618, Real Estate Investment Analysis ....................................................................... 3
RE 619, Urban Land Development .................................................................................. 3

Electives—3 hours
One upper-division course approved by the entrepreneurship program and/or the Center for Real Estate. Students are strongly encouraged to use internship, co-op, or independent study to satisfy this elective.

Entrepreneurship Minor
A minor in entrepreneurship is available to any WSU student whose major field of area of emphasis is other than entrepreneurship. The minor consists of 15 hours of entrepreneurship courses including ENTRE 310C and 12 hours of upper-division entrepreneurship courses. The student must take at least 9 hours at WSU and maintain a 2.250 GPA in those courses.

Finance Minor
A minor in finance consists of 15 hours, including FIN 340, FIN 440, ACCT 210, and 6 additional hours of finance courses (real estate courses will not count). At least 6 hours of upper-division finance courses must be taken in residence. A minimum GPA of 2.250 in the minor courses is required.

Human Resource Management Major
Department of Management

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM 466, Fundamentals of Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM 664, Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>HRM 666, Human Resource Selection</td>
<td>3</td>
</tr>
<tr>
<td>HRM 668, Compensation</td>
<td>3</td>
</tr>
<tr>
<td>HRM 699, Training and Development</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives, from the following:

ECON 661, Collective Bargaining
MGMT 462, Leading and Motivating
MGMT 464, Communicating Effectively in Organizations
MGMT 606, Designing Effective Organizations
MGMT 620, Coaching, Developing, and Mentoring
MGMT 662, Managing Workplace Diversity
MGMT 663, Building Effective Work Teams

International Business Major
Department of Management

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB 600, International Management</td>
<td>3</td>
</tr>
<tr>
<td>IB 601, International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>IB 625, International Financial Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Directed electives
Three of the following courses selected in consultation with the student's major advisor: ANTHR 303, World Cultures or ANTHR 515, China: People and Culture or ANTHR 516, Japan: People and Culture (may be taken as culture/area studies)
DS 390C, International Purchasing
ECON 622, Comparative Economic Systems or ECON 671, Economic Growth and Development
IB 481, Cooperative Education (may be taken as an elective)
IB 491, International Business Independent Study
IB 492, International Business Internship
IB 690, Special Topics in International Business
MKT 403, Marketing Research or MKT 405, Consumer Behavior

With major advisor's consent, other courses from upper-level courses in the Barton School or new courses related to international business in communications, economics, entrepreneurship, human resources management, management, and management information systems may be substituted.
Within the student’s total degree program, at least 10 hours are required in a foreign language. An additional 6 hours of culture/area studies related to a geographic area, selected from an approved list with major advisor’s consent, also are required. These courses, including Issues and Perspectives courses, e.g., LAS 300, Global Issues; War and Peace, may be included within the General Education Program.

Management Major
Department of Management

Seven courses selected from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 362, Managing People in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 430, Business, Government, and Society</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 462, Leading and Motivating</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 464, Communicating Effectively in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 660, Designing Effective Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 661, Coaching, Developing, and Mentoring</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 662, Managing Workplace Diversity</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 663, Building Effective Work Teams</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 680, Making Effective Decisions</td>
<td>3</td>
</tr>
<tr>
<td>HRM 466, Fundamentals of Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM 664, Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>HRM 666, Human Resource Selection</td>
<td>3</td>
</tr>
<tr>
<td>IB 660, International Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Up to 6 credit hours may be substituted from upper-level courses in business administration with advisor’s consent.

Management Information Systems Major
Department of Finance, Real Estate, and Decision Sciences

The MIS major consists of the following courses. Note: MIS majors are not required to complete MIS 495 in the business core.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 310, Fundamentals of Programming</td>
<td>3</td>
</tr>
<tr>
<td>MIS 325, Data Communications and Computer Networks</td>
<td>3</td>
</tr>
<tr>
<td>MIS 380, Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>MIS 600, Database Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS 696, Managing the IS Function</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives, from the following: 9

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 315, Intermediate Programming</td>
<td>3</td>
</tr>
<tr>
<td>MIS 610, Database and Web Programming</td>
<td>3</td>
</tr>
<tr>
<td>MIS 650, Knowledge Management</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 540, Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 660, E-Commerce</td>
<td>3</td>
</tr>
</tbody>
</table>

Marketing Major
Department of Marketing and Entrepreneurship

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 403, Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>MKT 405, Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKT 609, Marketing Programs</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives, from the following: 9

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 404, Retail Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 407, Marketing for Service and Nonprofit Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MKT 601, International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 604, Distribution Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 606, New Product Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 607, Promotion Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 608, Selling and Sales Force Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives, selected with consent of major advisor: 6

Emphasis in Real Estate

Within the marketing major an emphasis in real estate may be obtained by taking 21 hours beyond the college core, as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 403, Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>MKT 405, Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKT 609, Marketing Programs</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 407, Marketing for Service and Nonprofit Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MKT 608, Selling and Sales Force Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Real Estate core—9 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE 310, Principles of Real Estate</td>
<td>3</td>
</tr>
<tr>
<td>RE 619, Urban Land Development</td>
<td>3</td>
</tr>
<tr>
<td>Two upper-division real estate courses chosen from:</td>
<td></td>
</tr>
<tr>
<td>RE 438, Real Estate Law</td>
<td>3</td>
</tr>
<tr>
<td>RE 611, Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>RE 614, Real Estate Appraisal</td>
<td>3</td>
</tr>
<tr>
<td>RE 618, Real Estate Investment Analysis</td>
<td>3</td>
</tr>
<tr>
<td>RE 619, Urban Land Development</td>
<td>3</td>
</tr>
</tbody>
</table>

Marketing Minor

A minor in marketing consists of 15 hours, including MKT 300, 405, and 609, and 6 hours of upper-division marketing courses chosen from MKT 403, 404, 407, 601, 604, 605, 606, 607, and 608. At least 9 hours must be taken at WSU with at least a 2.250 GPA in these courses.

Real Estate Emphasis

An emphasis in real estate is available to students majoring in economics, entrepreneurship, finance, or marketing. See these sections for details.

Master of Accountancy

The Master of Accountancy program at Wichita State University is designed to prepare qualified candidates for careers as professional accountants in public practice, industry, government, and nonprofit organizations. The program is based on strong preparation in general education courses with special emphases on communication skills, mathematics, and economics, and includes a broad exposure to the different aspects of business and management.

The School of Accountancy recognizes students need differing technical requirements to enter a diverse work environment. Beginning fall 2002, two specialized concentrations will complement the traditional emphasis: Accounting Information Systems (AIS) and Taxation. The AIS concentration provides increasing technical competence in the area of accounting systems analysis. The tax concentration focuses on advanced issues in taxation, including the area of research.

Students not possessing a bachelor’s degree will receive both a Bachelor of Business Administration degree and a Master of Accountancy degree at the time of graduation.

The MACC program requires a minimum of five years of full-time collegiate study, when beginning as a freshman. Students who decide to enter the program later in their academic careers should consult with the director of the School of Accountancy to learn the approximate length of time it would take to earn the degree.

Professional Designations. Students interested in accounting may pursue several different professional designations. The designation Certified Public Accountant (CPA) requires that the candidate pass the Uniform CPA Examination and meet the requirements of Kansas law and the regulations of the Kansas State Board of Accountancy (or the relevant state of residence/practice, if not Kansas). The areas tested on the examination include auditing, business law, and accounting theory.

The Certificate in Management Accounting (CMA) requires that the candidate pass the CMA examination and meet the requirements of the Institute of Certified Management Accountants. The areas tested include economics and business finance, organization and behavior, including ethical considerations; public reporting standards, auditing, and taxes; internal reporting and analysis; and decision analysis, including modeling and information systems.

The designation Certified Internal Auditor (CIA) requires no specified course work prior to sitting for the examination. The areas tested on this examination are principles of internal auditing, internal audit techniques, principles of management, and disciplines related to internal auditing.

Additional information on these professional designations may be obtained from the School of Accountancy.

Admission Requirements

Admission to the MACC professional curriculum is available to (1) qualified students who have not yet completed a bachelor’s degree, and (2) qualified students who have completed a bachelor’s degree...
(not necessarily in business or accounting) from an accredited college or university. Students in the second category should see the Graduate Bulletin for further information.

Full admission to the MACC professional curriculum, for students who have not yet completed a bachelor’s degree, requires:
1. Completion of the preprofessional curriculum described below.
2. A minimum grade point average of 2.750 on all courses identified as Barton School of Business core courses.
3. A minimum grade point average of 3.000 on the following courses: ACCT 310, 320, 410, and 430.
4. A total of 1,100 points based on the formula of 200 times the overall grade point average (4.000 system) on the last 60 hours plus the Graduate Management Admission Test (GMAT) score.

Students who meet all the requirements above except one with no more than 9 hours of the preprofessional curriculum may be admitted on a conditional basis. These 9 hours must be completed in the first semester following conditional admission or as soon thereafter as course scheduling permits. All students are required to meet with the School of Accountancy’s graduate advisor prior to beginning course work.

Probationary Admission
Students who do not meet the minimum GMAT and/or grade point requirements may be admitted to probationary status by the director on the basis of sufficient evidence that they can satisfactorily complete the MACC program requirements and have the potential for a successful career in professional accounting.

Degree Requirements—Students Not Possessing a Bachelor’s Degree at Time of Admission

Preprofessional Curriculum
Students pursuing the Master of Accountancy (MACC) are required to meet specific requirements for admission to the School of Accountancy. During the candidate’s undergraduate work, the following requirements must be met:
1. The candidate must complete the general education requirements for Wichita State University, plus additional nonbusiness courses, for 63 semester hours.
2. Students planning to sit for the CPA exam are encouraged to take an upper-division economics course as part of the nonbusiness courses. The following courses are specifically required by the School of Accountancy and may be counted within this 63 hours:
   - ECON 201 and 202, Principles of Economics I and II..................6
   - ECON 231, Introductory Business Statistics.........................3
   - ECON 232, Statistical Software for Applications in Business........1
   - ENGL 210, Composition: Business, Professional and Technical Writing........3

Degree Requirements—Students Possessing a Bachelor’s Degree at Time of Admission

Total degree requirements for students granted admission after completion of a bachelor’s degree will vary and depend upon the specific course content of the undergraduate degree program. As a minimum, the candidate’s program must total 30 graduate-level credit hours beyond the bachelor’s degree, including 15 semester hours of accounting courses numbered 800 or above and a total of 21 semester hours in courses numbered 800 or above.

In general, we presume an undergraduate degree in business with a major in accounting equivalent to that required at Wichita State University. See page 39 for details. If a person is admitted without sufficient background, that person’s total degree program will be adjusted upward to satisfy any deficiencies. The following graduate-level course work must be completed:
1. ACCT 815, Financial Accounting and Reporting: Contemporary Issues........3
2. ACCT 825, Management Control Systems.................3
3. ACCT 835, Tax Research and Selected Topics........3

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. Graduate students may not take these courses for graduate 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 only to juniors and seniors. Graduate students may also receive graduate credit for these courses. Business courses numbered 700 to 899 are structured primarily for graduate students, but undergraduate, upper-level 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 program. (See the Academic Information section of the Catalog for special conditions under which seniors may be admitted to graduate courses.)

Accounting (ACCT)

Lower-Division Courses

ACCT 190. Selected Topics (1-3). Repeatable with departmental consent.

ACCT 210. Financial Accounting (3). The study of 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.

ACCT 220. Managerial Accounting (3). The study of 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. Prerequisite: ACCT 210.

ACCT 260. Introduction to Information Processing Systems for Business (3). Focuses on the evolving dimensions of hardware, software, data communications and computer networking, and the Internet. Using business situations as examples, students learn about and gain experience with word processing, spreadsheets, data bases, charting, present
**Upper-Division Courses**


**ACCT 320. Accounting for Decision Making and Control (3)** The use of accounting information to assist management in planning, analyzing, and implementing processes for decision making and control. Focus is operational control in temporary business contexts. Prerequisites: junior standing, MATH 111 or 112, and ACCT 220 and 260, advanced standing.

**ACCT 390. Special Group Studies in Business (1-3).** Repeatable for credit with School of Accountancy consent. Prerequisite: advanced standing.

**ACCT 410. Financial Accounting and Reporting: Equities (3).** A continuation of ACCT 310. Emphasizes liabilities and equity. Prerequisites: ACCT 260 and 310; MATH 111 or 112; junior standing, advanced standing.

**ACCT 430. Introduction to Federal Income Tax (3).** An overview of the federal tax law and those laws specifically applicable to individuals and sole proprietors. Also introduces tax research techniques. Prerequisites: ACCT 210; MATH 111 or 112; junior standing, advanced standing.

**ACCT 451. Cooperative Education (1-3).**

**ACCT 491. Independent Study in Accounting (1-3).** Individual study for Cr/NCr only. Prerequisites: 2.750 GPA in accounting, junior standing, and School of Accountancy consent.

**ACCT 492. Internship in Accounting (3).** Offered Cr/NCr only. Prerequisites: 2.750 GPA in accounting, junior standing, and School of Accountancy consent.

**Courses for Graduate Students Only**

Where a course is indicated as a prerequisite to a second course, all prerequisites to the earlier course(s) also apply to the later course(s).

**ACCT 800. Financial Accounting (3).** A study of the basic structure of accounting, income determination, asset valuation, liability recognition, and accounting for ownership equity. Includes the interpretation and analysis of financial statements. Prerequisite: no previous credit in accounting or permission of the School of Accountancy.

**ACCT 801. Managerial Accounting (3).** Examines the use of accounting information to assist management in planning, analyzing, and implementing business decisions and activities. Focuses on strategic and operational performance analysis and evaluation. Prerequisite: ACCT 800 or equivalent.

**ACCT 802. The Effect of Taxation on Management Decisions (3).** Introduces the basic tax concepts of income, deduction, and credits that will enable managers to (1) understand the tax consequences of their business decisions and (2) communicate effectively with tax professionals in structuring business transactions. Prerequisites: graduate standing and ACCT 800 or equivalent, or permission of the School of Accountancy.

**ACCT 815. Financial Accounting and Reporting: Contemporary Issues (3).** Uses the case method to examine and analyze the application of generally accepted accounting principles to problems of measurement, presentation, and disclosure in financial statements. Focuses on contemporary topics of interest in financial accounting and reporting. Prerequisites: graduate standing and ACCT 610 or equivalent, or permission of the School of Accountancy.

**ACCT 825. Management Control Systems (3).** Studies accounting in the context of management control systems. Focuses on how accounting interacts with management in achieving an organization’s strategic and operational objectives. Emphasizes contemporary challenges in accounting related to broadening the types of information captured, measured, and reported. Prerequisites: graduate standing and ACCT 620 or 801 (or equivalent), or permission of the School of Accountancy.

**ACCT 830. Taxation of Business Entities—Advanced Topics (3).** Analyzes various advanced topics in the taxation of business entities and business planning. Focuses on the use of various entity forms to achieve optimal tax and business objectives. Also considers the tax consequences of conducting business internationally.

**ACCT 831. Taxation of Estates and Trusts (3).** Studies the income taxation of trusts and estates, including the special cases of grantor and split-interest trusts. Examines the gift taxation of donors, the estate taxation of decedents, and the fundamentals of estate planning. Prerequisites: graduate standing and ACCT 430 or equivalent, or permission of the School of Accountancy.

**ACCT 835. Tax Research and Selected Topics (3).** An in-depth study of traditional and computerized tax research and planning techniques, ethical issues, tax practice issues, and an introduction to state, multistate, and international taxation. Prerequisites: graduate standing and ACCT 430 or equivalent, or permission of the School of Accountancy.

**ACCT 840. Advanced Principles of Auditing (3).** An advanced study of auditing emphasizing EDP auditing statistical sampling and ethics. Prerequisites: graduate standing and ACCT 410 and 640 (or equivalent), or permission of the School of Accountancy.

**ACCT 860. Advanced Accounting Information Systems (3).** A study of the concepts of information systems, their design and operation, and the relationship of these concepts to the economic information requirements, information flows, decision criteria, and control mechanisms in the business organization. Prerequisites: graduate standing and ACCT 560 (or equivalent), or permission of the School of Accountancy.
ACCT 890. Seminar in Special Topics (1-3). Repeatable with permission of the School of Accountancy.

ACCT 891. Directed Study in Accounting (1-3). Prerequisite: School of Accountancy consent.

ACCT 892. Internship in Accounting (3). Offered Cr/Nr only. Prerequisites: 3.000 GPA in accounting, graduate standing, and School of Accountancy consent.

Business Administration—General (BA)

Lower-Division Courses

BA 190. Selected Topics (1-3). Repeatable with departmental consent.

BA 190A. The Right Start: Becoming a Master Student (3). Specifically for first-year business majors. Helps students become master students. Provides an extended exposure to the mission, strategies, and programs of the Barton School of Business. Helps students prepare for success in studying, working with other students, interacting with faculty, and planning their careers. Students learn current business practices and interact with representatives of the business community. Non-business students may enroll on a space-available basis. Counts as a non-business elective for any student enrolled in the Barton School of Business.

BA 281. Cooperative Education (1). An 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. May be repeated, but limited to a total of 3 credits. Offered Cr/Nr only. Prerequisites: sophomore standing and 2.250 GPA.

BA 290. Selected Topics (1-3). Repeatable with departmental consent.

Upper-Division Courses

Upper-Division Courses


B LAW 431. Legal Environment of Business (3). An introduction to 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. Prerequisites: junior standing, advanced standing.


B LAW 481. Cooperative Education (1-3).

B LAW 491. Independent Study (1-5). Offered Cr/Nr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in business law.

B LAW 492. Internship in Business Law (1-3). Offered Cr/Nr only. Prerequisites: junior standing, 2.750 GPA in business law and departmental consent.

Courses for Graduate/Undergraduate Credit


B LAW 636. Law of Business Associations (3). Law of agency, partnerships, and corporations. Considers the organizational and relational aspects of both small, closely held businesses and large corporate enterprises. Prerequisites: junior standing, advanced standing.

B LAW 690. Seminar in Selected Topics (1-5). Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

Courses for Graduate Students Only

B LAW 890. Seminar in Special Topics (1-3). Repeatable with departmental consent.

Decision Sciences (DS)

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Course

DS 190. Selected Topics (1-3). Repeatable with departmental consent.

Upper-Division Courses

DS 350. Introduction to Production and Operations Management (3). An 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. Prerequisites: ECON 231 and 232 and MATH 144, or equivalent, junior standing, advanced standing.

DS 390. Special Group Studies in Decision Sciences (1-3). Repeatable with departmental consent. Prerequisite: advanced standing.

DS 390C. International Purchasing (1-3). Cross-listed as IB 390C. Repeatable with departmental consent. Prerequisite: advanced standing.

DS 481. Cooperative Education (1-3).

DS 491. Independent Study (1-5). Offered Cr/Nr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in decision sciences.

DS 492. Internship in Decision Sciences (1-3). Offered Cr/Nr only. Prerequisites: junior standing, 2.750 GPA in decision sciences and departmental consent.

Courses for Graduate/Undergraduate Credit

DS 651. Design of Operations Systems (3). Gives an in-depth view of the long-term design aspects of operations systems. Includes process analysis and design, production control information systems, facilities planning, materials handling systems, job design, personnel planning and scheduling, and current issues. Prerequisites: DS 350, advanced standing.


DS 690. Seminar in Selected Topics (1-3). Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

DS 750. Workshop in Decision Sciences (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

DS 850. Operations Management (3). Develops an understanding of the operations function in a business and how it interfaces with other major functions in business. Students gain an appreciation of the strategic importance of operations and how a firm can gain competitive advantage through world-class performance by operations in deliver-
ing high-quality, cost-competitive products and services. Builds a knowledge base of the concepts, tools, and techniques related to designing, managing, and improving operations. Helps managers, regardless of functional specialization, gain an "operations perspective." Prerequisites: calculus and statistics.

**DS 851. Advanced Operations Management (3).** This is an advanced course in the conceptual and applied aspects of Operations Management in the manufacturing and non-manufacturing sectors, as well as in the Internet. The thrust of the course is on strategic issues, process analysis, and the role of technology in supporting Operations. Students will learn how software, like SAP if available, can perform Operations Management tasks. Case studies will be used. Prerequisite: DS 850 or equivalent.

**DS 860 ERP-Enterprise Resource Planning (3).** This course provides an overview of Enterprise Resource Planning (ERP) and related systems like CRM. E-Commerce systems are designed to assist an organization with the integration and management of its business processes. ERP systems can be expensive and time-consuming to implement. Topics covered include ERP Life Cycle for Implementation and Change Management. Students will get hands-on exercises with ERP software, like SAP if available. Prerequisite: DS 850 or equivalent.

**DS 865. Supply Chain Management (3).** This course introduces concepts, models, and solution approaches critical to management of a supply chain. The focus will be on understanding how supply chain design and operation impact the performance of the company and its competitive advantage. Topics covered include strategy development, profitability, demand forecasting, inventory management, facility location, warehousing, transportation, network design, and information sharing. Prerequisite: DS 850 or equivalent.

**DS 875. Management Science (3).** This course gives an overview of management science techniques that can be used to solve decision problems in different business functional areas (operations management, finance, marketing, and HR). Students gain analytical skills that make them better decision makers regardless of their area of specialization. The course is example-driven and spreadsheet-based. Prerequisite: DS 850 or equivalent.

**DS 876. Advanced Management Science (3).** This case and project-based course allows students to do in-depth research on selected management science techniques and apply them to a real-world business problem. Students will be responsible for the problem definition, data gathering, model building, and model testing. Students will also develop a decision support system that uses the model as its engine and easy-to-use interfaces for data input and output. Prerequisite: DS 875 or equivalent.

**DS 890. Seminar in Special Topics (1-3).** Repeatable with departmental consent.

**DS 891. Directed Studies (1-5).** Prerequisite: departmental consent.

**DS 893. Special Project in Decision Sciences (1-4).** A special project including original case research, supervised internships, or field research. Prerequisite: approval of the MS Committee. Open only to MS in business candidates.

**ECON 250. Entrepreneurship and Personal Enterprise (3).** General education issues and perspectives course. Demonstrates that the ascribed attributes and personal qualities that traditionally have characterized the entrepreneur (initiative, investment, innovation, commitment, and risk-taking) can be learned by anyone who seeks personal intellectual fulfillment and/or business success. Knowledge of entrepreneurial principles and processes is invaluable in any academic discipline as well as for those in quest of desired career goals.

**ECON 280. Economics of Social Issues (3).** General education issues and perspectives course. Analyzes current social and public policy issues using the fundamental tools of economic theory. Issues covered depends partly on current events, but includes poverty, environmental issues, government tax and spending policies, international trade, and economic stability and growth. No prior study of economics is necessary. Prerequisites: MATH 111, COMM 111, and ENGL 102.

### Upper-Division Courses

**ECON 301. Intermediate Macroeconomics (3).** Introduces the concepts of 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. Prerequisites: ECON 201, 202, junior standing, advanced standing.

**ECON 302. Intermediate Microeconomics (3).** Theory of resource allocation by means of prices and markets. Economics choice, production, cost, supply, demand, and market structure are discussed, as well as efficiency conditions in consumer, production, distribution, and exchange. Prerequisites: ECON 201, 202, junior standing, advanced standing.

**ECON 304. Managerial Economics (3).** Applies concepts from microeconomic theory to problems in business management and decision-making. Includes demand analysis, pricing, production costs, effects of market structure on business decision-making, and decision-making with risk. Prerequisites: ECON 202 and 231/232, advanced standing.

**ECON 310. Economics of E-Business (3).** Covers the fundamental economic principles explaining the growth of e-business and the Internet: transaction costs, costs of producing and distributing information, network externalities, lock-in, and information pricing. Examines current state and practice of e-business and the effects of e-business and the Internet on society outside the business realm. Prerequisites: ECON 201 and 202 or instructor's consent, advanced standing.

**ECON 340. Money and Banking (3).** A study of 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. Prerequisites: ECON 201, junior standing, advanced standing.

**ECON 481. Cooperative Education (1-2).**
ECON 491. Directed Study (1-3). Individual study of various aspects and problems of economics. Repeatable for credit. Graded C/R only. Prerequisite: junior standing, departmental consent, and 2.750 GPA in economics.

Courses for Graduate/Undergraduate Credit

ECON 605. History of Economic Thought (3). A critical analysis of economic thought, the factors that influence this thought and its impact upon the social and economic development of the modern world. Prerequisites: ECON 201, 202, or 800, junior standing, advanced standing.

ECON 611. Economics of Sports (3). An 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: advanced standing.

ECON 614. Industrial Economics and Antitrust Policy (3). Examines the behavior of firms within industries emphasizing antitrust policy. Includes pricing behavior, distribution policies, entry deterrence, advertising, and mergers. Prerequisites: ECON 201 and 202, junior standing, advanced standing.

ECON 615. Economics of Transportation (3). A study of how businesses can effectively transport both nationally and internationally. Includes the physical and economic characteristics of transportation modes, basic concepts of logistics, and problems and policies related to transportation. Prerequisites: ECON 201 and 202, or ECON 800, junior standing, advanced standing.

ECON 617. Economics of Regulation (3). A study of the theory and practice of regulation. Includes both the traditional regulation of public utilities and communications and the newer forms of regulation, such as safety and environmental regulations. Prerequisites: ECON 201, 202, or 800, junior standing, advanced standing.


ECON 625. Economic History of Europe (3). Cross-listed as HIST 614. An analysis of the development of economic institutions; the rise of capitalism and its influence on overseas expansion, technology, precious metals, politics, and war; changes in economic ideologies; and cultural effects of economic change. Prerequisites: ECON 201, junior standing, advanced standing.

ECON 627. Economic History of the United States (3). Cross-listed as HIST 315. An 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. Prerequisites: ECON 201, junior standing, advanced standing.

ECON 660. Labor Economics (3). An introduction to labor economics surveying both theoretical and empirical research in this field. Includes labor markets, wage determination, and human capital theory. Prerequisites: ECON 201, 202, or 800, junior standing, advanced standing.

ECON 661. Collective Bargaining and Wage Determination (3). An examination of economic and legal aspects of collective bargaining and the major issues and problems inherent in the bargaining process. Explores the manner in which wages are determined under various institutional relationships and the effects of collective bargaining on wages, employment, and prices. Prerequisites: ECON 201 and 202, or ECON 800, junior standing, advanced standing.

ECON 662. Work and Pay (3). Investigation of the economic aspects of work and pay emphasizing the nature of work under capitalism and the manner in which wages are determined. Covers quality of work life, labor force participation and mobility, labor market discrimination, and labor market contracts and work incentives. Prerequisites: ECON 201 and 202, or ECON 800, junior standing, advanced standing.

ECON 663. Economic Insecurity (3). Cross-listed as GERON 663. Personal economic insecurity, such as unemployment, old age, health care, disability, and erratic economic fluctuations. Includes costs and benefits of government action to aid in meeting such insecurity. Prerequisites: ECON 201, 202, or 800, or instructor's consent; junior standing, advanced standing.

ECON 671. Economic Growth and Development (3). Survey of leading growth theories, emphasizing the processes of development and capital formation in developed and underdeveloped economies. Analyzes determinants of real income, resource allocation, investment criteria, balance of payment problems, national policies, and related topics within this framework. Prerequisites: ECON 201, 202, or 800, junior standing, advanced standing.


ECON 674. International Finance (3). Cross-listed as FIN 625 and 1B 625. A study of the international financial and monetary system, emphasizing currency markets. Examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisites: FIN 340, ECON 201, 202, or 800, junior standing, advanced standing.

ECON 688. Urban Economics (3). Cross-listed as P. Adm. 688. A survey of 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. Prerequisites: ECON 201 and 202, or ECON 800, junior standing, advanced standing.

ECON 692. Group Studies in Economics (1-3). Repeatable for credit with departmental consent. Prerequisite: junior standing.

ECON 702. Mathematical Methods in Economics (3). Introduces mathematical tools that are especially useful in economics, econometrics, and finance. Includes a review of differential and integral calculus, an introduction to matrix algebra, and various constrained optimization and economic modeling techniques. Emphasizes economic applications and modeling. Prerequisites: ECON 201, 202, or 800, and MATH 144 or equivalent, and junior standing.

ECON 731. Applied Econometrics I (3). A study of regression techniques including logit/probit analysis 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. Prerequisites: ECON 213 and junior standing.

ECON 740. Monetary Problems and Policy (3). An examination of historical and contemporary monetary issues in the context of the global economy. Prerequisites: ECON 201, 202, or 800, 340; and junior standing.

ECON 750. Workshop in Economics (1-3). Prerequisite: junior standing.

ECON 765. Public Sector Economics (3). Cross-listed as P. Adm. 765. An analysis of fiscal institutions and decision making in the public sector of the American economy. Budget planning and execution, taxation, debt, and fiscal policy. Prerequisites: ECON 201, 202, or 800, and junior standing, or instructor's consent.

Courses for Graduate Students Only

ECON 800. Analysis of Economic Theory (3). An intensive analysis of micro- and macroeconomic principles. Not for graduate credit in the MA program in economics. Prerequisite: departmental consent.


ECON 802. Microeconomic Analysis (3). An analysis of the consumer, the firm, and competitive and noncompetitive markets using mathematical models. Prerequisites: ECON 302.

ECON 803. Analysis of Business Conditions and Forecasting (3). An intensive study of research methodologies and forecasting for real life business decision-making. Covers...
Entrepreneurship (ENTRE)  
Department of Marketing and Entrepreneurship

Lower-Division Courses

ENTRE 160. Introduction to Entrepreneurship (3). An introductory course for non-business majors to familiarize the student with the world of small business, including the analysis of personal strengths and weaknesses as they relate to launching an entrepreneurial career. Gives considerable attention to elementary concepts of planning, financing, starting, and managing a new business.

ENTRE 250. Entrepreneurship and Personal Enterprise (3). Demonstrates that the ascribed attributes and personal qualities traditionally characterizing the entrepreneur (initiative, investment, innovation, commitment, and risk-taking) can be learned by anyone who seeks personal intellectual fulfillment and / or business success. Knowledge of entrepreneurial principles and processes is invaluable in any academic discipline as well as for those in quest of desired career goals.

Upper-Division Courses

ENTRE 310C. The Entrepreneurial Experience (3). 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. Integrates a strong oral and written communication component throughout course. Prerequisites: ENGL 101, 102, COMM 111 (C or above average required); ACCT 210; ECON 201; and junior standing or instructor’s consent.

ENTRE 403. Marketing Research (3). Cross-listed as MKT 403. A study of the design of marketing information systems and marketing research procedures. Prerequisites: MKT 300, ECON 231 and 232, junior standing, advanced standing.

ENTRE 420. Developing a Marketing Plan (3). Cross-listed as MKT 420. Explores the design and tools required in the development of a marketing plan for a new or existing organization. With wide use of traditional and web-based research, student develops a marketing plan that positions the firm to achieve competitive advantage in the marketplace. Prerequisites: ENTRE 310C, MKT 300, or instructor’s consent, advanced standing.

ENTRE 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. Offered Cr/No Cr only. Prerequisites: junior standing and 2.250 GPA.

ENTRE 491. Independent Study in Entrepreneurship (1-3). Offered Cr/No Cr only. Closed to graduate credit. Prerequisites: junior standing, 2.750 GPA in entrepreneurship courses, and departmental consent.

Courses for Graduate/Undergraduate Credit

ENTRE 542. Internship in Entrepreneurship (1-3). Offered Cr/No Cr only. Prerequisites: junior standing, 2.750 GPA in entrepreneurship, and departmental consent.

ENTRE 606. New Product Marketing (3). Cross-listed as MKT 606. Addresses identifying, evaluating, developing, and commercializing new products within both smaller and larger firms. Explores the role of the product/brand manager, a person who often acts as an internal entrepreneur. Prerequisites: MKT 300, advanced standing.

ENTRE 608. Selling and Sales Force Management (3). Cross-listed as MKT 608. An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: MKT 300, advanced standing.


ENTRE 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 "entrepreneurship," such as growing a division or department within a larger organization. Prerequisites: ENTRE 310C and junior standing or instructor’s consent, advanced standing.

ENTRE 668. Developing a Successful Business Plan (3). Emphasizes the development of a comprehensive business plan which incorporates 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. Explores and illustrates strategies for exiting and harvesting the business. Prerequisites: ENTRE 420, senior standing, or instructor’s consent, advanced standing.

ENTRE 690. Special Topics in Entrepreneurship (3). Advanced course with an in-depth study of emerging topics in entrepreneurship. Repeatable with departmental consent. Prerequisites: ENTRE 310C and junior standing or instructor’s consent, advanced standing.

ENTRE 750. Workshop in Entrepreneurship (1-4). Prerequisite: junior standing.

Entrepreneurship (ENTRE)  
Department of Marketing and Entrepreneurship

Lower-Division Courses

ENTRE 160. Introduction to Entrepreneurship (3). An introductory course for non-business majors to familiarize the student with the world of small business, including the analysis of personal strengths and weaknesses as they relate to launching an entrepreneurial career. Gives considerable attention to elementary concepts of planning, financing, starting, and managing a new business.

ENTRE 250. Entrepreneurship and Personal Enterprise (3). Demonstrates that the ascribed attributes and personal qualities traditionally characterizing the entrepreneur (initiative, investment, innovation, commitment, and risk-taking) can be learned by anyone who seeks personal intellectual fulfillment and / or business success. Knowledge of entrepreneurial principles and processes is invaluable in any academic discipline as well as for those in quest of desired career goals.

Upper-Division Courses

ENTRE 310C. The Entrepreneurial Experience (3). 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. Integrates a strong oral and written communication component throughout course. Prerequisites: ENGL 101, 102, COMM 111 (C or above average required); ACCT 210; ECON 201; and junior standing or instructor’s consent.

ENTRE 403. Marketing Research (3). Cross-listed as MKT 403. A study of the design of marketing information systems and marketing research procedures. Prerequisites: MKT 300, ECON 231 and 232, junior standing, advanced standing.

ENTRE 420. Developing a Marketing Plan (3). Cross-listed as MKT 420. Explores the design and tools required in the development of a marketing plan for a new or existing organization. With wide use of traditional and web-based research, student develops a marketing plan that positions the firm to achieve competitive advantage in the marketplace. Prerequisites: ENTRE 310C, MKT 300, or instructor’s consent, advanced standing.

ENTRE 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. Offered Cr/No Cr only. Prerequisites: junior standing and 2.250 GPA.

ENTRE 491. Independent Study in Entrepreneurship (1-3). Offered Cr/No Cr only. Closed to graduate credit. Prerequisites: junior standing, 2.750 GPA in entrepreneurship courses, and departmental consent.

Courses for Graduate/Undergraduate Credit

ENTRE 542. Internship in Entrepreneurship (1-3). Offered Cr/No Cr only. Prerequisites: junior standing, 2.750 GPA in entrepreneurship, and departmental consent.

ENTRE 606. New Product Marketing (3). Cross-listed as MKT 606. Addresses identifying, evaluating, developing, and commercializing new products within both smaller and larger firms. Explores the role of the product/brand manager, a person who often acts as an internal entrepreneur. Prerequisites: MKT 300, advanced standing.

ENTRE 608. Selling and Sales Force Management (3). Cross-listed as MKT 608. An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: MKT 300, advanced standing.


ENTRE 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 "entrepreneurship," such as growing a division or department within a larger organization. Prerequisites: ENTRE 310C and junior standing or instructor’s consent, advanced standing.

ENTRE 668. Developing a Successful Business Plan (3). Emphasizes the development of a comprehensive business plan which incorporates 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. Explores and illustrates strategies for exiting and harvesting the business. Prerequisites: ENTRE 420, senior standing, or instructor’s consent, advanced standing.

ENTRE 690. Special Topics in Entrepreneurship (3). Advanced course with an in-depth study of emerging topics in entrepreneurship. Repeatable with departmental consent. Prerequisites: ENTRE 310C and junior standing or instructor’s consent, advanced standing.

ENTRE 750. Workshop in Entrepreneurship (1-4). Prerequisite: junior standing.
Courses for Graduate Students Only

Entrepreneurship (ENTRE 812). Introduction to Total Quality Management (3). Cross-listed as MKT 812 and MGMT 812. Introduces the philosophy of quality improvement and compares/contrasts these views with traditional management thought. Also introduces the basic components of the quality improvement process. Includes application exercises in quality improvement techniques and experience with team contact.

Entrepreneurship (ENTRE 868). New Venture Feasibility Seminar (3). Focuses on directing students in the appropriate methods of selecting financial sources and in raising seed capital through the preparation of a comprehensive feasibility study. Covers (1) sources of capital, such as venture capitalists, investment bankers, banks, and creative forms of financing; (2) marketing opportunity analyses; (3) pro forma development; (4) feasibility decision making; and (5) actual preparation of the loan package. Prerequisite: ACCT 800 or its equivalent, or instructor’s consent. Not open to students with credit in ENTRE 668.

Entrepreneurship (ENTRE 869). Corporate Entrepreneurship (3). Addresses trends, current status, and success factors in the area of innovation and entrepreneurship within organizations. Examines principles applicable to any organization, large or small, private or public, by those people who wish to create change and innovate within the existing structure. Covers (1) foundations of entrepreneurship; (2) barriers to change; (3) entrepreneurial characteristics of individuals; (4) creative thinking and forced ideation methods; (5) corporate entrepreneurship—the need for it, definition, methods, favorable environment, and rewards; (6) examples of corporate entrepreneurship; (7) entrepreneurial strategies, policies, and practices for organizations; and (8) the entrepreneurial society, a growing way of life.

Entrepreneurship (ENTRE 890). Seminar in Special Topics (1-3). Repeatable with departmental consent.

Entrepreneurship (ENTRE 891). Directed Studies (1-5). Prerequisite: departmental consent.


Executive Master of Business Administration (EMBA) Graduate Studies in Business

Courses for Graduate Students Only

EMBA 800. Statistical Analysis and Quantitative Methods for Decision Making (3). Introduces methods of statistical inference, emphasizing applications to administrative and management decision problems. Includes classical estimation and hypothesis testing, regression, correlation, analysis of variance, and nonparametric methods. Prerequisite: admission to EMBA program.

EMBA 801. Human Behavior and the Management of Organizations (3). Examines leadership styles, power, authority, motivations, communications, and their impact on human behavior. Includes organizational learning, team building, participative management, transformational leadership, managing diversity, conflict management, network organizations, organizational change, and re-engineering. Prerequisite: admission to EMBA program.

EMBA 802. Marketing for Executive Management (3). Focuses on the analysis, planning, and implementation of marketing strategies from middle- and upper-management perspectives. Introduces key concepts and methods for the development of integrated marketing programs. Prerequisite admission to Executive MBA program.

EMBA 803. Economic Analysis for Managers (3). Focuses on the behavior of the firm’s product and labor markets; the consequences of business, regulatory and tax policies; industry pricing; research and development strategies; transfer pricing; the effects of vertical and horizontal integration; leveraged buy-outs and principal-agent problems. Prerequisite admission to Executive MBA program.

EMBA 804. Global Business and Competitiveness (2). Focuses on applications of economic analysis to international business decisions, international and macroeconomic components, understanding the implications of macro policies and developments for the firm’s business environment, expansions into foreign markets, foreign investment and the relevance of global changes in technology and labor productivity, and foreign exchange, balance of payments, and trade policy issues. Prerequisite admission to Executive MBA program.

EMBA 805. Operations Management (2). Focuses on the processes by which goods and services are produced, distributed, and delivered in organizations. Emphasizes systems for analyzing design and operational problems in the production/operations function. Prerequisite: admission to Executive MBA program.

EMBA 806. Using Accounting Information to Understand Financial Performance (2). Focuses on the nature and purpose of accounting, principal accounting instruments, and valuation problems. Prerequisite admission to Executive MBA program.

EMBA 807. Corporate Finance (3). Focuses on the strategic decision that an organization makes leading to capital spending. Also includes the risk element in financial decision making and the financial instruments that have evolved to mitigate risk in the economy. Prerequisite: admission to Executive MBA program.

EMBA 808. Using Accounting Information to Improve Strategic and Operational Performance (3). Focuses on the use of financial information in management decision making. Includes internal reporting systems, cost management systems, planning and budgeting, performance measurement issues, and activity-based management. Prerequisite admission to Executive MBA program.

EMBA 809. Information Technology (2). Focuses on information as a resource and the links between business strategy and information technology, the organizational implications of technology, and how to successfully incorporate information technology into organizations to support management decision making and control. Prerequisite: admission to Executive MBA program.

EMBA 810. Managerial Investment Strategies (2). Focuses on investment management, asset pricing models, factor models, performance assessment, option pricing, and other derivative securities. Prerequisite: admission to Executive MBA program.

EMBA 811. Managerial Strategy (3). Integrates the other courses in the program by addressing the strategic management of an organization. Focuses on developing a strategic plan that maximizes shareholder value, generates commitment and effective action from others in the organization for implementing the plan, and developing a strategy consistent with the organization’s resources while increasing shareholder value by satisfying customers better than do competitors. Prerequisite: admission to Executive MBA program.

Finance (FIN)
Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

FIN 140. Personal Finance (3). Management of the cash flows experienced by individuals and families. Analysis of alternative strategies to meet individual financial goals through various investment media emphasizing risks and return. 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.

Upper-Division Courses


FIN 390. Special Group Studies in Finance (1-3). Repeatable with departmental consent, advanced standing.

FIN 440. Financial Management II (3). A study of long-term financing decisions and financial planning. Also includes working capital management, mergers and acquisitions, and international financial management. Prerequisites: FIN 340, advanced standing.

FIN 451. Cooperative Education (1-3).

FIN 491. Independent Study (1-5). Offered Cr/Nr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in finance.

FIN 492. Internship in Finance (1-3). Offered Cr/Nr only. Prerequisites: junior standing, 2.750 GPA in finance and departmental consent.
Courses for Graduate/Undergraduate Credit


FIN 611. Real Estate Finance (3). Cross-listed as RE 611. Real estate financing instruments, institutions, traditional and creative financing techniques. Risk analysis, mortgage financing and underwriting, primary and secondary mortgage markets. Prerequisites: FIN 340, advanced standing.

FIN 618. Real Estate Investment Analysis (3). Cross-listed as RE 618. Equity investor decision criteria, institutional and ownership entity investment constraints, financial leverage opportunities, cash flow analysis, and creative income tax strategies. Prerequisites: FIN 340, advanced standing.

FIN 620. Investments (3). An analysis of 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. Prerequisites: FIN 340, junior standing; advanced standing.

FIN 622. Futures and Options Markets (3). Presents an overview of the futures and options markets. Discusses basic theoretical concepts as well as the practical issues of hedging and speculating in these markets. Prerequisites: FIN 340, junior standing; advanced standing.

FIN 625. International Financial Management (3). Cross-listed as ECON 674 and IB 625. A study of 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. Prerequisites: FIN 340; ECON 201, 202, or 300; junior standing; advanced standing.

FIN 631. Money and Capital Markets (3). A study of domestic and international financial markets, instruments, and institutions and the determinants of the general level and structure of interest rates and security prices. Also covers management of interest rates and portfolio risk using a variety of techniques. Prerequisites: FIN 340, 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. Prerequisites: FIN 340, junior standing; advanced standing.

FIN 650. Financial Modeling (3). Provides students experience in solving a variety of financial problems using a modern computer spreadsheet program. Assignments, covering topics from both corporate finance and investments, closely simulate the types of projects faced by financial managers and practitioners. Prerequisites: FIN 440, ACCT 260, advanced standing.

FIN 660. Cases in Finance (3). An exploration of the problems and operations for which the financial officer is responsible, emphasizing controversial aspects of financial analysis. This is the capstone course in the finance major and should be taken at the end of a finance program. Prerequisites: FIN 340, 440, 6 hours of accounting, or departmental consent; junior standing; advanced standing.

FIN 690. Seminar in Selected Topics (1-5). Repeatable with departmental consent. Prerequisites: FIN 340, junior standing; advanced standing.

FIN 750. Workshop in Finance (1-4). Prerequisites: FIN 340 and junior standing.

Courses for Graduate Students Only

FIN 810. Short-Term Financial Management (3). Provides state-of-the-art information in short-term financial management. Discusses how cash moves across international borders and within foreign countries and the influence of electronic communications on short-term financial management. Prerequisite: FIN 840 or equivalent.

FIN 821. Investments (3). Study of the basic theory and practice of security valuation and investment management. Includes security and portfolio analysis, selection of investment media, and measurement of performance. Prerequisite: FIN 840.

FIN 823. Risk Management with Options and Futures (3). Cross-listed as ECON 847. Discusses the use of futures and options contracts in managing some of the risks associated with business and investment. Also discusses theoretical issues to provide a basis for understanding the practical uses of these securities. Prerequisite: FIN 840 or equivalent.

FIN 830. Management of Financial Institutions (3). Analyzes the management and operations of firms in the financial services industry. Studies the competitive money and capital markets in which they operate. Emphasizes risk management in the financial institution using a variety of techniques. Prerequisite: FIN 840 or equivalent.

FIN 840. Financial Systems (3). An intensive analytical introduction to finance from the management viewpoint, including the theory of financial management, the financial institutional structure, and an analysis of a variety of practical problems of business finance. Prerequisite: ACCT 800 or equivalent.

FIN 850. Managerial Finance (3). Provides knowledge and tools to make informed investment and financing decisions. Includes capital markets, advanced capital budgeting, decision making under uncertainty, asset pricing models, contingent claims models, capital structure, dividend policy, mergers, restructuring and corporate control, and exchange rate systems and international finance. Prerequisite: FIN 840 or equivalent.


FIN 870. Financial Modeling (3). Prepares students to model various financial transactions and decision-making analyses using computer analysis and spreadsheets. Students build models to analyze corporate finance problems, portfolio and investment problems, derivative securities pricing problems, including real option analysis and fixed-income security valuation and duration problems. Studies technical issues in financial modeling and uses Visual Basic for financial analysis. Students gain tools needed to participate fully, creatively, and with technical proficiency in the resolution of many financial issues facing the firm. Prerequisite: FIN 850.

FIN 890. Seminar in Special Topics (1-3). Repeatable with departmental consent. Prerequisite: FIN 840.

FIN 891. Directed Studies (1-5). Prerequisite: FIN 840 and departmental consent.

FIN 893. Special Project in Finance (1-4). A special project including original case research supervised internships or field research. Prerequisite: approval of the MS committee. Open only to MS in business degree candidates. Prerequisite: FIN 840.


Human Resource Management (HRM)

Department of Management

Lower-Division Course

HRM 190. Selected Topics (1-3). Repeatable with departmental consent.

Upper-Division Courses


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, and employee/labor relations. Covers relevant societal, economic, and regulatory influences on human resource management. Prerequisites: MGMT 360 or concurrent enrollment; junior standing; advanced standing.

HRM 481. Cooperative Education (1-3).
HRM 491. Independent Study (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in HRM courses.

HRM 492. Internship in Personnel (1-3). Offered Cr/NCr only. Prerequisites: junior standing, 2.750 grade point average in HRM courses and departmental consent.

Courses for Graduate/Undergraduate Credit

HRM 664. Labor Relations (3). Presents the philosophy underlying labor legislation and the function of collective bargaining in labor-management relationships. Prerequisite: junior standing, advanced standing.

HRM 666. Human Resource Selection (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. Also validation of selection techniques. Prerequisites: HRM 466 or instructor's consent, 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. Prerequisites: HRM 466 or instructor's consent, 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. Prerequisites: HRM 466 or instructor's consent, advanced standing.

HRM 690. Seminar in Selected Topics (1-5). Repeatable with departmental consent. Prerequisite: HRM 466 or instructor's consent, advanced standing.

HRM 691. Directed Studies (1-5). Prerequisite: departmental consent.

HRM 695-896. Thesis (2-2).

International Business (IB)
Department of Management

Upper-Division Courses

>IB 333. International Business (3). General education issues and perspectives 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 system, 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.

IB 390C. International Purchasing (1-3). Cross-listed as DS 390C. Repeatable with departmental consent. Prerequisite: advanced standing.

IB 481. Cooperative Education (1-3). Introduces the student to international business practices by working in an international business-related job. Also provides planned professional experience to enhance the student's academic program and career focus. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Prerequisite: junior standing.

IB 491. International Business Independent Study (1-5). Offered Cr/NCr only. Prerequisites: junior standing and 2.750 GPA.

IB 492. International Business Internship (1-3). Offered Cr/NCr only. Prerequisites: junior standing and 2.750 GPA.

Courses for Graduate Students Only

IB 600. International Management (3). Studies management concepts and practices applicable to business operations in an international setting. Examines a wide range of problems associated with business operations across national boundaries. Discusses cultural differences, language barriers, nationalism, protectionism, technology transfer, and trade policies. Prerequisites: MGMT 360 or concurrent enrollment, junior standing, advanced standing.

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. Prerequisites: MKT 300, junior standing, advanced standing.

IB 625. International Financial Management (3). Cross-listed as ECON 625 and FIN 625. A study of 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. Prerequisites: FIN 340, ECON 201, 202, or 800; junior standing, advanced standing.

IB 690. Special Topics in International Business (3). Covers emerging topics within the field of international business. Prerequisites: completion of or concurrent enrollment in all required IB courses, advanced standing.

Courses for Graduate Students Only

IB 836. International Business and Competitiveness (3). An introduction to international business administration with particular attention to the development of multinational business strategies in light of the diverse economic, political, social, and cultural dimensions of the environments that exist in both developed and developing areas of the world.

IB 891. Directed Studies in IB (1-6). Prerequisite: departmental consent.

IB 892. Internship in IB (1-3). Prerequisite: departmental consent.

Legal Assistant (LEGAL)
Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

LEGAL 230. Introduction to Paralegalism (2). The new role concept of the legal assistant in the practice of law. An inquiry into what paralegals do, types of paralegal employment, education and licensure, professional ethics, authorized and unauthorized practice of law, and an introduction to paralegal skills. Prerequisite: LAW 130, concurrent enrollment or departmental consent.

LEGAL 231A. Legal Research and Writing (1) (3). An introduction to the tools and techniques of legal research, emphasizing basic analytical skills. Introduces the student to the components of a law library through a variety of assigned problems, some of which culminate in the writing of a research memorandum or brief. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 232. Legal Aspects of Business Organizations (3). The law of business organizations emphasizing the practice aspects related to formation of operation of proprietorships, partnerships, and corporations. Includes drafting aspects related to employment agreements, partnership agreements and corporate documents. Prerequisite: admission to the Legal Assistant Program or departmental consent.
LEGAL 233. Litigation I (3). An introduction to the civil litigation process emphasizing the practice aspects associated with a civil action. Includes civil procedure, preparation and use of pleadings, discovery, law of evidence, and appeals. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 234. Estate Administration (3). The law of intestate succession, wills, and trusts, emphasizing the administration of an estate under Kansas law. Includes the preparation of wills, trust instruments, and documents related to the probate process. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 235. Law Office Management and Technology (3). The application of modern concepts of organization, management, and systems technology to the law office. Emphasizes the use of systems approaches and the proper use of software in the handling of all administrative functions and routine legal matters. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 236. Litigation II (3). A continuation of Litigation I. Emphasizes the functions of a legal assistant in trial preparation and execution including gathering and organization of materials, investigating, interviewing, drafting of pleadings and interrogatories, preparing a trial notebook, assisting during trial, etc. Prerequisites: admission to the Legal Assistant Program or departmental consent.

LEGAL 237. Family Law (3). An introduction to family law including the role of a lawyer as counselor. Emphasizes the practice aspects related to divorce, separation, custody, support, adoption, and guardianship matters. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 238. Legal Assistant Internship (2). Internship training in a law office, corporate law department, or government agency. Offered C/W only. Prerequisites: 12 hours of legal specialty courses and internship committee approval.

LEGAL 239. Special Topics (1-3). Repeatable with departmental consent. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 240. Substantive Law: Torts (3). An introduction to the substantive law which is involved in personal injury litigation. Special emphasis on analysis of cases and applying legal principles to facts. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 241. Legal Research and Writing II (3). A continuation of LEGAL 231A. Covers research in specialized legal materials and writing of trial and appellate briefs. Prerequisites: admission to the Legal Assistant Program or departmental consent and LEGAL 231A.

LEGAL 243. Property Law (3). An introduction to the principles of property law emphasizing the practice aspects of real estate transactions. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 244. Legal Assistant Computer Skills (3). An introduction to the use of microcomputers by legal assistants. Emphasizes word processing, litigation support, and computer-aided research with Lexis or Westlaw. Prerequisite: LEGAL 231A or 233 or departmental consent.

Management (MGMT)

Management (MGMT)

Lower-Division Courses

MGMT 101. Introduction to Business (3). Since everyone spends a lifetime dealing with and being influenced by business firms, course introduces students to current issues, concepts, and functions of business and its environment.

MGMT 190. Selected Topics (1-3). Repeatable with departmental consent.

Upper-Division Courses

MGMT 360. Management and Organizational Behavior (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. Prerequisites: junior standing, advanced standing.

MGMT 362. Managing People in Organizations (3). Studies why individuals behave the way they do in organizations. Discusses concepts such as personality, motivation, group dynamics, conflict, leadership, and organizational dynamics, emphasizing developing skills to manage behavior for maximum organizational effectiveness. Prerequisites: junior standing, advanced standing.

MGMT 390. Special Group Studies in Management (1-3). Repeatable with departmental consent. Prerequisite: advanced standing.


MGMT 462. Leading and Motivating (3). A study of theories of human motivation and adaptation of these theories to programs in organizations. Probes concepts of authority and delegation and analyzes leadership styles. Prerequisites: MGMT 360 or concurrent enrollment, junior standing, advanced standing.

MGMT 464. Communicating Effectively in Organizations (3). An examination of the design of organizational communication systems. Includes an introduction to communication models and the analysis of the interpersonal communication process. Prerequisites: MGMT 360 or concurrent enrollment, junior standing, advanced standing.

MGMT 481. Cooperative Education (1-3).

MGMT 491. Independent Study (1-5). Offered C/W only. Closed to graduate credit. Prerequisites: junior standing and 2.75 GPA in management.

MGMT 492. Internship in Management (1-3). Offered C/W only. Prerequisites: junior standing, 2.75 GPA in management, and departmental consent.

Courses for Graduate/Undergraduate Credit

MGMT 561. Introduction to International Economics and Business (3). Cross-listed as ECON 627. A survey of the economic foundations of international trade and investment. Studies international trade, theory, and policy (the international economy), then explores the operations of the multinational firm within that environment. Prerequisites: ECON 201 and 202, junior standing, advanced standing.

MGMT 560. 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, and 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. Prerequisites: MGMT 360 or concurrent enrollment, junior standing, advanced standing.

MGMT 661. Coaching, Developing, and Mentoring (3). Managers and leaders of all kinds are judged not on what they do but upon how well their subordinates perform. Course develops positive, supportive management skills for helping individuals and groups achieve their potential. Covers the importance of identifying and hiring superior performers, orienting them to the group, coaching and developing subordinates to their fullest, maintaining motivation at high levels, and merging individuals into a cohesive group. Prerequisites: MGMT 360 or concurrent enrollment, junior standing, advanced standing.

MGMT 662. Managing Workplace Diversity (3). Modern organizations face the challenge of managing employees with diverse backgrounds and talents to provide products and services to diverse customers. Course examines work force 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. Prerequisites: MGMT 360 or concurrent enrollment, junior standing, advanced standing.

MGMT 663. 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 a 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. Prerequisites: MGMT 360 or concurrent enrollment, junior standing, advanced standing.

MGMT 680. Making Effective Decisions (3). A study of the theories of decision making with attention to the factors of creativity, the quest for subjective certainty, rationality, cognitive inhibitors, problem identification, evaluation of alternatives, applications of qualitative methods to decision processes, and decision implementation. Prerequisites: MGMT 360 or concurrent enrollment, 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, finance, accounting, and production. Discusses both domestic and international policy issues, large and small firms, and various sources of competitive advantage. Prerequisites: DS 350, FIN 340, MKT 300, MGMT 360, senior standing, advanced standing.

MGMT 690. Seminar in Selected Topics (1-5). Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

MGMT 750. Workshop in Management (1-6). Prerequisite: junior standing.

Courses for Graduate Students Only

MGMT 803. Business Decision-Making and Analysis (3). A study of business decision-making and problem-solving methodologies including problem definition, research design, data-gathering techniques, analytical techniques, reporting strategies, and communication issues. Prerequisite: ECON 231 or equivalent.

MGMT 812. Introduction to Total Quality Management (3). Cross-listed as ENTRE 812 and MKT 812. Introduces the philosophy of quality improvement and compares/contrasts these views with traditional management thought. Also introduces the basic components of the quality improvement process. Includes application exercises in quality improvement techniques and experience with team concepts.

MGMT 860. Management of Organizations (3). An introduction to management and organizational theory. Includes classical and contemporary management theory, human relations, group dynamics, motivation, communication, organizational structure and design, and behavioral control.

MGMT 862. Organizational Behavior (3). The study of individual and group behavior as it affects organizational functioning. Applies concepts such as motivation, personality, interpersonal relations, upward management, conflict management, and leadership to organizational settings, emphasizing analysis and action-planning. Prerequisite: MGMT 860 or departmental consent.

MGMT 865. Communication (3). Cross-listed as COMM 865. An analysis of communication models emphasizing their applications to communication problems in organizations. Explores social-psychological processes underlying persuasion in interpersonal relations and through the mass media. Critically analyzes communication systems and techniques within formal organizations. Prerequisite: MGMT 860 or departmental consent.

MGMT 885. Advanced Strategic Management (3). An analysis of business problems from a strategic perspective. Builds on prior course work to focus on a firm's ability to develop a sustainable competitive advantage. Firms studied represent a broad range of manufacturing and service, global and domestic, entrepreneurial and mature issues. Prerequisite: to be taken during last semester of student's program or departmental consent.

MGMT 890. Seminar in Special Topics (1-3). Repeatable with departmental consent.

MGMT 891. Directed Studies (1-5). Prerequisite: departmental consent.

MGMT 893. Special Project in Management (1-4). A special project including original case research, supervised internships, or field research. Prerequisite: approval of the MS Committee. Open only to MS in business degree candidates.


Management Information Systems (MIS)

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

MIS 190. Selected Topics in MIS (1-3). Repeatable for credit with departmental consent.

Upper-Division Courses


MIS 315. Fundamentals of Data Structures, File Design and Access (3). A second course in programming emphasizing data structures and concepts necessary for building business application systems. Utilizes file design and access applications as the vehicle to teach traditional concepts of in-memory data structures as well as more advanced event-driven, object-oriented programming practices. Prerequisites: MIS 310, advanced standing.

MIS 325. Data Communications and Computer Networks (3). Takes a problem-solving approach to introducing data communications 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 intranetworking LANs over a wide area network (WAN) provide the backdrop for introducing data communication concepts (OSI), standards, protocols, and technologies. Prerequisites: ACCT 260, advanced standing.

MIS 350. 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 and solutions related to business process reengineering. 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. Prerequisites: MIS 310, advanced standing.

MIS 390. Special Topics in MIS (1-3). Repeatable for credit with departmental consent. Prerequisite: advanced standing.

MIS 481. Cooperative Education (1-3). Offered Cr/No Cr only. Prerequisites: 2.500 GPA in MIS, junior standing, and departmental consent.

MIS 491. Directed Study (1-3). Individual study for Cr/No Cr only. Prerequisites: 2.500 GPA in MIS, junior standing, and departmental consent.

MIS 492. Internship in MIS (1-3). Offered Cr/No Cr only. Prerequisites: 3.000 GPA in MIS, senior standing, and departmental consent.

MIS 495. Management Information Systems (3). A study of the structure and the strategic role of computer-based information systems. Includes information resource management perspective emphasizing issues of information architecture, data integration and administration, and risk management in information systems development efforts. Prerequisites: ACCT 260, advanced standing.

Courses for Graduate/Undergraduate Credit

MIS 600. Database Management Systems (3). Introduces various methodologies for conceptual data modeling, including Entity-Relationship Data Modeling and Object-Oriented 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 in a required database programming project. Covers electronic commerce transaction processing, data warehousing, data mining, and distributed database management. Prerequisites: MIS 350, advanced standing.

MIS 610. Database and Web Programming (3). Uses ASP.NET as the programming tool to teach Web application development. Includes HTML forms and XML-based data sources for developing interactive and dynamic Web applica-
tions within a server-based scripting environment. Covers advanced topics such as ADO and implementing Security in ASP. Prerequisites: MIS 325 and MIS 600, advanced standing.

MIS 650. Knowledge Management (3). Introduces the design and implementation of systems for leveraging organizational knowledge and intellectual capital. Includes the role of expert systems, data warehousing and knowledge discovery tools, knowledge repositories, e-learning applications, and discussion and chat technologies for knowledge creation and sharing in support of decision making and problem solving in business. Prerequisites: MIS 600, advanced standing.

MIS 690. Advanced Topics in MIS (1-3). Repeatable for credit with departmental consent. Prerequisites: 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. Prerequisites: MIS 600 (concurrent enrollment) and advanced standing.

Courses for Graduate Students Only

MIS 874. Management Information Systems (3). Focuses on information as an organizational resource to be managed. Explores the links between business strategy and information technology, and addresses the organizational implications of investing in information systems. Goal is to prepare today's manager with the necessary know-how to successfully manage with information technology.

MIS 884. Database Planning and Management (3). Prepares students to deal with issues in planning and managing organization-wide integrated databases. Emphasizes logical database design and relational database implementation. Includes SQL, assurance, database integrity, database conversion, database administration, and data management for computer integrated manufacturing. Prerequisite: MIS 874 or instructor's consent.

MIS 890. Seminar in Special Topics (1-3). Repeatable for credit with departmental consent.

Marketing (MKT)
Department of Marketing and Entrepreneurship

Lower-Division Course

MKT 190. Selected Topics (1-3). Repeatable with departmental consent.

Upper-Division Courses

MKT 300. Marketing (3). A description and analysis of the U.S. marketing system and an investigation of the factors affecting management of the major policy areas of marketing in the firm. Prerequisites: junior standing, advanced standing.

MKT 390. Special Group Studies in Marketing (1-3). Repeatable with departmental consent. Prerequisite: advanced standing.

MKT 403. Marketing Research (3). Cross-listed as ENTRE 403. A study of the design of marketing information systems and marketing research procedures. Prerequisites: MKT 300, ECON 231 and 232, 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 and clarify new influences at work in the retailing environment. Prerequisites: MKT 300 or departmental consent, advanced standing.

MKT 405. Consumer Behavior (3). A study of a variety of concepts in the behavioral sciences related to specific topics in consumer behavior, including mass communication; reference groups; and sociological, psychological, and economic aspects of consumer behavior. Prerequisites: MKT 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 these organizations. Prerequisites: MKT 300, junior standing, advanced standing.

MKT 420. Developing a Marketing Plan (3). Cross-listed as ENTRE 420. Emphasizes the analysis and tools required in the development of a marketing plan for a new or existing organization. With extensive use of traditional and web-based research, student develops a marketing plan that positions the firm to achieve a competitive advantage in the marketplace. Prerequisites: ENTRE 310C, MKT 300, or instructor's consent, advanced standing.

MKT 481. Cooperative Education (1-3).

MKT 491. Independent Study (1-5). Offered for Cr/No Cr only. Closed to graduate credit. Prerequisites: junior standing and 2,750 GPA in marketing.

MKT 492. Internship in Marketing (1-3). Offered for Cr/No Cr only. Prerequisites: junior standing, 2,750 GPA in marketing, and departmental consent.

Courses for Graduate/Undergraduate Credit

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. Prerequisites: MKT 300, junior standing, advanced standing.

MKT 604. Distribution Management (3). A study of all areas involved with the distribution of a firm's products or services. Focuses on such issues as the development of a firm's marketing channels and its relationships with wholesalers and retailers, as well as the management of the firm's storage facilities, inventory control, procedures, and shipping facilities. Prerequisites: MKT 300, junior standing, advanced standing.

MKT 606. New Product Marketing (3). Cross-listed as ENTRE 606. Addresses identifying, evaluating, developing, and commercializing new products within both smaller and larger firms. Explores the role of the product/brand manager, a person who often acts as an internal entrepreneur. Prerequisites: MKT 300, advanced standing.

MKT 607. Promotion Management (3). An analysis of all issues involved with the promotion of an organization and its products or services. Deals with the development of advertising campaigns, management of the personal sales force, development of special promotional activities, and management of public relations. Prerequisites: MKT 300, junior standing, advanced standing.

MKT 608. Selling and Sales Force Management (3). Cross-listed as ENTRE 608. An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: MKT 300, advanced standing.

MKT 609. Marketing Programs (3). A study of all the aspects of the marketing mix that are integrated to make an effective and coordinated marketing program. Prerequisites: MKT 300, 6 additional hours of marketing, advanced standing.

MKT 690. Seminar in Selected Topics (1-5). Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

MKT 750. Workshop in Marketing (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

MKT 800. Marketing Systems (3). An intensive analytical introduction to the combination of institutions that comprise the overall marketing system. Also presents the marketing function as a major subsystem within the individual business firm.

MKT 801. Marketing Management (3). Develops an understanding of the difference between a sales/marketing department and a marketing orientation. Emphasizes the integral role of a marketing orientation throughout the modern organization. Prerequisite: MKT 800 or equivalent.

MKT 803. Marketing Analysis (3). The application of the scientific method to the solution of marketing problems. Prerequisite: MKT 800 or equivalent.

MKT 805. Consumer Decision Processes (3). An examination of different aspects of the behavior of consumers and of the factors that help explain their behavior. Includes an
analysis of current concepts and models. Prerequisite: MKT 800 or departmental consent.

MKT 807. Services and Nonprofit Marketing (3). Examines the characteristics of commercial and nonprofit services that pose unique marketing challenges for these types of organizations. Prerequisite: MKT 800 or equivalent.

MKT 812. Introduction to Total Quality Management (3). Cross-listed as ENT 812 and MGMT 812. Introduces the philosophy of quality improvement and compares/contrasts these views with traditional management thought. Also introduces the basic components of the quality improvement process. Includes application exercises in quality improvement techniques and experience with team concept.

MKT 890. Seminar in Special Topics (1-3). Repeatable with departmental consent.

MKT 891. Directed Studies (1-5). Prerequisite: departmental consent.

MKT 893. Special Project in Marketing (1-4). A special project including original case research, supervised internships, or field research. Prerequisite: approval of the MS Committee. Open only to MS in business degree candidates.


Master of Business Administration (MBA)

Courses for Graduate Students Only

MBA 800. Financial Statement Analysis (3). Studies financial statements and related footnote disclosures. Includes tools and procedures common to the interpretation and analysis of financial statements. Prerequisites: graduate standing and permission of a Barton School graduate studies in business advisor.

MBA 801. MBA Basics: Management and Marketing (3). Highlights foundation knowledge from the disciplines of management and marketing integrated with a strong component of communication skills. Primarily, provides students with a knowledge base in management and marketing from which to build in their MBA course work. Secondarily, builds oral and written communication skills necessary for success in the MBA curriculum and beyond. Prerequisites: graduate standing and permission of a Barton School graduate studies in business advisor.

Real Estate (RE)

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Course

RE 190. Selected Topics (1-3). Repeatable with departmental consent.

Upper-Division Courses

RE 310. Principles of Real Estate (3). Economic, legal, and physical characteristics of real estate. Overview of real estate, including contracts, deeds, title assurance, market analysis, appraisal, brokerage, mortgage financing, investment, and property management principles. Prerequisites: junior standing, advanced standing.

RE 390. Special Group Studies in Real Estate (1-3). Repeatable with departmental consent. Prerequisite: advanced standing.

RE 438. Real Estate Law (3). Laws and regulations affecting real estate ownership and use, including ownership interests, conveyancing, mortgages, title assurance, landlord-tenant relationships, and public and private land-use controls. Prerequisites: junior standing, advanced standing.

RE 481. Cooperative Education (1-3).

RE 491. Independent Study (1-5). Offered Cr/NoCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in real estate courses.

RE 492. Internship in Real Estate (1-3). Offered Cr/NoCr only. Prerequisites: junior standing; 2.750 GPA in real estate, and departmental consent.

Courses for Graduate/Undergraduate Credit

RE 611. Real Estate Finance (3). Cross-listed as FIN 611. Real estate financing instruments, institutions, traditional and creative financing techniques. Risk analysis, mortgage financing and underwriting, primary and secondary mortgage markets. Prerequisites: FIN 340, advanced standing.

RE 614. Real Estate Appraisal (3). Analysis of factors that create real estate value. Cost, sales comparison, and capitalized income approaches to market value. Highest and best use analysis. Prerequisites: RE 310, advanced standing.

RE 618. Real Estate Investment Analysis (3). Cross-listed as FIN 618. Equity investor decision criteria, institutional and ownership entity investment constraints, financial leverage opportunities, cash flow analysis, and creative income tax strategies. Prerequisites: FIN 340, advanced standing.

RE 619. Urban Land Development (3). A hands-on course to familiarize students with all aspects of land development, including supply and demand analysis, site selection, feasibility analysis, development financing, cash-flow budgeting, and marketing strategies. Prerequisites: RE 310 or 614 or 618, advanced standing.

RE 690. Seminar in Selected Topics (1-5). Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

RE 750. Workshop in Real Estate (1-4). Prerequisite: junior standing.
The College of Education offers programs to develop skilled and competent teachers, administrators, counselors, school psychologists, speech and language clinicians, and other specialists. College faculty also contribute to the improvement of education at local, state, and national levels through their teaching, research, and professional service.

Curricula listed in the following sections give students an opportunity for systematic study. These programs enable students to develop (1) an understanding of education’s place in a democratic society, (2) a philosophy of education consistent with functioning in that society, and (3) a conceptual base to use in relating theory to practice, which includes knowledge of human growth and development and principles of human learning.

The College of Education is accredited by all appropriate agencies, including the Kansas State Board of Education, the National Council for the Accreditation of Teacher Education, the American Speech and Hearing Association, and the National Association of School Psychologists. The college recommends appropriate teacher's certificates be issued to those who complete requirements established by the board.

The college also offers B.A. degree programs in exercise science and in sport administration. The exercise science degree program prepares students for careers involving exercise physiology, physical therapy, health promotion, clinical exercise-related fields, rehabilitation, medicine, biology, exercise, research, and academia, or graduate education. The sport administration degree program prepares students for careers in a variety of sport industry segments including college athletics, professional and minor league sports, park and recreation departments, sport governing associations, and sport and/or fitness centers.

**Degrees Offered**

**Undergraduate**

The college offers teaching and non-teaching programs leading to the bachelor's degree and/or to state teacher certification at the elementary and secondary levels. The State Board of Education regulates standards for all teaching certificates; curricula offered by the college are altered as needed to meet changes in these requirements.

The programs in kinesiology and sport studies provide non-teaching routes to the bachelor's degree.

A student may obtain a second bachelor's degree in the College of Education. This requires (1) admission to the College of Education, (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 Education.

**Graduate**

The College of Education offers programs leading to the Master of Arts (MA) in communicative disorders and sciences; the Master of Education (MED) in counseling, curriculum and instruction, educational administration, educational psychology, physical education, sport administration, and special education; the Specialist in Education (EdS) in school psychology; the Doctor of Education (EdD) in educational administration; and the Doctor of Philosophy (PhD) in communicative disorders and sciences.

Graduate offerings include courses which help students meet requirements for state certification or licensure as principals, supervisory personnel, district school administrators, school counselors, early childhood teachers, English as a second language teachers, special education teachers, reading specialists, school psychologists, speech and language pathologists, audiologists, and gifted teachers. Other programs are available to support the continued academic and professional development of teachers. Graduate offerings are also available to support careers in sport-related businesses and exercise-related programs at all levels.

**Policies**

**Undergraduate Admission**

Students who have declared a major in one of the programs in the College of Education will be admitted directly into the college upon admission to WSU. Students are required to maintain at least a 2.500 overall grade point average to remain in good standing. Any student denied admission to the college may appeal by filing a written petition with the Standards Committee of the College of Education.

**Admission to Teacher Education**

Students are advised on the basis of the program (check sheet) in effect when they are admitted into teacher education rather than the program (check sheet) in effect when they began their college or university work.

Admission to the College of Education does not mean that a student is accepted into one of the certification programs in teacher education. Students must satisfy the following requirements to be admitted as a candidate for a Kansas teacher's certificate:

1. Pass CI 271, Introduction to Education, with a grade of B or better, and pass CI 272, Preprofessional Field Experience.
2. Complete 35 hours of General Education courses with a minimum grade point average of 2.750 on the 35 hours.
3. Earn a grade of C or better in ENGL 101 and 102, College English I and II; COMM 111, Public Speaking; and MATH 111, College Algebra.
4. Maintain an overall grade point average (GPA) and a WSU GPA of at least 2.500.
5. Complete a second course in mathematics above College Algebra. Students are encouraged to choose Stat 370, Elementary Statistics, which may be applied in the Mathematics and Natural Sciences division of the General Education Program.
6. Pass the Preprofessional Skills Test (PPST), a competency test in reading, writing, and mathematics.

To remain in good standing in the teacher education program requires a grade point average of at least 2.500 in all courses on the student's WSU academic plan and for all work taken at WSU. Demonstrated suitability for professional practice, as determined by the teacher education faculty, is also a consideration for remaining in good standing in the teacher education program leading to certificates or endorsements indicating professional practice or achievement.

**Enrollment Limits**

Students enrolled in the College of Education may not enroll in more than 21 semester hours of work per semester during the academic year. Summer Session enrollments are limited to a maximum of 6 hours for each four-week session or 12 hours during the Summer Session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.00 or better may petition their department chairperson for permission to enroll in excess hours.

**Probation and Dismissal**

Students in the College of Education are placed on probation at the conclusion of any semester in which their overall WSU grade point average falls below 2.500. These students will be continued on probation if their grade point average for each subsequent semester while on probation is not at least 2.500. Students who fail to earn at least a 2.500 for any semester while on probation may be dismissed for poor scholarship. Students on probation are limited to a maximum enrollment of 12 hours per semester.

Students may not be academically dismissed at the end of a semester unless they began that semester on academic probation. Also, students may not be academically dismissed from the College of Education before they have attempted a total of 12 semester hours at WSU after being placed on probation.

Students dismissed for poor scholarship may reenroll only with the special permission of the Standards Committee.

Students who have been dismissed for academic reasons may seek readmission to the College of Education by appealing in writing for an exception to the regulations. The College of Education requires petitioners to meet with an academic counselor, and to prepare a written petition which is considered by the Standards Committee of the College of Education and then for-
should secure their recent academic records, complete and submit.

They should center their petitions around reasons for

session to the University's Committee on Admissions and Exceptions for final action.

Academic counseling and advanced planning require careful attention and time. Thus, students should secure their recent academic records, complete their petition, and have their re-admissions counseling session well in advance of the semester for which they wish to be readmitted.

Students develop their own cases for readmission. They should center their petitions around reasons for their failure and presentation of evidence for probable future success.

Transfer Students

Transfer students admitted on probation must complete at least 12 semester hours of credit work and achieve a 2.500 grade point average on work at Wichita State before probation is removed.

Students on probation normally are limited to a maximum load of 12 hours per semester, although exceptions may be made by the Associate Dean of the College of Education. The limitation of 12 hours also applies to students who have declared a transition semester.

All students who have accumulated 12 attempted credit hours after being placed on probation and who do not have a 2.500 grade point average for the most recent semester or Summer Session will be academically dismissed. Students who have been dismissed may seek readmission to the College of Education by appealing, in writing, for an exception to the regulations.

Cooperative Education Internships

The College of Education is one of the participating colleges 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 early childhood through university settings. Participation in the program requires 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.

Professional Development School (PDS) Opportunity

A Professional Development School (PDS), a collaboration between school and University faculty and staff, supports effective teaching practices, integration of intern and teacher learning with instructional programs, collegiality, inquiry, and dissemination of new knowledge. This design provides an environment which mixes the best of theory, research, and practice and provides an exciting alternative to the current teacher education program. In the PDS program, students spend 10 to 12 hours a week at one of the PDS complexes (either the elementary, middle school, or high school). The eight professional courses plus a portion of elective hours are delivered at the complex. Students interested in applying for the program should contact the chairperson of the Department of Curriculum and Instruction.

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Teacher Education at Wichita State University, 2000-2001*

Pass Information

Number of program completers: 158

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<th>Kansas pass rate</th>
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Aggregate and Summary Assessment Pass Rate Data

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WSU is ranked in the 1st (top) quartile among institutions of higher education in the state of Kansas.

Notes: 1) Aggregate assessments reflect the combined performance of program completers on all components of a larger assessment (e.g., combined reading, math, and writing components of the PPST).
2) Summary assessment reflects the combined performance of program completers on all assessments (e.g., all PPST component assessments and NTE assessment).
3) PPST = Pre-Professional Skills Tests published by the Educational Testing Service.
   NTE = National Teacher Examination published by the Educational Testing Service.
   PLT = Principles of Learning and Teaching published by the Educational Testing Service.

Program Information

Enrollment: Number of enrolled students in the teacher preparation program:
   Full-time = 506
   Part-time = 146
   Total = 652

Student Teaching: Number of students in teacher preparation program participating in supervised student teaching:
   Total = 199

Number of faculty supervising student teachers who were:
   1) Appointed full-time in professional education: 13
   2) Appointed part-time in professional education and full-time in the institution: 1
   3) Appointed part-time in professional education and not otherwise employed by the institution: 18

Student/faculty ratio for student teaching supervision: 6:1

Time required in student teaching by student:
   Average number of: 1) Hours per week: 40
   2) Weeks: 16/semester
   3) Total hours: 1,280

Accreditation/State Approval

- WSU's teacher preparation programs in elementary and secondary education are approved by the Kansas State Department of Education.
- The College of Education at Wichita State University is accredited by the National Council for Accreditation of Teacher Education (NCATE).
- WSU is fully accredited by the North Central Association.

*Title II Disclosure Statement: Questions about any of this information should be directed to Dean, College of Education, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0131, (316) 978-3301.
Transition-to-Teaching Program
For those individuals who have undergraduate degrees in major fields that are transferable to secondary certification, and in areas of high need, there is an alternative route to completing teacher certification. 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.

Requirements for Graduation
Several sets of graduation requirements apply to undergraduates in the College of Education seeking a Bachelor of Arts (BA) in education or the institution's recommendation for a teaching certificate. Students should study carefully the requirements for their particular area of study.
Under Kansas Department of Education policies students are expected to complete all program requirements in effect at the time they are admitted into teacher education. Students transferring to the College of Education will be advised on the basis of the program (check sheet) in effect when they are admitted into teacher education rather than the program (check sheet) in effect when they began their college or university work.

For graduation from the College of Education, students must satisfactory complete all program requirements, complete a minimum of 124 semester hours of credit, have at least a 2.500 grade point average in the major field, and must have at least a 2.500 overall grade point average.

Requirements for Teacher Certification
All graduates applying for teacher certification in Kansas are required to complete the Principles of Learning and Teaching (PLT) examination established by the Kansas State Department of Education in order to qualify for their initial certificate. A grade of C or better in student teaching is necessary to receive a recommendation for a teaching certificate.
Prospective teachers in specialized fields of art and music are subject to certain departmental requirements and the general and professional education requirements listed under secondary education. (Students planning to teach fine arts should consult the College of Fine Arts section of the Catalog.)

General Education
A total of 42 hours of General Education courses is required for all students in the college, including the following requirements for graduation:

I. Basic Skills courses (12 hours) to be completed with a grade of C or better:
   ENGL 100 or 101 and 102, College English I and II (6 hours)
   COMM 111, Public Speaking (3 hours)
   MATH 111, College Algebra (3 hours)
   CDSS, Exercise Science, and Sports Administration majors may take either Math 111, College Algebra (3), or Math 131, Contemporary Mathematics (3).

II. Distribution requirements
   A. Fine Arts and Humanities
      One introductory course from a fine arts discipline.
      One introductory course from two humanities disciplines.
      One further study course from the same discipline as one of the introductory courses above, or an issues and perspectives course in fine arts or humanities.
   B. Social and Behavioral Sciences
      One introductory course from each of the two different social and behavioral science disciplines.
      One further study course from the same discipline as one of the introductory courses above, or an issues and perspectives course in social and behavioral science.
   C. Mathematics and Natural Sciences
      One introductory course from each of the two different mathematics and natural science disciplines.
      One further study course from the same discipline as one of the introductory courses above, or an issues and perspectives course in mathematics and natural science.

An introductory course meets General Education objectives and serves as an introduction to the discipline. A further study course is taken in a discipline once a student has completed an introductory course in the same discipline. An issues and perspectives course is an interdisciplinary course or one which informs students of issues or problems from a disciplinary perspective. Students may take either a second course in a discipline represented by an introductory course or an issues and perspectives course from the division housing that discipline. Students must complete at least one and not more than two issues and perspectives courses to fulfill General Education requirements. Courses within the student's major discipline do not count toward General Education requirements.

College of Education Specific Requirements
In addition to, or as part of, the University General Education requirements listed above, students applying for a degree from the College of Education or for teacher certification must have PSY 111. Students seeking teacher certification must also take Stat 370 or any higher-level math course.

Professional Education
Professional education requirements in areas of specialization and additional General Education requirements in these areas are summarized on the following pages.

Communicative Disorders and Sciences
I. General Education
   Students majoring in communicative disorders and sciences are expected to meet all General Education requirements. In Social and Behavioral Sciences, courses must be taken in two different departments. At least 3 hours of psychology are required.

II. Professional Education
   Preprofessional Block
   Course   Hrs
   CI 271, Introduction to Professional Education 2
   CI 272, Field Experience 1
   Block I
   CESP 334, Growth and Development 2
   CI 430, Social/Multicultural Education 3
   CI 320, Introduction to Exceptional Children 2
   CI 311, Field Experience/Block I 1
   Block II
   CESP 433, Learning and Evaluation 3
   CI 326, Curriculum, Instruction, Management and Technology 5
   CI 312, Field Experience/Block II 1

III. Elementary Specialization
   In addition to the General Education requirements and the professional education sequence, students majoring in elementary education must fulfill the teaching specialty emphasis of the elementary program. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification and degree requirements. A check sheet of requirements is available from the College of Education.

Secondary Education
I. General Education
   Students majoring in secondary education should meet the requirements in the General Education Program as listed above.

II. Secondary Teaching Major
   Students must fulfill the teaching specialty emphasis of a program as specified in the teaching field section that follows. Only those specialties listed among the combined curricula and departmental majors and minors (in the majors and minors section) may be counted.

III. Professional Education
   The following courses are required:
   Preprofessional Block
   Course   Hrs
   CI 271, Introduction to Professional Education 2
   CI 272, Field Experience 1
For majors in math, science, social studies, English

Block I
Course                                      Hrs.
CESP 334, Growth and Development            2
CI 430, Social/Multicultural Education       3
CI 320, Introduction to Exceptional Children 3
CI 311, Field Experience/Block I             1

Block II
CESP 433, Learning and Evaluation           3
CI 328, Curriculum, Instruction, Management and Technology 5
CI 312, Field Experience/Block II           1

In addition to the General Education requirements, the professional education sequence, and the requirements for the major, secondary students must complete the pre-service teaching and the student teaching requirements. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification and degree requirements. A check sheet of requirements is available in the College of Education.

For majors in physical education, art, music

Block I
Course                                      Hrs.
CESP 334, Growth and Development            2
CI 430, Social/Multicultural Education       3
CI 320, Introduction to Exceptional Children 3
or ART E 518, Art for the Exceptional Child, 2
or MIS E 611, Music for Special Education, 3
or KSS 360, Adaptive PE                      2
CI 311, Field Experience/Block I             1

Block II
CESP 433, Learning and Evaluation           3
CI 328, Curriculum, Instruction, Management and Technology 5
CI 312, Field Experience/Block II           1

In addition to the General Education requirements, the professional education sequence, and the requirements for the major, secondary students must complete the pre-service teaching and the student teaching requirements. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification and degree requirements. A check sheet of requirements is available in the College of Education.

For majors in music education
For other requirements, see Music Education, College of Fine Arts.

For majors in art education
For other requirements, see Art Education, College of Fine Arts.

Secondary Teaching Fields
The major is generally no fewer than 30 semester hours. (For specific exceptions see the combined curricula program.) Students may elect one of the majors offered in Fairmount College of Liberal Arts and Sciences, the College of Fine Arts, or the College of Education. Students meet the specific course requirements of the department in which the major is offered. For example, students may elect to major in art because they wish to become high school art teachers. To do so, they complete the art major as prescribed by the School of Art in the College of Fine Arts. In addition, they complete the University's General Education requirements, the professional education sequence, and other requirements for the teacher's certificate prior to graduation. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification requirements. A check sheet of requirements for each teaching field is available from the College of Education.

The selection of teaching fields is made with an academic advisor representing the College of Education. The teaching field or major should be declared no later than the beginning of the junior year. Students who plan to teach in secondary schools may select their major and minor from the fields given below. The minor will not qualify a student to teach unless special arrangements have been made in advance.

Combined Curricula
The teaching assignment after graduation often involves a combination of related subjects. For this reason intensive study in the following combined disciplines is offered in lieu of a departmental major and minor.

Students should work closely with advisors to ensure proper course selection for certification and degree. A check sheet of requirements for each teaching field is available from the College of Education.

Natural Science—Biological
This major requires a minimum of 50 hours. A teacher who qualifies under this provision may teach chemistry and general science as well as biology.

Natural Science—Physical
This major requires a minimum of 50 hours. A teacher who completes this program may teach chemistry, general science, and physical science.

Administration, Counseling, Educational and School Psychology
The Department of Administration, Counseling, Educational and School Psychology offers courses at the undergraduate level taken by students both in and outside of the College of Education. In addition, the department offers programs leading to the Master of Education (MEd) in educational administration, the MEd in counseling, the MEd in educational psychology, the Specialist in Education (EdS) in school psychology, and the Doctorate of Education (EdD) in educational administration.

Counseling, Educational and School Psychology (CESP)

Lower-Division Courses

CESP 150. Workshops in Education (1-2).

Upper-Division Courses

CESP 334. Growth and Development (3). Examines developmental theories and principles in the dimensions of physical, cognitive, and psychosocial growth. Explores the social and cultural contexts in which growth and development occur. Students demonstrate openness and objectivity towards issues and theories by inspecting their own biases. Prerequisites: FYI 111, acceptance into teacher education program, and concurrent enrollment in CI 311, 320, 430.

CESP 433. Learning and Evaluation (3). Examines the nature of learning and memory, learning strategies, individual differences, and social factors influencing learning. Also examines effective use of measurement, observation, and grading. Students learn to apply psychological and evaluation principles to teaching and learning. Prerequisites: CESP 334, CI 311, 320, 430.

CESP 450. Workshops in Education (1-4). Accommodates a variety of topics related to counseling, guidance, and communication issues in helping relationships. May emphasize different preselected topics during a semester. Repeatable for credit.

CESP 490. Independent Studies (1-3).
Courses for Graduate/Undergraduate Credit

CESP 701. Introduction to Educational Research (3). An introduction to research in education. Includes (1) a survey of current educational research, (2) the nature of research methodology, (3) the preparation of research reports, and (4) criticism of current research.

CESP 704. Introduction to Educational Statistics (3). An introduction to statistics, including measures of central tendency, measures of variability, correlation, chi square, median test, / test, correlated / test, and one-way and two-way analysis of variance.

CESP 707. Child Abuse and Neglect (1). Acquaints students with the etiological factors, potential indicators, consequences, reporting procedures, and treatment strategies associated with child abuse and neglect. Covers DSM-IV diagnostic categories associated with abuse and neglect.

CESP 718. 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 way we currently view human development as well as significant new perspectives which may shape the way we view it in the future. Prerequisites: CESP 334, PSY 334 or equivalent, and CESP 701 or equivalent, or instructor's consent.

CESP 750. Workshops (1-6).

CESP 752. Special Studies in Education (1-3). For students with personnel and guidance interests. May emphasize different preselected areas during a semester. Repeatable with advisor's consent. Prerequisite: instructor's consent.

Courses for Graduate Students Only

CESP 802. Introduction to Interaction Process (1). Not grade only. A laboratory approach to an examination of the counselor's role in the counseling process. Helps the prospective counselor develop basic interviewing skills as a foundation for more advanced techniques used in the counseling process. Prerequisite: counseling major or departmental consent. To be taken concurrently with CESP 804.

CESP 803. Counseling Theory (3). A study of selected theories of counseling. Prerequisite: admission to counseling or school psychology program or instructor's consent.

CESP 804. Principles and Philosophy of Counseling (3). The development of a guidance philosophy, including a study of the helping relationship and the services that are part of school, agency, and other institutional settings. Prerequisite: admission to counseling program or instructor's consent.

CESP 808. School Psychology Professional Issues (3). Examines roles and functions of school psychologists within the content of historical foundations of the profession. Uses lecture, discussions, observations in schools, and presentations by field-based school psychologists to acquaint students with the kinds of problems with which school psychologists typically work, the methods they employ to deal with problems, social systems in which these endeavors occur, and professional issues that shape and characterize the profession.

CESP 810. Elementary School Counseling (3). The role of the elementary counselor in providing individual and group counseling, group guidance, and consultation in the school setting. Prerequisites: CESP 701, 704, 803, and 804, or instructor's consent.


CESP 815. Career Development (3). For master's-level students interested in assisting students and adults in career development and related concerns. Covers (1) career development of individuals across life span, (2) sources and organization of information, (3) assessment designs and career intervention techniques, and (4) career decision-making/planning processes. Includes hands-on experience with a variety of assessment methods and intervention techniques and theory-based career decision-making strategies for career interventions. Prerequisites: CESP 803 or 804 or instructor's consent.


CESP 820. Learning Theory and Instruction (3). Applications of some major learning theory and learning principles. Prerequisite: CESP 701 or departmental consent.

CESP 821. Multicultural Issues in Counseling (3). Students acquire knowledge and skills that enable them to offer help to individuals in a multicultural environment. Focuses include developing a sense of the student's own cultural identity, increased sensitivity to cultural differences in help-seeking attitudes and behaviors, and understanding how the potential sources of cultural misunderstanding, biases, and prejudice may affect their counseling effectiveness. Prerequisites: CESP 701, 803 or 804, or instructor's consent.

CESP 822. Assessment in Counseling (3). Survey and study of standardized tests and their application in counseling, emphasizing their selection, use, and interpretation. Studies the basic concepts pertaining to the interpretation of psychological tests and inventories, including basic measurement theory and the factors involved in the selection of tests. Prerequisites: CESP 701 and 704; CESP 803 or 804.

CESP 823. Experimental Design in Educational Research (3). Focuses on the use of inferential statistics for various experimental designs. Parametric topics covered include t-test, one-way and factorial analysis of variance and covariance (with and without repeated measures), post-hoc comparisons, and simple and multiple regression. Also covers selected non-parametric statistics. Develops all statistics through practical application with computer programs. Prerequisite: CESP 704 or instructor's consent.

CESP 824. Techniques of Counseling (3). Examines and practices techniques of counseling through simulated counseling situations and extensive examination of counseling case studies. Prerequisites: CESP 728, 821, 822, and counseling major or departmental consent.

CESP 825. Group Counseling Techniques (3). Examines different kinds of groups, group selection, communication patterns in groups, and issues to be addressed in group settings. Prerequisites: CESP 728, 803 (or concurrent enrollment), 804, and counseling major or departmental consent.

CESP 833. Secondary School Counseling (3). Provides information and skills needed for counseling in secondary schools. Prerequisites: CESP 701, 704, 803, and 804, or instructor's consent.

CESP 836. Biological Principles; and Psychological Functioning for School Psychologists (3).

CESP 837. Family Issues in Counseling (2). Teaches basic family processes and how they impact the growth and development of children and adolescents. Covers family systems theory, the family life cycle, cultural and social influences on families, wealthy family functioning, the impact of substance abuse on the family, and the unique challenges faced by single parent and blended families. Presents basic family assessment and therapy techniques. Prerequisite: graduate standing.

CESP 840. Psychology of Exceptional Children (3). Study of the conceptual and theoretical formulations, empirical evidence, and research concerning behavioral characteristics of exceptional children.

CESP 845. Professions School Counseling (3). The role of the professional school counselor in providing counseling, guidance, and consultation services to students, staff and parents in Pre-K12 settings will be covered in this course. Prerequisites: Admission to the counseling degree program, CESP 803 and CESP 804 or department consent.

CESP 852. Special Studies (1-3). Covers specific topics identified by the department in consultation with institutions or groups of graduate students. Course procedures vary according to topic. Repeatable. Prerequisite: instructor's or departmental consent.

CESP 853. Law, Ethics, and Multicultural Issues for School Psychologists (3). For school psychology students and practicing school psychologists. Covers issues of legislation, litigation, professional ethics, and cultural diversity that impact the practice of school psychology. Prerequisite: admission to the school psychology program or instructor's consent.

CESP 855. Individual Intelligence Assessment (3). Use of individual tests for assessment of intelligence. Examines the
n nature of intelligence, theory, administration and interpretation of selected individual intelligence tests, and critical issues related to the assessment of intelligence. Includes case simulation and practice activities. Prerequisites: CESP 822 and instructor's consent.

CESP 856. Counseling Practicum (3). Supervised practice in counseling. Requirements include at least 60 hours applied experience. Repeatable for credit. Prerequisites: CESP 824 within the last calendar year, coordinator's consent, and counseling major or departmental consent.

CESP 857. Professional and Ethical Issues (3). Study of major ethical, legal, and professional issues in counseling, including those issues related to diagnosis and treatment of mental illness using the DSM-IV. Prerequisites: CESP 803, 821, 822, or instructor's consent.

CESP 858. Diagnostic Testing (3). An in-depth examination of the assessment process. Studies the theory and uses of individual assessment techniques for evaluating the learning difficulties of preschool and school-aged children. Emphasizes planning the assessment, interpreting and integrating assessment data, proposing relevant interventions, and communicating assessment findings to others. Prerequisites: CESP 822, 855, and instructor's consent.

CESP 859. School-Based Interventions (3). Focuses on planning, implementing, monitoring, and evaluating interventions in the school setting with students who are experiencing academic and/or behavioral problems. Prerequisite: CESP 822 or departmental consent.


CESP 862. Presentation of Research (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum of 2 hours of credit. Prerequisite: CESP 860.


CESP 890. Special Problems (1-3). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent.

CESP 914. Consultation Techniques (3). Intensive study of the literature in counseling, school psychology, social psychology, and administration that provides a basis for consultation techniques in the interpersonal context of school and work settings.

CESP 930. Marriage and Family Counseling II (3). An advanced course on marriage and family counseling, including theory, techniques, and research in the field. Prerequisite: CESP 803, 830, 30 graduate hours or instructor's consent.

CESP 934. Personality Assessment (3). Focuses on theory and interpretation of instruments representing three major approaches to personality assessment: projective techniques, behavioral techniques, and personality inventories. Includes alternative personality assessment approaches and reviews of personality theory and psychopathology. Includes supervised experience. Prerequisites: CESP 822, 855, post-master's standing or last 6 hours of master's program, and instructor's consent.

CESP 946. Practicum in School Psychology (3 or 6). Supervised practice in providing school psychological services to children in school, clinical, or community agency settings. Requires at least 300 hours applied experience per 3 hours of credit. Repeatable for a maximum of 6 hours. Prerequisite: departmental consent.

CESP 947. Internship in Counseling (2). The internship is a placement appropriate to the intern's career objectives in a position within an agency, institution, or school. The student and University supervisor develop goals and objectives that enhance the student's level of professional functioning. Repeatable up to 6 hours of credit.

CESP 977. Internship in School Psychology (2). Supervised experience as a school psychologist in a school or agency setting. Requires at least 600 hours of applied experience. Repeatable for a maximum of 4 hours. Prerequisites: CESP 946 and departmental consent.

CESP 990. Special Problems in Counseling and School Psychology (1-3). Directed problems in research for EdS students under supervision of a graduate instructor. Prerequisites: CESP 701 and instructor's consent.

Educational Administration and Supervision (EAS)

Courses for Graduate/Undergraduate Credit

EAS 750. Experienced Administrator's Workshop (1-6). Offers a variety of administrative topics.

EAS 752. Special Studies in Educational Administration and Supervision (1-3). Group study in a prescribed specialization area of educational administration and supervision. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Courses for Graduate Students Only

EAS 803. Seminar: Professional Self-Assessment and Inquiry (3). Participants engage in self-assessment and readiness for becoming a school administrator. Includes discussing and learning issues and techniques for measurement in the cognitive, affective, and psychomotor domains. Also reviews the basics of educational research, the nature of research methodologies, and methods for the preparation of research reports. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 805. Practicum: School Opening I (1). Participants engage in preparing to open their school for the fall semester with their principal/mentor. Participate in a planning project in their local school, and read and critique current research literature and analyze how that research can assist in their school. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 813. Seminar: Introduction to Educational Leadership and School Finance (3). Discusses educational philosophy, personal goal-setting, and educational administration models. Includes (a) an examination of educational foundations and the major theories of administration and application to specific problems, and (b) an overview of administration of the school district, especially problems involving the community and staff. Examine theoretical concepts related to financial planning and building resources. Review knowledge necessary to plan and organize work groups, projects, and the resources necessary to carry out day-to-day functional activities of school. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 815. Practicum: Introduction to Educational Leadership and School Finance (3). Spend time in schools identifying how major theories of administration apply to specific problems in the school and how the school interacts with the district and the community. Apply financial planning concepts to the school setting and manage the day-to-day financial and other resources allocation to schools. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 823. Seminar: Interpersonal Relations and Supervision (3). Examine the theoretical concepts related to clinically oriented supervisory models and explicit teaching approaches. Study formative evaluation concepts focusing on performance issues related to actual teaching situations and the teacher's guided analysis of these issues. Review the responsibility of the supervisor for planning and organizing staff development activities. Examine processes involved in the development of interpersonal skills. Engage in simulated exercises to acquire interpersonal skills desirable for group collaboration and communication. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 825. Practicum: Interpersonal Relations and Supervision (3). Apply the concepts of clinical supervisory models and specific teaching approaches, emphasizing formative evaluation strategies which focus on performance issues generated from actual teaching situations and the teacher's guided analysis of these issues. Cover preparation of the supervisor's role in planning and organizing staff development activities. Apply concepts of formative evaluation and staff development using interpersonal and group process skills. Observe, analyze, and reflect upon supervisory techniques and interpersonal skills in the school setting. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 830. Practicum: School Closing (1). Engage in closing the school year with a principal/mentor. Prerequisite: admission to the MEd in educational administration or instructor's consent.

and behavior management. Includes discussion of developmental psychology sufficient to interpret human developmental patterns and their behavioral implications. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 832. Practicum: School Opening 2 (1). For a second time, prepare to open a school for the fall semester with a principal/mentor, and participate in an inquiry project in the local school. Read and critique current research literature and analyze how that research can assist in the school. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 833. Seminar: School Law and Personnel Management (3). Examine concepts related to staffing issues, including selection and recruitment, certification, orientation, staff development, evaluation, transfer and dismissal, and retirement. Cover general concepts of law, interpretations of statutes and court decisions affecting education, and the legal responsibilities of school personnel and professional negotiations. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 834. Practicum: School Law and Personnel Management (3). Apply the concepts related to selection, recruitment, certification, orientation, staff development, evaluation, transfer, dismissal, and retirement. Apply general legal concepts and statutes to various situations and personal professional liability. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 842. School Law (3). General concepts of law, interpretations of statutes and court decisions affecting education, and legal responsibilities of school personnel.

EAS 843. Seminar: Curriculum and Learning Theory (3). Examine theoretical concepts related to curriculum philosophy and developmental processes. Examine recent programs and proposals as well as curriculum development at the building and school system levels. Review techniques of program evaluation and major learning theories and principles. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 845. Practicum: Curriculum and Learning Theory (3). Apply the concepts of curriculum theories and development, emphasizing skills necessary to propose, implement, and evaluate various building programs. Address applications of prevailing major learning theories and principles as they relate to academic and behavioral aspects of the classroom. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 852. Special Studies in Educational Administration and Supervision (1-3). Group studies in new materials, new research, or innovations in advanced educational administration and supervision areas for practicing administrators or advanced students. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

EAS 854. Finance and Facilities Management (3). For those preparing to become administrators at the school-building level. Focuses upon the knowledge and skills necessary to plan and organize work groups, projects, and the resources necessary to carry out day-to-day functional activities of schools.

EAS 864. School Plant and Facilities (3). Planning new educational facilities based upon educational programs. Includes the evaluation of existing schools, remodeling, and operation and maintenance of present school plant. Prerequisite: master's degree or instructor's consent.

EAS 890. Special Problems in Administration (1-4). Directed problems in research for master's students primarily under supervision of a graduate instructor. Prerequisite: instructor's consent.

EAS 947. Post Program District Level Internship (3). A two semester course designed for individuals who have a conditional leadership certification license and a full time position in a district-level program. The course focuses on the performance expectations of district-level administrators as identified in the ISLLC standards and KSDE certification guidelines. The student works under the guidance of a mentor who, together with the university/clinical supervisor, assesses the intern's performance level.

EAS 963. Politics and Power in Education (3). An examination of the interaction of society and the school as it relates to administrative processes. Studies systems of control, social class, power structure, human relations, and group dynamics. Prerequisite: instructor's consent.

EAS 969. Technologies for Academic Writing in Educational Administration (3). Allows practicing administrators to gain knowledge of the doctoral program process through the use of various software packages used to collect and analyze data in Educational Administration and Supervision. Also introduces expectations for academic writing at the doctoral level. Students must own a Macintosh computer (preferably a Powerbook) and be reasonably familiar with the Macintosh operating system, Microsoft Excel, EndNote Plus, and Microsoft Word. Prerequisite: admission to the EdD program in EAS.

EAS 970. Advanced Administrative Theory Seminar (5). Examines the relationship between theory and practice in educational administration. Participants consider various theoretical frameworks for empirical studies, program designs, and organizational implementation efforts, and take initial steps toward an integration of these frameworks. Class activities require the application of the constructs and propositions considered to an on-going analysis of school-related problems and the conceptualization of action programs for addressing such problems. Prerequisite: admission to the EdD program in EAS.

EAS 971. Decision-Making and Problem-Solving Seminar (5). Focuses on approaches to identifying, clarifying, and solving various problems in elementary and secondary education. Decision-making and problem-solving models are reviewed, critiqued, and applied. Prerequisites: admission to the EdD program; EAS 970 and 981, concurrent enrollment in EAS 982.

EAS 972. Administrative Leadership Seminar (5). Facilitates in-depth investigations of research relevant to leadership theory and practice. Activities include clarifying and developing personal leadership skills, identifying, fostering, and supporting the leadership skills of others; and conducting observations of leaders in action. Prerequisites: admission to the EdD program; EAS 970 and 971, and concurrent enrollment in EAS 986.

EAS 981. Applied Inquiry Seminar I (3). Provides doctoral students with an introduction to field-based inquiry/prob­lem-solving strategies; begins the development of field-based problems/issues; and provides practice in field research design, implementation, and reporting. Prerequisite: admission to the EdD program in EAS.

EAS 982. Applied Inquiry Seminar II (3). Continues EAS 981 and provides opportunities for more sophisticated and complex field-based studies. Prerequisite: admission to the EdD program in EAS.

EAS 983. Applied Inquiry Seminar III (3). Continues EAS 981 and 982. Focuses on the development of individualized research plans leading to small group or individual field-based experiences in the second year of doctoral study. Prerequisite: admission to the EdD program in EAS.

EAS 986. Field-Based Research I (3). This is the first in a sequence (Fall, Spring, Summer) that provides opportunities for field work leading to the EdD dissertation proposal. Prerequisites: admission to the EdD program; EAS 981, 982, 983, and concurrent enrollment in EAS 972.

EAS 987. Field-Based Research II (3). Follows EAS 986 and continues field-based research activities and development of dissertation proposals. Prerequisite: admission to EdD program, EAS 986.

EAS 988. Field-Based Research III (1). Follows EAS 986 and 987 and culminates the field-based sequence. Prerequisites: admission to EdD program, EAS 986 and 987.
EAS 989. Advanced Research Methods in Educational Administration (3). Prepares students to examine research design techniques appropriate for use in educational administration and specifically for doctoral dissertations. Includes qualitative and quantitative research methodology, statistical tools and techniques for analysis of data, and examination of software designed to assist researchers in educational administration. Prerequisites: EAS 981, 982, 983, and 986.

EAS 990. Special Problems in Administration (1-4). Directed problems in research for specialist and doctoral degree students under supervision of a graduate instructor. Prerequisite: instructor's consent.

EAS 992. Superintendent/Internship (6). Two-semester course designed primarily for individuals who are completing course work to obtain certification as a district-level administrator. Focuses on the role expectations of district-level administrators and includes field experiences designed to emphasize knowledge and skill in administrative practices and procedures. Work is designed for each student's projected administrative interest. Students must file an application for this terminal course.

EAS 999. Dissertation Research (1-6). Taken concurrently with EAS 986, 987, and 988 for 6 credits each semester during the last year of enrollment. Provides students with dissertation proposal and dissertation advisement and may be taken for 1-6 credits per term for a maximum of 24 credits. Up to 17 credits may be counted toward program completion. Prerequisite: admission to EdD program in EAS and required doctoral course work.

Communicative Disorders and Sciences (CDS)

The Department of Communicative Disorders and Sciences provides academic and clinical education for students at Wichita State University who wish to work with communicatively handicapped children and adults. The undergraduate program offers broad, comprehensive, and preprofessional preparation for specialized training, which is offered on the graduate level. Graduate work, culminating in a master's degree, is required to obtain professional certification as a speech-language pathologist or audiologist in the public schools, hospitals, or rehabilitation centers, or to engage in private practice. With an undergraduate, preprofessional major, students completing the master's program will be eligible to apply for certification by the American Speech-Language-Hearing Association, for a Kansas teacher certificate, and for Kansas licensure. The PhD in communicative disorders and sciences prepares individuals to function professionally as independent clinicians, as teacher-scholars in an academic setting, or as program administrators.

Undergraduate Major

The preprofessional, undergraduate major places primary emphasis on the general area of communicative sciences and disorders in the specialized areas of speech-language pathology and audiology. Supervised practicum courses are required as part of the educational program.

Students should make formal application for practicum courses one semester prior to enrollment. Evaluation of the student's speech, language, and hearing proficiency will be conducted. Significant deviations in any area must be corrected to maximum ability before enrollment in practicum courses or student teaching. In addition, medical clearance is required for all observation and practicum classes. Admission to a major in CDS does not constitute assurance of automatic entrance into the practicum or student teaching sequence.

Undergraduate students may major in communicative disorders and sciences in either the College of Education or Fairmount College of Liberal Arts and Sciences. Most students take the program in the College of Education, but those wishing to emphasize applied language study may enroll in the communicative disorders and sciences major in Fairmount College of Liberal Arts and Sciences. In either case, all students must satisfy the General Education requirements of the University. Students in the College of Education must select certain courses from the General Education Program that will satisfy teacher certification requirements. These are stated under general requirements at the beginning of the College of Education section of the Catalog.

Applied Language Study in Fairmount College of Liberal Arts and Sciences

The major with emphasis in applied language study consists of a minimum of 36 hours. Students should work closely with advisors in the College of Education and Liberal Arts and Sciences to ensure proper course selection for certification and degree. A check sheet of requirements is available from the College of Education and the department office, 113 Hubbard Hall.

Teacher Education Certification

One full semester of practicum in the public schools is required at the graduate level for all students working toward certification as speech-language pathologists or audiologists in an educational setting.

Students must apply for practicum in an educational setting at least one semester in advance of practicum work. They must have a minimum overall grade point average of 3.00, a 3.00 average in the major field; a grade of C or better in English 101 and 102 and in Communication 111, or their equivalents; and the recommendation of the major department.

Clinical Certification

The communicative disorders and sciences undergraduate preprofessional major may be applied toward certification by the American Speech-Language-Hearing Association. This certification requires a master's degree with major emphasis in speech-language pathology or in audiology.

Undergraduate Minor

A minor in communicative disorders and sciences consists of 18 hours and may be earned in either the College of Education or Fairmount College of Liberal Arts and Sciences. The following courses are recommended for a minor unless other arrangements are made: CDS 111, 232, 300, 304, 306, and 501.

Arrangements for the minor should be made in consultation with an advisor in the Department of Communicative Disorders and Sciences.

Other Requirements

Participation in the department's clinical practicum courses requires that a student obtain medical clearance prior to the start of the course. This requirement is indicated in the individual course descriptions. Procedures to be followed may be obtained from the department's office. Also, students who participate in active clinical practice during the year must purchase professional liability insurance from the department in the amount of not less than $1,000,000.$3,000,000. This must be done each year the student is enrolled in practicum courses.

CDS 770. Communicative Development and Disorders, is a general survey course and may not be used as part of a major or minor in communicative disorders and sciences at the undergraduate or graduate level without departmental consent.

Special Certificate Program

The Department of Communicative Disorders and Sciences offers a certificate program for interpreter development in Signing Exact English (SEE). The Educational Interpreter Development Certificate Program: Signing Exact English helps classroom interpreters or others interested in the deaf or hard of hearing attain sufficient signing competence to meet or exceed Level 3 (Intermediate) performance on the Educational Interpreter Performance Assessment (EIPA). The program requires 19 credit hours and generally can be completed in one academic year, including the summer session. Contact the department office for details.

Clinical Services

Clinical services for members of the community with speech, language, or hearing disorders, as well as students enrolled at Wichita State, may be arranged with the Speech-Language-Hearing Clinic. Fees are charged for these services.

General

Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.

Lower-Division Courses

CDS 111. Disorders of Human Communication (3). An introduction to disorders of human communication, communicative and psychosocial problems commonly encountered, and general approaches to habilitation.

CDS 340. Pragmatic Process and Analysis in SEE (3). Addresses the professional development, roles, ethics, confidentiality, and responsibilities of interpreters in educational settings. Includes interpreting principles. Covers ways to efficiently integrate the role of the interpreter into the educational system, as well as current issues in the field of educational interpreting. Prerequisites: CDS 240 and 260.

CDS 345. Refining Interpreting Techniques in SEE (3). Provides strategies for improving vital skills in expressive and receptive interpreting. Addresses such issues as reading signs, non-manual markers, and grammar, as well as application of lag time and prioritization for proper word and grammar choices in English. Also addresses interpretation of cultural information and effective public speaking. Prerequisites: CDS 240, 260, 330, 360, and 380.

CDS 360. Signing Exact English II (3). An advanced class in the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Emphasizes vocabulary and interpreting skills. Prerequisite: CDS 260.

CDS 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. Prerequisite: CDS 270.

CDS 380. Practicum in Signing Exact English (1). Provides students with observation of skilled interpreters in various educational K-12 settings throughout the semester. Opportunities to discuss with the interpreters about their responsibilities and roles in providing communication access to students in and outside of the classroom in school-related activities. Repeatable for credit.

CDS 470. Conversational 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. Prerequisite: CDS 370.

CDS 481. Cooperative Education (1-4). Allows students to participate in the cooperative education program. Offered Co/Wc only.

CDS 490. Directed Study in Speech and Language Pathology or Audiology (1-3). Individual study or research on specific problems. Repeatable. Instructor's consent must be obtained prior to enrollment.

Courses for Graduate/Undergraduate Credit

CDS 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.

CDS 520. Poetry, Mine and Song (3). Non-verbal way of communication which forms an integral base for communication in American Sign Language. This course will emphasize the use and understanding of facial expression, gestures, and body language. Role play and acting out will be required as part of this class.

CDS 522. Deaf Heritage (3). Considers the history, nature, and uses of language and its effect upon human thought and action. Also covers the ideas and ideas expressed by deaf people over many periods of time through drama, philosophy, painting, and related areas.

CDS 540. Senior Seminar (1). An exploration of theories, principles, practices, and pitfalls of audiology and speech-languag pathology emphasizing creating dynamic models for research interpretation, clinical interaction, and professional management. Examines the current educational, professional, and ethical issues in clinical practice.


CDS 626. Introductory Methods and Practicum in Communication Disorders and Sciences (2). Techniques and methods for development of clinical skills in a supervised practicum in a supervised practicum setting. Clients with speech, language, and/or hearing disorders are the primary focus. Development of a philosophy of clinical practice includes procedures for therapy, writing behavior objectives and progress, and conducting parent/spouse/significant other conferences. Prerequisites: 25 hours of observation, placement of C or better in CDS 304, 306, 316, 416, 510 (may be concurrent), and 514-2750 cumulative and 3.00 GPA in major, departmental application required one semester prior to enrollment; medical clearance and insurance.

CDS 704. Graduate Issues in Ethics and Practice in Communication Disorders and Sciences (1). Provides graduate students as future practitioners a forum to be acquainted with and to review professional clinical issues they may encounter in their careers. Covers issues such as professional ethics, professional standards, management, and credentialing. Individualized and group participation stresses need for professionals to deal competently with issues and to understand professional responsibility related to these topics.

CDS 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.

CDS 740. Selected Topics in Communication Disorders and Sciences (1-3). Individual or group study in specialized areas of communication disorders and sciences. Repeatable.

CDS 750. Workshop in Communication Disorders and Sciences (1-4). Offered periodically on selected aspects of communication disorders and sciences. Repeatable.

CDS 770. Communication Development and Disorders (3). Identifies communication deviations, differentiating disorders from developmental and/or cultural/linguistic differences. Evaluates potential impact of various communication disorders on academic performance of individuals. Considers strategies for facilitating development of children's communication skills in educational settings.

Courses for Graduate Students Only

CDS 800. Research Methods (3). A survey of different research methods utilized in the fields of communication sciences and communication pathology. Students acquire the fundamental motivation, knowledge, and skills for conducting clinical and basic science research and for reading and critically evaluating the clinical research literature.

CDS 890. Independent Study in Speech and Language Pathology or Audiology (1-3). Arranged individual, directed study in specialized content areas in speech and language pathology or audiology. Repeatable. Prerequisite: instructor's consent prior to enrollment.

CDS 991. Non-thesis Research Project (3). A directed research project which may include literature searches, data
collection or interpretation of data. Topic of project to be determined by instructor. Repeatable, but total credit hours may not exceed 3. Prerequisites: CDS 800 and departmental consent prior to enrollment.

CDS 892. Presentation of Research (1-3). A directed research project. Repeatable, but total credit hours may not exceed 3. Prerequisites: CDS 800 and instructor's consent prior to enrollment.

CDS 895. Thesis Research (1-2). Repeatable, but total credit hours counted toward degree requirements must not exceed 2. Prerequisite: instructor's consent.

CDS 899. Thesis (1-2). Repeatable, but total credit hours counted toward degree requirements shall not exceed 2. Prerequisite: instructor's consent.

CDS 935. Advanced Practicum in Communicative Disorders and Sciences (1-3). Supervised internship in one or more of the following sections: Client Management, Clinical Supervision, Academic Instruction, Research, and Clinical and Program Administration. Intended for doctoral students or advanced master's-level students. Repeatable; more than one section may be taken concurrently.

CDS 940. Advanced Selected Topics in Communicative Disorders and Sciences (1-4). Advanced individual or group study in special areas of communicative sciences and disorders. Intended for doctoral students or advanced master's-level students. Repeatable.

CDS 990. Advanced Independent Study in Speech and Language Pathology, Audiology, or Speech Science (1-3). Arranged individual, directed study in special areas in speech and language pathology, audiology, or speech science. Repeatable. Prerequisites: advanced standing and instructor's consent.

CDS 992. Advanced Presentation of Research (1-3). A directed research project for doctoral students culminating in a manuscript appropriate for publication.

CDS 995. Research Preseminar (1). A weekly seminar of informal discussion and formal presentation of ongoing or planned research by the CDS faculty and doctoral graduate students. Goal is to provide CDS doctoral students with new and valuable knowledge and insights regarding how real world research is performed. Prerequisite: doctoral student standing.


Speech and Language Pathology

Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent or with departmental consent, unless otherwise specified in the course description.

Upper-Division Courses

CDS 300. Anatomy and Physiology of the Speech and Hearing Mechanisms (3). A study of the pre-natal development and basic anatomy of the systems necessary for speech and hearing. Discusses the respiratory, phonatory, articulatory, and auditory mechanisms from a functional point of view. Prerequisite: CDS 131.

CDS 304. Language I: Normal Acquisition (3). Cross-listed as Ling. 304. The study of the acquisition of language in the child from birth to six years of age. Evaluation of various acquisition theories in the light of current psychological and linguistic thought. Emphasizes the development of phonology, morphology, syntax, semantics, and pragmatics. Prerequisite: CDS 131 or departmental consent.

CDS 306. Phonetics: Theory and Application (3). Cross-listed as Ling. 306. Introduction to the International Phonetic Alphabet and its use in transcribing the sounds of American English with emphasis on the major dialects. Study of physiological, acoustic, and perceptual specification of speech sounds and a survey of current phonetic theory and applications to speech improvement. Extensive practice in transcription of speech. Prerequisite: prior or concurrent enrollment in CDS 111 or departmental consent.

CDS 416. Language II: Introduction to Disorders (3). Introduces language disorders and children who do not acquire language typically. Studies language and behavioral characteristics of children with specific impairment, mental retardation, learning disabilities, autism, hearing impairment, and acquired language disorders. Requires observation of clinical procedures with children who have language differences and disorders. Prerequisite: CDS 304 or instructor's consent.

Courses for Graduate/Undergraduate Credit

CDS 501. Speech and Hearing Science (3). Examines elements in the chain of events that lead to human communication. Studies speech production and perception at physiological and acoustical levels, emphasizing acoustics. Prerequisite: CDS 300, CDS 380 or instructor consent.

CDS 510. Introduction to Diagnostics (3). Provides the principles underlying basic diagnostic processes for speech/language disorders across the life span. Teaches observation techniques, how to take case histories, beginning interview techniques, and how to administer and interpret formal and informal assessment measures. Requires observation of diagnostic procedures in the speech-language-hearing clinic. Prerequisites: CDS 416 and 514.

CDS 514. Speech-Sound Disorders (3). Discusses basic methods and procedures of identifying, assessing, analyzing, and remediating speech-sound disorders. Practice in phonetic transcription of highly unintelligible speech samples. Prerequisite: CDS 306.

CDS 516. Language III: Introduction to Assessment and Intervention—Birth to School Age (3). Discussion of current language intervention strategies and programs for infants, toddlers, preschoolers, and school-age children, birth to 8 years. Examination of the development of individual and family plans. Discussion of the multidimensional nature of language and culturally different language patterns. Requires observation of clinical intervention and a laboratory experience. Prerequisites: CDS 416 and 510.

CDS 519. Genetic and Organic Syndromes (3). Introduces human genetics and the impact of chromosomal and structural anomalies of communication disorders. Assessment and remediation of speech issues. Prerequisite: CDS 300.

CDS 605. Neurology of Speech and Language I: Basic Processes (3). A consideration of basic neuroanatomy and neuropathology necessary for obtaining an understanding of the representation of speech and language in the human central nervous system and of conditions resulting from neurological impairment. Prerequisite: at least senior standing.

CDS 616. The Science of Reading: Current Research in the Identification and Treatment of Dyslexia (3). Teaches students about the relationship between oral language and reading acquisition. Students will differentially diagnose and apply treatment protocols appropriately to individuals who present with specific reading disabilities. Exposes students to the last quarter century of research from the National Institutes of Child Health and Development (NICHD) that demonstrates the significant relationship between explicit and direct teaching of oral language aspects of acquiring reading in a written alphabet language system. Prerequisite: instructor's consent.

CDS 780. Communication Disorders in Educational Settings (2). Organization, administration, and professional relationships in public school speech and language management programs on the elementary and secondary school levels. Emphasizes procedures and materials for surveying, scheduling, writing IEPs; therapeutic management, record keeping, and utilization of various instructional media. Should be taken prior to student teaching. CDS 821. Prerequisite: prior or concurrent enrollment in CDS 510.

CDS 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. Prerequisite: 2.5 GPA. Repeatable for credit. Offered Credit/No Credit.

Courses for Graduate Students Only

CDS 601. Advanced Speech and Hearing Science (3). Advanced study of speech and hearing processes, primarily in their normal aspects. Attention to current understanding of speech generation, the speech signal, and the normal function of hearing. Attention also to techniques of investigation of these processes. Prerequisite: CDS 501 or equivalent or departmental consent.

CDS 810. Neurology of Speech and Language II: Motor Speech Disorders (3). Studies speech disorders resulting from upper and lower motor neuron lesions in the central nervous system and emphasizes evaluation and treatment strategies for intervention. Prerequisite: CDS 605.
CDS 811. Dysphagia (3). Covers the disorder of dysphagia as it affects persons of all ages. Addresses normal swallowing in infants, children, and adults. Covers the etiologies which cause dysphagia as well as assessment procedures appropriate for various ages. Examines treatment procedures. Covers the importance of team interventions for dysphagia assessment and treatment. Addresses ethical and funding issues. Prerequisite: CDS 605.

CDS 812. Neurology of Speech and Language III: Normal Aging, Aphasia, and Dementia (3). Examines the continuum of communicative abilities (including speech, language, hearing, and cognition) which may be seen in older persons. Covers normal aging as well as the influence of stroke, dementia, and other neuropsychopathologies on communicative function in the elderly. Prerequisite: CDS 605 or instructor's consent.

CDS 813. Communication Disorders in Medical Settings (2). Provides the principles underlying a transdisciplinary training approach, emphasizing differential diagnosis and treatment of complex disorders found in medical settings. Discusses the fundamentals of private practice and legal issues in the practice of speech-language pathology. Prerequisites: CDS 510 and 812.


CDS 815. Assistive Technology for Special Populations (3). Provides information about assistive technology for persons with special needs across the life span (e.g., autism, cerebral palsy, and degenerative neurological disease). Considers physical, linguistic, and cognitive factors in the design and implementation of assistive technology resources. Studies augmentative and alternative communication systems and computer applications/modifications. Explores resources for funding.

CDS 816. Language Disabilities in Children and Adolescents (3). Examination of various approaches to working with children and adolescents with language disabilities. Practical application of language assessment procedures, individualized planning, and language intervention strategies. Language in the classroom for school-age children and adolescents and collaborative strategies. Multicultural literacy and the multidimensional nature of language in the classroom. Prerequisite: CDS 416 and 516 or departmental consent.


CDS 818. Fluency Disorders (3). Reviews current theories on the etiology and development of the disorder. Considers behaviorally based diagnostic procedures for children and adults, as well as methods for clinical intervention, including procedures for parent interviewing and counseling, and multilingual concerns. Provides opportunities for observation, one focus being demonstration of intervention methods. Prerequisites: CDS 300 and 510.

CDS 819. Acquired Brain Injury and Metacognitive Disorders Across the Life Span (3). Addresses issues of assessment and treatment of individuals with metacognitive, executive function, and behavioral disorders as a result of brain injury (traumatic, moderate, mild) and/or identified Attention Deficit Disorders (ADD), Attention Deficit with Hyperactivity Disorders (ADHD), Developmental Dyslexia (DD), Acquired Dyslexia (AD), and Specific Linguistic Impairments (sLIs) influencing processing and production of narrative and discourse skills in oral and written language. Prerequisites: CDS 605 or equivalent and instructor's consent.

CDS 820. Graduate Methods and Practicum in Speech and Language Evaluation (2). Discusses clinical methods for evaluation and diagnosis of children and adults presenting with speech and/or language disorders. Prerequisites: CDS 510, medical clearance, and insurance.

CDS 821. Graduate Methods and Practicum in Educational Settings (7). Discussion and evaluation of student teaching experiences in public schools, demonstrations of clinical skills, counseling on the elementary and secondary school levels. Prerequisites: CDS 780 and 816. Instructor's consent one semester prior to enrollment, medical clearance, and insurance.

CDS 822. Beginning Graduate Methods and Practicum in General Clinic (2-4). Provides an opportunity to relate theories and methods for student's assigned placement through discussion of various management techniques and methods with regard to different types of communication disorders and provides support for the present clinical experience. Prerequisites: CDS 623, medical clearance, and insurance.

CDS 823. Graduate Methods and Practicum in Medical Settings (4 or 6). Class discussions cover various topics pertaining to hospital and adult care practicum experiences. Discusses theory and methods to student's practicum assignments. Prerequisites: CDS 813, department approval one year prior to enrollment, medical clearance, and insurance.

CDS 824. Graduate Methods and Practicum for External Placements (2). Techniques and methods for development of clinical skills in a supervised extramural practicum setting. Focuses on clients with language and speech sound disorders. Development of a philosophy of clinical processes includes procedures for therapy, writing behavior objectives and progress, and conduct of parent conferences. Supervised practicum of clinical assignments in off-site settings. Prerequisites: department approval one semester prior to enrollment, medical clearance, and insurance.

CDS 825. Graduate Methods, Practicum, and Diagnostics in Autism Spectrum Disorders (2-4). Techniques and methods for development of clinical skills in a supervised practicum setting. Primary focus on children with social language disorders. Prerequisites: departmental consent one semester prior to enrollment, medical clearance, and insurance.

CDS 826. Graduate Methods, Practicum, and Diagnostics in Language and Literacy (2 or 4). Techniques and methods for development of clinical skills in a supervised practicum setting (in the WSU Speech-Language-Hearing Clinic, "After-School Program," and the College of Education's Assessment, Intervention Multi-Disciplinary (AIM) program). Primary focus is on clients with language (oral and written) and literacy disorders. Development of a philosophy of clinical processes includes procedures for therapy, writing behavior objectives and progress, and conduction of client conferences. Prerequisites: departmental consent one semester prior to enrollment, medical clearance, and insurance.

CDS 827. Graduate Methods, Practicum, and Diagnostics in Voice (2-4). Techniques and methods for development of clinical skills in a supervised practicum setting (in the WSU Speech-Language-Hearing Clinic). Priority focus is on clients with voice disorders. Development of a philosophy of clinical processes includes procedures for therapy, writing behavior objectives and progress, and conduction of client conferences. Prerequisites: CDS 817, departmental consent one semester prior to enrollment, medical clearance, and insurance.

CDS 828. Graduate Methods and Practicum in Fluency (2-4). Develops advanced clinical skills in the diagnosis and treatment of children and adults presenting fluency disorders. Prerequisites: CDS 818, departmental consent one semester prior to enrollment, medical clearance, and insurance.

CDS 829. Graduate Methods and Practicum in Accent Modification (2). Lecture and discussion of techniques for foreign accent and dialect modification. Relates techniques to students' practicum experience in CDS 570, Attendance in CDS 570 required. Prerequisites: CDS 625, 822, department consent one semester prior to enrollment, medical clearance, and insurance.

CDS 830. Graduate Methods and Practicum in Early Language (4). Techniques and methods for development of clinical skills in a supervised early childhood interdisciplinary preschool practicum setting. Primary focus on preschool children with language disorders. Development of a philosophy of clinical processes includes procedures for group and classroom therapy, writing behavior objectives and progress, and conduction of client conferences. Prerequisites: departmental consent one semester prior to enrollment, medical clearance, and insurance.

Audiology

Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.
Lower-Division Courses

CDS 251. Auditory Development and Disorders (2). Introduces the etiology, nature, and symptomology of auditory disorders and pathologies. Prerequisite: CDS 111.

Upper-Division Courses

CDS 351. Introduction to Auditory Assessment (3). History and scope of the field. Surveys audiologic threshold testing procedures, immittance audiometric interpretation. Prerequisite: CDS 251 or instructor consent.


Courses for Graduate/Undergraduate Credit

CDS 655. Graduate Methods and Practicum in Auditory Assessment-ELP (2). Methods in audiologic evaluation for speech and language pathology students. Discusses procedures for diagnostic evaluation of a broad range of auditory disorders in infants, children, and adults in weekly class meetings, along with procedures for hearing screening, hearing aid maintenance and fitting, counseling, and others as appropriate. Speech and language pathology students engage in practicum experiences in audiologic screening and assessment as arranged. Prerequisites: CDS 251 and 351, medical clearance, and insurance.

CDS 802. Anatomy and Physiology of the Auditory System (2). Examines in detail anatomy and function of the auditory system in light of current research knowledge. Studies the normal system as a basis for understanding the pathological system. Prerequisites: CDS 251 and 301.

CDS 803. Introduction to Psychoacoustics (2). Basic principles underlying the perceptual hearing process, emphasizing the interdependencies between sound stimuli and subjective auditory experience as related to communication behavior. Prerequisite: CDS 802.

CDS 804. Clinical Audiology I (4). Provides in-depth theoretical and clinical principles associated with the administration and interpretation of the basic comprehensive audiological test battery. Provides hands-on learning of auditory equipment and test batteries in tandem with the theoretical background for auditory assessment. Prerequisites: CDS 251 and 351.

CDS 805. Clinical Audiology II (3). Discusses diagnostic and rehabilitative procedures in the audiology clinic. Includes application of theoretical clinical principles toward the administration and interpretation of site-of-lesion and other special tests of auditory function beyond the traditional audiology test battery. Prerequisite: CDS 804.

CDS 851. Medical Audiology (3). Many hearing disorders require evaluation/treatment by both the audiology and medical professions. Reviews the audiological and physiological/medical aspects of the more common of these conditions found in children and adults. Prerequisites: CDS 251 and 802.


CDS 858. Electrophysiologic Audiology (4). Techniques and procedures for administration and interpretation of electrophysiologic tests of the auditory system, including otoacoustic emissions (OAEs), neurocochlear electrog (EOG), auditory brainstem responses (ABR, AEP), later occurring cortical evoked potentials (MLR, LAEP, P300), and somatosensory evoked response testing (SERP). Addresses interoperative monitoring and imaging techniques. Techniques and procedures for clinical evaluation of the functional status of the peripheral and central nervous system in relation to the vestibular or balance system (ENG). Prerequisite: CDS 802.

CDS 860. Amplification and Hearing Aids I (3). Reviews basic electronics as it applies to amplification systems. Emphasizes the history, function, and maintenance of hearing aids. Addresses the measurement and significance of electroacoustic characteristics. Presents the principles and procedures for the selection and recommendation of specific amplification systems for individual's hearing losses. Provides review of recent developments in research involving the measurement of real ear insertion responses and real ear effects of hearing aid modifications, as well as acquired competency in application of real ear testing. Discusses counseling and techniques related to hearing aid fitting.

CDS 861. Amplification and Hearing Aids II (3). Continuation of CDS 860. Describes and discusses the performance of digital, analog, and hybrid amplification systems and provides a detailed evaluation of requirements for dispensing such devices. Discusses counselling and techniques related to hearing aid fitting. Prerequisite: CDS 860.


CDS 865. Graduate Methods and Practicum in Aural Rehabilitation (2). Provides students with experiences in the provision of aural habilitation/rehabilitation on behalf of hearing-impaired children and adults. Prerequisite: CDS 864 (can be concurrent).

CDS 885. Advanced Methods in Auditory Assessment-Audiology (1-5). Practicum experiences encompassing diagnostic evaluations covering a full range of auditory disorders and types of evaluations in infants, children, and adults, including standard audiologic batteries, masking, site-of-lesion testing, electrophysiologic measurements, hearing aid fitting and dispensing, patient follow-up, and counseling. Prerequisites: audiology faculty's consent, medical clearance, and insurance.

CDS 887. Internship in Auditory (1-9). Placement in a credit off-campus practicum experiences in audiology. Placement is contingent upon successful completion of didactic graduate program in audiology and three semesters of CDS 885 and 886. Prerequisites: application one semester prior to enrollment, medical clearance, and insurance.

Curriculum and Instruction (CI)

Undergraduate teacher education in curriculum and instruction is a five-stage competency-based program beginning with an introduction to teaching and concluding with reflections on an extended student teaching experience. Through intensive academic and field experience combined with systematic student reflection, the goal of this program is to produce effective, informed, and reflective teachers, capable of independent practice and continued professional growth.

Students enter the set of course work for the teacher education program when they are in their 35th hour with the Pre-professional Block taking CI 271 and 272 concurrently. Each block thereafter contains two to four classes which must be taken concurrently. The courses in each of the blocks must be taken together and completed before entering the next set of course work.

Lower-Division Courses

CI 101. Introduction to the University (3). Helps students make connections with academic programs, faculty, staff, and other students; develop required academic and career competencies; and make sense of the higher education environment.

CI 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 non-scholarly publications.
CI 301. The Computer as a Learning Tool I (1). Provides computing skills necessary to succeed in the academic environment. Learn how to use computers and software to organize course work, outline and plan papers, write and edit text, search for information, compile and report data, and integrate data with text. Apply the course content in a computer lab under the supervision of the instructor.

CI 271. Introduction to Professional Education (2). Students examine the career in education, characteristics of good teaching, the nature of teacher education programs, basic historical and philosophical foundations of education, and employment options. After analyzing their own personalities, personal strengths and weaknesses, and values and beliefs about teaching, students reach an informed decision regarding their own suitability for teaching. Prerequisites: C or better in English I and II, Communication, and College Algebra; sophomore standing; 2.750 GPA; in the 35th hour; and concurrent enrollment in CI 272.

CI 272. Preprofessional Field Experience (1). Intended primarily to give prospective teachers the opportunity to consider seriously their suitability for a career in education. In addition, students begin to develop skills in observing educational situations and settings which help them develop a teacher perspective and seeing schools as prospective workplaces and teachers as colleagues. Graded S/U only. Prerequisites: C or better in English I and II, Communication, and College Algebra; sophomore standing; 2.750 GPA; in the 35th hour; and concurrent enrollment in CI 271.

CI 290. Directed Study (2-3).

Upper-Division Courses

CI 303. Clinical Field Experience: English as a Second Language (ESL) I (1-4). Students work with an ESL specialist to learn hands-on strategies for teaching students whose native language is not English. Includes observing the interpersonal relationship between language and culture, how to use multi-level teaching strategies, how to adapt materials, how to assess and grade a variety of language proficiency levels, and how to best utilize available people resources (bilingual paraprofessionals, parents, etc.) to maximize successful performance among this population. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CI 304. Clinical Field Experience: English as a Second Language (ESL) II (1-4). An extension of CI 303. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CI 305. Clinical Field Experience: Special Education I (1-4). Students learn how special education services are delivered in public schools; gain practical experience interacting with public school students with various labels, abilities, and exceptionalities in a variety of settings; and become familiar with related terminology (PTI, IEP, ECSE, ADHD, EMR, Child Study Team, etc.), the steps used to evaluate and place students with special needs, and approaches that work to maximize the success of all students. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CI 306. Clinical Field Experience: Special Education II (1-4). An extension of CI 305. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CI 307. Clinical Field Experience: Technology I (1-4). Students work with teachers using technology as a teaching, learning, and/or management tool; gain hands-on experience with computers (management systems, word processing, internet/email, graphics); become familiar with basic technology; and gain experience in the selection and use of appropriate commercial software to enhance the regular curriculum. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CI 308. Clinical Field Experience: Technology II (1-4). An extension of CI 307. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CI 309. Clinical Field Experience: Developmentally Appropriate Practices I (1-4). Students work with teachers delivering Developmentally Appropriate Practices in a classroom setting; gain experience in assessing developmental levels, personalizing instruction (developing centers, using learning contracts, structuring multi-level lessons), and designing and implementing appropriate instruction for each level. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CI 310. Clinical Field Experience: Developmentally Appropriate Practices II (1-4). An extension of CI 309. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CI 311. Block 1 Field Experience (1). Provides students with experiences in socio-cultural school and classroom observations, observations of work in special education settings, alternative schools, and tutorial work with individuals or small group settings. Graded S/U only. Prerequisites: acceptance into teacher education, CI 271 and 272 and concurrent enrollment in CI 320 and 430 and CESP 334.

CI 312. Block 2 Field Experience (1). Focuses on pupils' learning behaviors, methods of assessment, measurement, grading, curriculum goals and content as they influence classroom teaching, and teachers' methods of classroom management and instruction. Graded S/U only. Prerequisites: acceptance into teacher education, CI 311, 320 and 430, CESP 334 and concurrent enrollment in CESP 433 and CI 328.

CI 316. Children's Literature I (3). Students examine literature suitable for use with children in the preschool and elementary grades. Includes reading and examination of a wide selection of children's literature in all genres. Students develop evaluative techniques for identifying materials and practice in the use of selection aids. Prerequisite: acceptance into teacher education.

CI 320. The Exceptional Child (2). Surveys the characteristics of exceptional learners including mental retardation, learning disabilities, emotional disturbances, physical challenges, hearing/visual impairments, and gifted. Also explores the effect of cultural differences and human development on disabilities. Presents service delivery models and current special education practices. Prerequisites: admission to teacher education; CI 271 and 272; concurrent enrollment in CI 311.

CI 322. Instructional Strategies in Language Arts and Reading: Elementary School (5). Students examine the content and methods of instruction in the subject areas of language arts and reading and practice teaching their subjects in a variety of settings. Prerequisites: acceptance into teacher education; CI 311, 316, 320, 328, 430, CESP 334 and 433; concurrent enrollment in CI 413 for a practicum experience.

CI 328. Curriculum, Instruction, Management and Technology (5). Students examine the nature, purposes, and development of curriculum in educational settings. They develop a knowledge and understanding of various curriculum models and how these models influence instruction and the work of teachers.

Students acquire a knowledge and understanding of instruction: the decisions and processes by which teachers translate goals and objectives into classroom realities. Students become familiar with a wide range of practical strategies and techniques associated with various models of teaching, and learn to apply these strategies and techniques in actual and simulated teaching situations. Students also acquire practical knowledge of and experience with the development and use of a wide range of instructional materials and technology, including the use of computers.

Students examine and learn to use various classroom management strategies in order to maintain control, promote a positive learning climate, and facilitate the achievement of instructional objectives. Prerequisites: acceptance into teacher education; CI 311, 320, 430, CESP 334; concurrent enrollment in CESP 433 and CI 312.

CI 402. Instructional Strategies in Math and Science: Elementary School (5). Students examine the content and methods of instruction in their subject area and teach their subject in a variety of elementary school settings. Prerequisites: CI 312 and 328, CESP 433, MATH 501, and a physical and/or biological science class.

CI 406. Instructional Strategies in Social Studies: Elementary School (3). Students examine objectives, methods of teaching, equipment and resources, and evaluation and measurement in social studies in the elementary school. Prerequisites: CI 312 and 328 and CESP 433.

CI 413. Prestudent Teaching (1-3). This field experience allows students to spend an extended length of time in an appropriate classroom working with a cooperating teacher to plan and implement instruction designed to teach distinct objectives and evaluate learning outcomes. Students also evaluate their own instruction, noting strengths and weaknesses and planning for improvement. Graded S/U only. Prerequisites: acceptance into teacher education; CI 312 and 328 and CESP 433.
CI 427. Philosophy and History of Education (2). Presents the major contemporary educational philosophies, the development of American education, and the historical influences on the structure of schools today. Some emphasis on the students’ examination of their own educational philosophy. Prerequisites: entrance into teacher education, CI 271 and 272.

CI 430. Social/Multicultural Education (3). Examines the social and multicultural foundations of education and schools in a changing society. In addition students develop an appreciation for the changing ethnic and cultural characteristics of American schools. Prerequisites: acceptance into teacher education including successful completion of CI 271 and 272 and concurrent enrollment in CI 311 and 320 and CESP 334.

CI 446. Student Teaching Seminar: Elementary (1). Students study and discuss experiences emerging from student teaching including the planning of school programs and assuming the responsibilities of a teacher. Graded Cr/NC only. Prerequisites: acceptance into teacher education; CI 322, 402, 406; concurrent enrollment in CI 447 and 457.

CI 447. Student Teaching in the Elementary School (15). The primary purpose of the student teaching field experience is to provide evidence of the present teacher’s readiness to engage in independent reflective practice as a certified teacher. Working with one or more cooperating teachers in the schools, preserve teachers gradually assume responsibility for instructing a full complement of classes, including a full schedule for at least 10 days. Prerequisites: acceptance into teacher education; CI 322, 402, 406; concurrent enrollment in CI 446 and 457.

The student teaching semester is required of all students working toward a degree certificate in education. Every student wishing to receive the certificate must file an application, available in 107 Corbin, with the certification office. Application for the fall semester must be filed by February 1 and for spring semester by September 1. The only exception to the required number of semester hours is the transfer student who has taken student teaching elsewhere or students who hold other certificates or who may have taught for a number of years. Any deviations from established grade point averages and other regulations must be approved by the College of Education’s Standards Committee.

CI 448. Student Teaching in Early Childhood (4-6). This field experience provides half-time participation in preschool (three- and four-year-olds) under guidance of a master teacher and a college supervisor. Prerequisites: CI 322, 402 and 406 and 9 semester hours of early childhood education. Prerequisites may be waived for equivalent experience with departmental consent. See CI 447 for deadlines for filing an application to enroll in student teaching.

CI 451. Student Teaching in the Elementary School: Music (4). Prerequisites: acceptance into teacher education, CI 328, CESP 433, methods in the subject area, and concurrent enrollment in CI 457 and student teaching seminar.

CI 452. Special Studies in Education (1-3). Primarily for elementary and secondary education majors. Repeatable with advisor’s consent.

CI 454. Instructional Strategies: Secondary (3). Prerequisites: CI 351. (E) English: (J) Social Studies; (M) Mathematics; (S) Science. Students examine the content and methods of instruction in their subject area and teach their subject in a variety of settings. In addition, students are provided with the understanding of the development of learning and teaching skills and explore instructional approaches for guiding secondary students in those skills and their use in content areas. Prerequisites: acceptance into teacher education, CI 312 and 328, CESP 433, and concurrent enrollment in CI 413.

CI 455. Student Teaching Seminar: Secondary (1). Prerequisites: CI 351. (E) English; (J) Social Studies; (M) Mathematics; (S) Science. Students study and discuss experiences emerging from student teaching including planning school programs and assuming the responsibilities of a teacher. Prerequisites: acceptance into teacher education; CI 312, 328, 413, 454, CESP 433, and concurrent enrollment in CI 457 and student teaching.

CI 457. Senior Seminar (1). Students engage in reflective practice during their professional semester, reflecting on the social, cultural, philosophical, and psychological foundations of education as they relate to practice.

Students examine the role of the teacher as a professional: legal concepts related to employment, the role of the teacher in the educational system, ethics of the profession, communication skills as a staff member, planning for and scheduling aides and volunteers. Provides students with the opportunity to conduct field experiences and reflective practice and the WSU College of Education Teacher Education Program. Prerequisites: acceptance into teacher education and concurrent enrollment in student teaching and student teaching seminar.

CI 459. Student Teaching in the Elementary School: Art (4). Prerequisites: acceptance into teacher education, CI 328 and CESP 433, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

*Student Teaching—Secondary School. The student teaching semester is required of all students working toward a secondary certificate and is a full-time assignment. Application for approval to enroll in the program must be made in the certification office by February 1 for the fall semester or by September 1 for the spring semester. In addition, students must obtain approval from the representative of the subject area in which they wish to student teach before placement can be considered.

It is expected that students will student teach in their field of major interest. However, individuals who are well prepared in more than one field may apply to student teach in a second field, but they must take the special methods course in the second field before entering the student teaching semester.

The assignment for student teaching begins with the opening of the public school semester, and enrollees must arrange to meet from 8 a.m. to 5 p.m. daily and to be available for selected evening programs throughout the semester.

Prerequisites: acceptance into teacher education, methods in the subject area, and concurrent enrollment in CI 457 and student teaching seminar.

*For special areas see CI 462 through 466.

CI 462. Student Teaching: Secondary Art (4). Prerequisites: acceptance into teacher education, methods in the subject area, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 465. Student Teaching: Secondary English (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 466. Student Teaching: Secondary Foreign Language (8). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 467. Student Teaching: Secondary Social Studies (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 468. Student Teaching: Secondary Music (4). Prerequisites: acceptance into teacher education, CI 454, and concurrent enrollment in CI 457 and student teaching seminar.

CI 471. Student Teaching: Secondary Mathematics (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 471S. Student Teaching: Secondary Science (8-15). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

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. Prerequisite: successful completion of 24 credit hours and a 2.500 GPA. Repeatable for credit. Offered Cr/NC.

CI 490. Individual Studies in Education (1-3).

Courses for Graduate/Undergraduate Credit

CI 541. Desktop Publishing I (3). Desktop publishers control the entire publishing process, from creation and typesetting to printing and distribution, with equipment from the desktop. Word processing on the personal computer and laser printing are the two technological achievements that make possible a desktop publishing revolution. Stresses type design, harmony, legibility, copy fitting, and layout fundamentals.

CI 542. Desktop Publishing II (3). An intermediate-level course which enhances, enriches, and develops further skills and techniques used in desktop publishing. Students select software packages in which they need additional depth toward master-level. Prerequisite: CI 541.
CI 615. Learning and Reading Strategies (3). Students are provided with the understanding of the development of learning and reading strategies and to explore instructional strategies that are currently available. Prerequisite: graduate standing.

CI 616. Literature for Adolescents (3). Students participate in intensive reading of literature in various genres consistent with studies of adolescents; reading interests, abilities, and responses to literature. Prerequisite: acceptance into teacher education. Currently and previously certified teachers meet prerequisites.

CI 621. Instructional Strategies: Middle Level Education (3). Students examine the middle grades school as an organization that takes its design specifically from the analysis of 11-14 year olds, their characteristics and needs. Students examine many curricular and instructional alternatives for middle grades education and learn to manage changes.

CI 701. Foundations of Education (3). Prerequisite: graduate standing.

CI 702. Introduction to Exceptional Children (3). A survey of 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 exceptionalism for special education majors, administrators, and school psychologists. Prerequisite: bachelor's degree or departmental consent.

CI 705. Knowledge and Beliefs About Reading (3). Helps students understand the theories of reading development, individual student differences, the nature of readers difficulties, and principles of assessment. Includes the standards developed by the International Reading Association concerning knowledge and beliefs about reading as the learning outcomes. Prerequisites: graduate standing and teaching certificate.

CI 706. Reflective Inquiry into Learning, Teaching, and Schools (5). Fosters the reflective thinking ability of teachers about the relationships among learning, teaching, and schools. Explores various frameworks of growth and development, learning theory, social and multicultural education, and philosophical foundations. Students are engaged in initial reading and investigation into individualized research topics. Prerequisites: admission to graduate school, CESP 701.

CI 708. Current Topics in Curriculum (1-3). Addresses a broad range of topical issues in curriculum development and implementation. A current issue will be covered under this course number, an umbrella number for a variety of topics/innovations in curriculum. Repeatable.

CI 709. Current Topics in Instruction (1-3). Addresses a broad range of topical issues in current practices for effective instruction. A current issue will be covered under this course number, an umbrella number for a variety of topics/innovations in instructional practices. Repeatable.

CI 710. Current Topics in Classroom Management (1-3). Addresses a broad range of topical issues in current classroom management practices. A current issue will be covered under this course number, an umbrella number for a variety of topics/innovations in classroom management. Repeatable.

CI 711. Multicultural Education (3). Emphasizes the understanding of multiple perspectives in a global society and developing multiple modalities, 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 relevant pedagogy. Prerequisite: graduate standing or departmental consent.

CI 712. Environmental Education (3). Provides basic information on environmental issues which can be addressed in the classroom. Become familiar with a wide range of resources for both teachers and their students. Stresses applying environmental issues to everyday teaching.

CI 713. Agriculture in the Classroom (2). K-12 teachers learn about agriculture and develop ways to integrate that information into their everyday teaching. Includes presentations, field trips, and projects showing how food chain industries touch every person's life. Teachers learn to integrate agricultural information into existing teaching basic subjects like math, language arts, social studies, science, and art.

CI 714. Reading Instruction and Assessment (4). Helps students create instructional environments that teach phonemic awareness, word identification (including phonics), vocabulary-building skills, strategies for comprehension and the construction of meaning, and study strategies, and assess student performance and progress. Prerequisite: CI 705.

CI 716. Introduction to School Librarianship (3). Introduces the role of the library and the librarian in the school. Studies issues affecting school libraries and librarians. Prerequisites: teaching certification and admission to the Library Media Endorsement Program.

CI 717. Qualitative Inquiry in Education (3). Through readings and guided experiences in acts of inquiry in qualitative research, learners acquire the ability to develop a reflective inquiry; becoming familiar with the knowledge base for qualitative inquiry. Prerequisite: instructor's consent.

CI 718. Acts of Qualitative Inquiry in Education (3). Through readings and guided experiences, students develop and employ the skills of the reflective, qualitative inquirer. Prerequisite: CI 717 or departmental or instructor's consent.

CI 723. Analysis and Management of Behavior (3). Covers behavior management strategies specifically needed by classroom teachers to affect academic and social outcomes. Addresses technical, theoretical, and practical aspects of applied behavior analysis. Prerequisites: CI 320 or 702 and CI 430 or 711 or equivalent; admission to graduate program in special education, or instructor's consent.

CI 724. Methods I: Academic and Cognitive Skills, Mild Exceptionalities (3). Introduces students to specific techniques for improving the cognitive skills and academic performance of students with mild exceptionalities (learning disabilities, emotional disturbances/behavior disorders, or mental retardation). Includes competencies for (a) teaching readiness, cognitive, and academic skills as well as content to students with exceptional learning needs; (b) recognition in situations which can be used as a starting point for instruction of students with special needs; (c) instructional management and monitoring strategies, and (d) strategies for working with students with exceptional learning needs in general and special education settings. Prerequisites: CI 320 or 702, CI 430 or 711, admission to the Teacher Education Program or to the graduate program in special education as a non-degree-seeking student, or instructor's consent.

CI 725. Improvement of Instruction in Science (3). Assists teachers in improving the way they teach science and the way their students learn science. Includes instructional strategies, curriculum, research, and technology. Prerequisite: CI 402.

CI 726. Information Technologies in the School Library I (3). Introduces a wide range of information technology applications, including word processing, database, spreadsheet, and presentation software. Emphasis on using these applications in a library setting. Covers the use of the Internet, options for filtering Internet content, Internet user policies, and basic Web page design. Includes basic computer and software troubleshooting, installation and removal of software, and computer security issues. Prerequisite: Windows 95 or equivalent skills, CI 716.

CI 727. Information Technologies in the School Library II (3). Introduces a wide range of technologies and equipment in the school library. Covers selection and purchase as well as basic maintenance and repair of equipment. Includes the basics of local area network design. Presents methods of using technology with students including CD-ROM, laser disc, and video. Students learn the basics of media production and strategies for teaching media production to students. Also looks at the future of technology in school libraries. Prerequisite: CI 726.

CI 728. Organization of Information Resources (3). Introduces the organization of information resources in the school library. Includes the organization and cataloging of print and non-print materials in US MARC format, how to assign Dewey Decimal Classification numbers and subject headings, how to identify the sources for copy cataloging records, and the importance of authority control in a library. Prerequisites CI 726 and 727.

CI 729. Reference Materials (3). Provides skills in evaluating and using indexes, bibliographies, encyclopedias, diction-
CI 730. Curriculum in the School Library (3). Gives students knowledge about the role of the school library in curriculum. Addresses how the school library media specialist teaches information literacy to students and staff. Prerequisite: CI 716.

CI 731. The Reflective and Inquiring Educator (6). Builds a foundation for reflective thinking about (a) the role of the educational practitioner; (b) educational issues in curriculum, instruction, and change theory; and (c) principles and application of teacher-based action research. Prerequisite: admission to MEd in curriculum and instruction.

CI 732. Library Management and Design (3). Provides information and examples on ways to effectively manage a library. Covers budgeting, grants, policies, procedures, and collection/selection/deselection. Prerequisites: CI 716, CI 726, CI 728.

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: graduate standing.

CI 735. Introduction to the Gifted (3). Students are introduced to the historical and socio-educational perspectives germane to gifted education. Explores issues related to the field of gifted education such as theories of intelligence, identification, delivery modes, characteristics and learning needs, special populations, curriculum differentiation, and underachievement. Prerequisite: 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. Prerequisites: CI 705 and 714.

CI 740. Introduction to Early Childhood Special Education (3). Students are provided a basic introduction to the emerging field of early intervention for children with disabilities and their families. Prerequisites: CESP 728 and CI 761.

CI 741. Early Childhood Special Education Methods: Preschool (3). Provides specific techniques needed to teach children with exceptionalities in preschool settings. Includes competencies within early childhood special education for: (a) legal foundations (IDEA, Part B); (b) characteristics of learners; (c) assessment, diagnosis, and evaluation; (d) report and Individualized Education Plan (IEP) development; (e) instructional content and management strategies; (f) instructional content and practice; (g) planning and managing the teaching and learning environment; (h) managing student behavior and social interaction skills; (i) collaborating and forming partnerships with family members and other professionals; (j) professional and ethical practices; and (k) strategies for working with students with exceptional learning needs in general and special education preschool settings. Prerequisites: CI 320 or 702, CI 740, admission to the Teacher Education Program or to the special education graduate program as a non-degree student, or instructor's consent.

CI 743. Alternative Certification Internship I (3). In the alternative teacher certification program, this internship replaces the required student teaching assignment for the purposes of certification. Students teach half-time or more with a provisional certificate. Credit is given for a combination of (a) the teaching experience and (b) attendance and the completion of assignments in the scheduled seminars. Prerequisites: employment by a school district and completion of course work for provisional teacher certification.

CI 744. Alternative Certification Internship II (3). Continuation of CI 743. Prerequisites: employment by a school district and completion of course work for provisional teacher certification.

CI 746. Alternative Certification Internship III and IV (1). Continuation of CI 743 and 744. Prerequisites: employment by a school district, CI 743 and 744, and admission to MEd in CI.

CI 747L Practicum: ESl/Bilingual Education (K-12 or adult) (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. Prerequisites: CI 430 or 711, CI 753, CI 755, CI 750, or CI 765. Special Studies in Education.

CI 748. Alternative Certification Internship III (3). Prerequisites: employment by a school district and completion of course work for provisional teacher certification.

CI 749. Alternative Certification Internship IV (3). Prerequisites: employment by a school district and completion of course work for provisional teacher certification.

CI 750. Workshops in Education (1-4).

CI 751, 752, 753, 754, or 755. Special Studies in Education (1-3). For elementary and secondary school teachers. Repeatable with advisor's consent. Prerequisite: teacher certification or departmental consent.

CI 760. Parent Education (3). An introduction to ways of working with parents of preschool and elementary children and an analysis of formal and informal approaches emphasizing the teacher's role in developing these procedures.

CI 761. Early Childhood Education (3). Students examine programs, problems, and philosophy of educating children in the preschool years. Prerequisite: admission to the Teacher Education Program.

CI 762. Instructional Strategies: Preschool Education (3). Students examine the content and methods of instruction in preschools and observe/teach in a variety of settings. Students study teaching methods for preschool children and prepare materials to enhance the learning experiences of these children. Prerequisite: CI 761.

CI 765. Second Language Acquisition (3). This course will cover survey and experimental, and interactionist theories of second-language acquisition, and bilingualism by reviewing substantive research findings, as well as causes for differential success among second-language learners. This course will include discussions over readings, collaborative activities, and presentations involving application of theory to teaching practice.

CI 777. ESL Assessment (3). This course examines legal, theoretical, and practical considerations in ESL/BSE programs. Explores a variety of established principles of language assessment, procedures for identification of language minority students, and applications for these procedures and techniques. Covers level placement, monitoring of language development, and exit criteria for language programs. Introduces desirable qualities of tests: validity, reliability, practicability, and beneficial feedback.
digitizing audio and video, storyboards, scripting, appropriate hardware, and authoring software.

Courses for Graduate Students Only

CI 802. Seminar on Current Issues in Special Education (3). Analyze and critique research, integrate understandings, evaluate current issues in light of historical events, and draw conclusions relating theory to practice. Students make oral and written presentations. Prerequisite: within 6 hours of graduation, CESP 701.

CI 804. Classroom Research in Curriculum and Instruction (6). Guides students in formulating questions and using appropriate research principles to collect, analyze, interpret, and report data to evaluate the effectiveness of educational policies and/or practices. Sustained exploration of topics from CI 731 expected. Prerequisite: CI 731.

CI 807. Philosophy, History, and Psychology of Secondary and Elementary Education (3). Students survey of concepts of mind, learning, experience, and knowledge, and philosophical, historical, and psychological systems and theories as they relate to current educational problems and practices. Prerequisite: CI 701.

CI 809. Foundations and Characteristics of Mild Exceptionalities (3). Introduces students to the principles, concepts, and historical foundations underlying the provision of services for students with mild exceptionalities. Explains characteristics of students identified as having behavior disorders, learning disabilities, or mental retardation. Discusses legal and ethical principles related to various delivery approaches, and examines roles of the students with exceptional learning needs, their parents, and educators as well as related services and community personnel. Discusses current developments in the field of special education. Prerequisites: CI 320 or 732, CI 430 or 711, CI 723 and 724, and full admission to the MEd program in special education or instructor’s consent.

CI 810. Methods II: Social Skills for Mild Exceptionalities (3). Provides the knowledge and skills necessary to teach social skills and affective education to children and youth with exceptionalities. Prerequisites: full admission to the graduate program, CI 723, 724, 809, and 887, and instructor’s consent for majors in other master’s degree programs.

CI 811. Family and Professional Collaboration (3). Assists the special educator in developing the skills to collaborate and consult with parents, siblings, regular educators, support personnel, and community agencies to facilitate the needs of children with exceptionalities. Prerequisites: full admission to the graduate program, CI 739, 740, 809, and 887, and instructor’s consent for majors in other master’s degree programs.

CI 812. Transition Across the Life Span (3). Examines aspects of transition programming for individuals with exceptionalities across their life span. Addresses transitions from (a) early childhood special education settings to the school environment, (b) elementary to middle school, (c) middle school to high school, (d) one special education setting to another (e.g., self-contained classroom to resource room or general education classroom), and (e) high school to post-secondary settings and independent functioning. Discusses roles of individuals with exceptional learning needs, parents, educators, and community personnel. Prerequisites: CI 809, full admission to the MEd program in special education, or instructor’s consent.

CI 821. Classroom Reading Practicum (3). Students participate in a practicum experience, delivering developmental and corrective reading instruction in a classroom setting. Prerequisites: CI 615, 705, 714, 734, 736.

CI 835. Instructional Models and Practices (3). For teachers (1) to explore the theories behind the development of, and the syntaxes for viable instructional practices; (2) to apply instructional models to the analysis and evaluation of various learning environments; and (3) to develop a commitment as a reflective practitioner to more effective instruction through an expanded and integrated repertoire of teaching strategies. Prerequisites: admission to MEd in curriculum and instruction program, CESP 701.

CI 837. Collaborating and Refining Problem-Solving Skills (6). This integrated class guides students in implementing school and classroom improvement practices that have documented success. Emphasizes collaboration skills in the identification, selection, and development of approved school and professional development projects.

CI 842. Early Childhood Special Education Methods: Infants/Toddlers and Families (3). Provides specific techniques needed to provide services, supports, and accommodations for infants/toddlers and their families who face challenges of developmental disabilities. Includes competencies within early childhood special education for (a) legal foundations (IDEA Part C); (b) collaborating and forming partnerships with family members and other professionals; (c) typical and atypical developmental patterns; (d) child assessment, diagnosis, and evaluation; (e) family assessment and evaluation; (f) family service coordination; (g) development of Individualized Family Service Plans (IFSP); (h) family-centered intervention strategies; (i) instructional content and practice; (j) planning intervention strategies in natural environments; (k) transitions for infants/toddlers and families; and (l) professional and ethical practices. Prerequisites: CI 320 or 702, CI 740, full admission to the MEd in special education program, or instructor’s consent.

CI 843. Leadership and Sustained Professional Growth (4). Emphasizes commitment to and application of professional leadership in curriculum and instruction and/or school improvement. Sustained exploration of topics from CI 731, 804, and 837 expected. Prerequisite: CI 837.

CI 845. Curriculum Models and Practices (3). Examines theories, development processes, evaluation procedures, and current practices in curriculum. Emphasizes multiple conceptual frameworks for thinking about curriculum and reflective inquiry into the implications of those frameworks in today’s classrooms and schools. Prerequisites: admission to MEd in curriculum and instruction program, CESP 701.
CI 847. Practicum/Internship in Special Education (1-10). Provides students with participation in a class for early childhood disability (847A), children/adolescents with learning disabilities (847E), educable mental retardation (847I), or behavior disorders (847K) supervised by a University professor. Emphasizes applied teaching methods for students with mild exceptionalities, including formal-informal psycho-educational assessment devices, curriculum strategies, behavior management, and prescriptive remediation for academic deficits. Prerequisites: full admission to MEd program in special education and completion of all core courses needed for provisional endorsement in specialty areas.

CI 847B. Practicum: School Libraries (3). Students pursue a professional experience in a school library media center under the cooperative supervision of an experienced practitioner in the field and a University supervisor. Prerequisite: CI 732.

CI 847C. Practicum: Cataloging (2-4). Students pursue a professional experience in a school library media center or central services office under the cooperative supervision of an experienced cataloger in the field and a University supervisor. Prerequisites: CI 728 and 847B.

CI 847M. Practicum: Gifted (3-6). Stresses applied teaching approaches. Provides opportunities to apply theoretical, structural, and technological methodologies related to the education of the gifted learner. Prerequisites: CI 735 and 853.

CI 847R. Practicum: Regular Early Childhood (3). Provides opportunities in a traditional setting for the student to develop competencies with young children by working in a classroom setting with a trained professional. Prerequisites: CI 761 and 762.

CI 854. Improvement of Instruction in Social Studies (3). Students examine recent changes in social studies curriculum and instruction to investigate strengths and limitations of various approaches. Stresses competency in teaching for concept development, dealing with value-laden issues, and teaching for inquiry. An inquiry-centered learning environment emphasizes personalizing the social studies curriculum for children. Reviews and practices alternative teaching strategies and complementary evaluative techniques.

CI 855. Models and Practices of Curriculum and Instruction (6). Examines theories behind, the development of, current practices and trends in, and evaluation and assessment procedures pertaining to curriculum and instruction. Emphasizes multiple conceptual frameworks for thinking about curriculum and instruction, and reflective inquiry into the implications of these frameworks in today's classrooms. Prerequisite: CI 706.

CI 856. Improvement of Instruction in Mathematics (3). Students examine recent trends in subject matter content and teaching guides to improve understanding of meanings, vocabulary, and mathematical concepts. Includes instructional methods and materials.

CI 860. Seminar on Research Problems (1-3). Helps MEd students formulate either an acceptable agenda for the development of a professional portfolio or an acceptable proposal for a master's thesis to satisfy the applications requirement for the MEd in curriculum and instruction.

CI 861. Seminar in Special Education Research (2). Development and presentation of research proposal. Prerequisites: admission to MEd in special education, CESP 701.

CI 862. Professional Portfolio Development (2). Students develop the professional portfolio proposed and accepted in CI 860. In consultation with their portfolio advisor and two other faculty members, students proceed with their approved agendas. Prerequisite: CI 860.

CI 863. Presentation of Professional Portfolio (2). Students complete, present to their faculty portfolio committee, and orally defend the professional portfolio proposed in CI 860. Prerequisites: CI 860 and 862 (or concurrent enrollment in CI 862).

CI 870. Trends in Early Childhood Education (3). Students analyze current early childhood education research with an in-depth study of contemporary programs influencing the education of young children.

CI 875-876. Master's Thesis (2-2). Students complete their research proposal that was accepted by their thesis committee. Also required is the completion and oral defense of the student's thesis. Students work closely with their advisor and committee. Students needing an additional semester to satisfy these requirements should enroll in CI 875. Students receive credit for courses(s) when their thesis has been completed and defended. Prerequisite: CI 865.

CI 883. Methods in Teaching the Gifted (3). Students examine strategies and techniques for planning qualitatively differentiated curriculum to meet the unique academic needs of the gifted learner. Students explore a variety of curriculum approaches including acceleration, enrichment, compacting, grouping, and combinations of these. Prerequisite: CI 735.

CI 887. Assessment and Analysis of the Learner (3). Students learn the application of standardized and informal evaluation techniques including critical evaluation of standardized tests and their appropriateness for special populations (including school-age individuals with exceptionalities and reading disabilities as well as young children and culturally and linguistically diverse learners), and alternative methods of assessment and intervention techniques based on diagnostic profiles. Prerequisites: CI 320 or 702, 430 or 711, 723 and 724, full admission to the MEd program in special education, or instructor's consent.

CI 889. Action Research in Special Education (3). Students design and implement research projects using qualitative and quantitative methods. Preparation: completion of CI 860 or CI 863 or permission of the instructor.

Kinesiology and Sport Studies (KSS)

The mission of the Department of Kinesiology and Sport Studies is to prepare students for careers in exercise science, physical education, and sport administration, 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: a BA degree in sport administration, a BA degree in physical education: K-12, and a BA degree in exercise science. Each degree area provides students with a quality education leading to numerous career opportunities.

Physical Education: K-12

Wichita State's elementary and secondary physical education teacher preparation program offers a quality education for students desiring a career teaching physical education. The Core curriculum provides a scientific and practical background upon which to base teaching content and methods. The K-12 program addresses the importance of a developmentally appropriate curriculum based on the national physical education standards. Students are provided a minimum of 45 contact hours with K-12 students during pre-service teaching experiences. Graduates qualify for the Kansas teacher certification in physical education: K-12.

Exercise Science

Wichita State's exercise science program is for those interested in careers involving exercise physiology, physical therapy, 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.

Sport Administration

Wichita State's sport administration degree provides students with a quality curriculum including courses such as sport marketing, sport law, sport management, and sport facility
management. Students pursuing the sport administration degree program complete a two-semester 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.

Minor in Exercise Science
The exercise science minor consists of 23 credit hours including the following courses: KSS 201E, 202, 203, 328, 331, 440, 470, and 530; HS 331; and a prerequisite course in Anatomy and Physiology. This program provides minimum knowledge for careers in the fitness industry and for certification exams.

Minor in Sport Administration
The sport administration minor consists of 18 credit hours including the following courses: KSS 325, 360, and 565; MCT 300; and two of the following three courses: KSS 475, 520, and 544. This program provides minimum knowledge for careers in the athletic/sport industry.

Physical Activity Service 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.

Lower-Division Courses
KSS 111. Foundations in Physical Education, Sport, and Fitness (3). Introduction to the history, principles, philosophy, and foundations of physical education with concomitant outgrowths for modern society.

KSS 112. Introduction to Sport Administration (3). Introduction to the discipline of sport administration and its vast array of career opportunities (since the sport industry represents the eleventh largest industry in the U.S.).

KSS 113. Introduction to Exercise Science (3). This course is designed to provide an overview of the basic physiological, neurological and biomechanical processes associated with physical activity and human movement.

KSS 117. Community First Aid and Community CPR (2). Community first aid and community cardiopulmonary resuscitation with certification by the American Red Cross.

KSS 125. Health/Wellness Concepts (1). Teaches health and wellness concepts to promote living a positive, healthy life. Covers behavior-change theory to maximize the chances that behavior changes stimulated during the class will become permanent.

KSS 150. Workshop (1-3).

KSS 152. Special Studies in Health, Physical Education, and Recreation (1-3). Group activities in preselected areas of physical education, exercise science, or sport administration. Offered Cr/NC only.

KSS 201A. Introduction to Physical Activity (2). Introduces basic skills and strategies of individual sports/activities. Prerequisite: K-12 physical education major.

KSS 201B. Introduction to Physical Activity (2). Introduces activities focusing on life adventures. Prerequisite: K-12 physical education major.

KSS 201C. Introduction to Physical Activity (2). Introduces fundamental motor patterns and movement education. Prerequisite: K-12 physical education major.

KSS 201D. Introduction to Physical Activity (2). Introduces basic skills and strategies of team sports. Prerequisite: K-12 physical education major.

KSS 201E. Introduction to Physical Activity (2). Introduces activities appropriate for students majoring in exercise science or K-12. Focuses on basic concepts of exercise physiology and fitness instruction. Prerequisite: KSS major.

KSS 210. Practicum—Sport Administration (3). Integrates course work with planned and supervised professional experiences for a minimum of 15 hours per week. Prerequisite: KSS 112.


KSS 270. Motor Learning (3). The introduction and examination of the physiological and psychological factors that affect the acquisition of motor skills.

Upper-Division Courses
KSS 306. Water Safety Instructor (2). 1R; 2L 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: KSS 107A or departmental consent.

KSS 310. Methods in Physical Education (3). Presentation and participation in methods of teaching physical education, emphasizing techniques, skills, organization of activities, and classroom procedures. Prerequisites: KSS 270 and 201A, B, C, D, admission to teacher education, and completion of Pre-professional Block.

KSS 311. Physical Education in Middle School (3). Methods, techniques, teaching progression, analysis, and skill development of the Physical Focus curriculum. Requires 15 hours of field experiences and observation in selected middle schools. Prerequisite: Block I of teacher education program.

KSS 312. Physical Education in High School (3). Methods, techniques, teaching progression, analysis, and skill development of the Physical Focus curriculum for high school. Requires 15 hours of field experience and observation in selected high schools. Prerequisite: Block I of teacher education program.

KSS 326. Physical Education in the Primary Grades (3). 3R; 2L Second in the series for an emphasis in elementary school physical education. Focuses on developmental movement activities for children in grades K-2. Includes 15 hours of laboratory experiences with primary school children. Prerequisite: Block I of teacher education program.

KSS 327. Physical Education in the Intermediate Grades (3). 3R; 2L Final course in the series for an emphasis in elementary school physical education. Assists students in developing the necessary skills to teach physical education in grades 3-6. Includes 15 hours in laboratory experiences with intermediate grade school children. Prerequisite: Block I of teacher education program.

KSS 328. Kinesiology and Biomechanics (3). The understanding of the kinesiologies and mechanics of human motion with respect to performance of sport activities. Prerequisite: KSS 229 or equivalent.

KSS 331. Care and Prevention of Athletic Injuries (3). For prospective coaches, athletic trainers, health and physical educators—to aid in the recognition, evaluation, and care of athletic injuries. Techniques in taping, prevention, and rehabilitation of injuries. Prerequisite: KSS 229 or equivalent.

KSS 332. Technology for K-12 Physical Educators (3). Provides knowledge, skills, and tools to effectively implement technology into health and physical education. Examines computer technology as well as technology associated with the IFER disciplines. Students have opportunities for practical applications of technological skills.

KSS 338. Theory and Organization of Baseball (2). The theory, organization, responsibilities, and techniques of coaching baseball.

KSS 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 at least two hours per week in observation of physical activity with persons impaired, disabled, or handicapped. Prerequisite: KSS 229 or equivalent, admission to teacher education, and completion of Pre-professional Block.

KSS 380. Organization and Administration of Sport (3). Discusses the fundamental aspects of a management within any sport-related entity. Addresses management, marketing, facility management, human resources, legal issues, budgeting/finance, purchasing, and communication.

Acquaints elementary and middle school classroom majors with organizational skills and instructional materials. Not open to students in physical education. Prerequisite: admission to teacher education.

**KSS 430. Advanced Evaluation of Athletic Injuries (3).**
Advanced study of the etiology, pathology, and clinical signs of common athletic injuries. Emphasizes clinical evaluation of athletic injuries/illness by the athletic trainer. Includes application of orthopedic and neurological evaluations.

**KSS 431. Rehabilitation and Therapeutic Modality Use for Athletic Injuries (3).**
Principles in planning and implementing rehabilitation programs for injured athletes, emphasizing application of contemporary therapeutic exercise techniques. Advanced study of the use of hydrotherapeutic and electrotherapeutic agents in the rehabilitation of athletic injuries and the use and application of various modalities in the treatment of athletic injuries.

**KSS 432. Athletic Training Lab I, II, III, IV (1).**
Laboratory course. Provides practical learning experiences in the prevention, first aid, and care of athletic injuries. May be repeated.

**KSS 440. Concepts in the Prescription of Exercise (3).**
An introduction to the 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: KSS 201E and 330 or equivalent.

**KSS 465. Psychology of Sport (3).**
Explores the observations, descriptions, and explanations of various psychological and physiological factors that influence diverse aspects of sport and physical activity. Prerequisite: KSS 112, 380.

**KSS 470. Fitness Practicum (3).**
Application of theory to practice by assisting in various activities associated with the field of exercise science (i.e., fitness instruction, weight management, weight training, athletic training, etc.) a minimum of 15 hours per week. Prerequisites: KSS 117, 201E, 530; a 2.500 GPA; or departmental consent.

**KSS 471. Student Teaching—Physical Education—Secondary (4).**
Prerequisite: completion of all courses in major field and Block III of teacher education program.

**KSS 472. Student Teaching—Physical Education—Elementary (4).**
Application for student teaching must be made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for student teaching begins with the opening of the public schools, and the student is expected to follow the public school calendar for a semester. Prerequisite: completion of all classes in the major field and Block III of teacher education program.

**KSS 473. Student Teaching Seminar (1).**
Weekly seminar evaluates strategies for managing classrooms and assesses instructional strategies. Students also discuss the employment process and the requirements for teacher certification. Prerequisite: concurrent enrollment in KSS 471 and 472.

**KSS 475. Sport in American Culture (3).**
A basic understanding of the developments, trends, and social processes that explain the widely popular sporting experiences in society today. Prerequisites: KSS 112, 380, 465, and 526.

**KSS 481. Cooperative Education (4).**
Allows students to participate in the Cooperative Education program. Offered Cr/Ncr only. Prerequisites: 2.500 GPA and admission to College of Education.

**Courses for Graduate/Undergraduate Credit**

**KSS 500. Health Education K-12 (3).**
Provides practical applications of theoretical models of change for the health field. Discusses health problems, strategies for affecting change, and outcome assessment. Develops selected instructional materials. Two field trips to preselected local health agencies. Additional projects required for graduate students. Prerequisite: Block I of teacher education program.

**KSS 515. Rhythmic Activities in K-12 (3).**
Teaches methodology and curricular content of rhythmic activities appropriate for elementary and middle school children. Prerequisite: Block I of teacher education program.

**KSS 520. Sport Tournament and Event Management (3).**
A detailed account of the structural designs, mathematical calculations, scheduling principles, procedures, and thought processes involved in organizing and conducting sport tournaments and events. Prerequisite: KSS 112.

**KSS 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: KSS 112.

**KSS 526. 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: KSS 380 and 465.

**KSS 528. Sport Finance (3).**
Introduces the sport administration student to financial challenges, financial statements, financial planning, and related issues within sport organizations. Prerequisite: KSS 380 and 465.

**KSS 530. Physiology of Exercise (3).**
Focuses on the working knowledge of human physiology as it relates to exercise. Prerequisite: KSS 229 or equivalent.

**KSS 540. Seminar in Sport Business (3).**
Integrates the knowledge base of sport and business as it applies in the practical setting. Prerequisites: 2.500 GPA, admission to College of Education, KSS 460, and senior standing.

**KSS 543. Organization and Administration of Exercise Science (3).**
Introduces the various organizational and administrative issues existing in the field of exercise science. Addresses the concepts and issues involved with administering and organizing facilities such as corporate-sponsored wellness programs, sports medicine clinics, exercise laboratories, athletic training departments, physical therapy centers, cardio-pulmonary rehabilitation clinics, and health and fitness centers.

**KSS 544. Organization and Administration of Physical Education Programs (3).**
The organizational and administrative problems of physical education programs and the management of the physical plant.

**KSS 547A. Internship in Sport Administration (8).**
Culminating activity for students in sport administration. Students spend the equivalent of full-time employment in an appropriate agency for a total of at least 520 hours. Prerequisites: 90 hours of accumulated course credit. KSS 475, 2.500 GPA overall, and internship coordinator's permission.

**KSS 547B. Internship in Sport Administration (8).**
Second internship experience for students in sport administration; takes place in a different setting than KSS 547A. Students spend the equivalent of full-time employment in an appropriate agency for a total of at least 520 hours. Prerequisites: KSS 475A, 2.500 GPA overall and in major; senior standing in College of Education, advisor's approval.

**KSS 557. 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. Prerequisites: senior standing, departmental consent, KSS 470, 2.500 minimum GPA overall and for major; admission to College of Education.

**KSS 560. Legal Aspects of Sport and Physical Activity (3).**
Focuses on the concepts of tort law, constitutional law, and statutory law as they relate to the sport professions. Emphasizes liability-related issues as they impact sport administrators, exercise professionals, and teachers/coaches of physical activity. Prerequisites: KSS 112, 380, and 465.

**KSS 565. Marketing Sport and Physical Activity Programs (3).**
Introduces concepts and tools used to market sport and physical activity. Emphasizes marketing strategies that are applicable to the sport administrator, teacher/coach, and exercise professional. Prerequisite: MKT 300.

**KSS 590. Independent Study (1-3).**
Prerequisite: department consent.

**KSS 720. Teaching Strategies (3).**
Non-traditional and innovative techniques and strategies for increasing student participation and motivation in the physical education lesson. Prerequisites: senior standing, graduate standing, or instructor's consent.

**KSS 726. Communication in Sport (3).**
Since a sport organization's success is largely dependent on the degree to which it can effectively communicate with key constituents, this class addresses a variety of communication-related topics including public relations management, image, media relations, and community relations.

**KSS 732. Introduction to ECGs (3).**
Develops a foundation in electrocardiography. Includes ECG leads, rate and rhythm,
ECG complexes and intervals, conduction disturbances, arrhythmias. ECG identification of myocardial infarction location, and drug effects on an ECG. Prerequisites: KSS 530 and senior standing, full standing in the Graduate School, or instructor's consent.

KSS 750. Workshop in Education (1-3).

KSS 752. Special Studies in Kinesiology and Sport Studies (1-3). Group study in a selected area of health, physical education, or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

KSS 750. Sport in Society (3). Impact of sports on American culture, with focus on competition, economics, mythology, education, religion, ethics, professional sports, sports, and minorities.

KSS 762. Tests and Measurement in Human Performance (3). Introduces testing, measurement, and evaluation techniques used in human performance and related fields. Students learn to conduct valid, reliable, and objective laboratory/field testing, measurement, and evaluation procedures commonly used in human performance settings. Prerequisites: KSS 111, 211, 221, 250, and 530.


KSS 780. Physical Dimensions of Aging (3). Covers the complex physiological changes that accompany advancing age and how exercise affects the aging process. Includes an appreciation for how functional consequences affect mental and social dimensions of life. Emphasizes factors associated with the preparation, implementation, and evaluation of research projects involving elderly populations.

KSS 781. Cooperative Education Field Study (1-8). 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. May be repeatable for credit with a limit of 8 hours counting toward the graduate degree; Offered CR/NC only.

KSS 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 athlete and athlete; and the differences in performance and training between genders. Prerequisite: KSS 530 or 830.

KSS 793. 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.

KSS 796. Motor Integration (3). Examines the principles of motor skill acquisition, human motor performance, and motor control. Emphasizes the use of transfer, memory, practice schedules, motivation, knowledge of results, neuromotor function, and differences in motor abilities that are involved in motor skill performance. Prerequisite: graduate standing at WSU.

Courses for Graduate Students Only

KSS 800. Recent Literature in the Profession (3). Survey and critical analysis of research and other pertinent materials in the field.

KSS 801. Leadership and Management in Sport (3). Initial introduction into the administration of sports in public schools, institutions of higher education, and commercial and professional sports organizations. Learn about the various components of sports administration by reading appropriate materials and entering into dialogue with practicing administrators.

KSS 803. Sport Marketing (3). 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.

KSS 814. Analysis of Teaching (3). An in-depth examination of teaching effectiveness. Includes analyzing research in physical education, identifying significant teacher and student elements involved in effective teaching, examining evaluation models designed for analyzing and measuring teaching effectiveness, and developing intervention programs.

KSS 815. Fitness Assessment/Exercise Recommendations (3). Introduces techniques appropriate for screening, health appraisal, and fitness assessment as required for prescribing exercise programs for individuals without disease or with controlled disease. Requires out-of-class laboratory experiences. Prerequisites: KSS 530 or equivalent and graduate standing.

KSS 830. Advanced Physiology of Exercise (3). In-depth study into the physiological basis of exercise. Includes energy metabolism, respiratory dynamics, cardiovascular function, and regulation during rest, steady state, and exhaustive physical activity. Emphasizes immediate and long-term adaptation to exercise and training. Prerequisite: KSS 530.

KSS 835. Legal Issues in the Profession (3). Acquaints the graduate student with legal research and the role that law plays in governing the sport and fitness industries. Actively research various theories of law and how they affect the nature of sport, fitness activity, the participants, and consumers. Investigates the basic concept of negligence utilizing illustrative cases from sports, physical education, and fitness activities. Also focuses on specific situations regarding injury and subsequent lawsuits.

KSS 847. Internship (6). Internship in selected areas of specialization in sport administration. Prerequisite: departmental consent.

KSS 857. Internship in Exercise Science/Wellness (6). Internship in selected area of specialization within the exercise science/wellness program. Students spend the equivalent of full-time employment in an appropriate agency for one full semester. Prerequisite: departmental consent.

KSS 860. Research Methods in the Profession (3). Examination of research methodology as related to topics in health, PE, recreation, sports studies, and exercise science/wellness. Includes research and critical analysis of the literature, research design and statistical procedures, methodology, data collection techniques, computer-based analysis of data and thesis/report writing. Students design and complete a minor research project. Prerequisite: KSS 800.

KSS 862. Professional Portfolio Development (1-2). Students develop the professional portfolio proposed and accepted in CI 860. In consultation with their portfolio advisor and two other faculty members, students proceed with their approved agendas. Prerequisite: CI 860.

KSS 863. Presentation of Professional Portfolio (1-2). Students complete, present to their faculty portfolio committee, and orally defend the professional portfolio proposed in CI 860. Prerequisites: CI 860 and KSS 862 or CI 862 (concurrent enrollment in 862).

KSS 875. Thesis Research (1-2). Development of a research problem and proposal with the direction of a graduate faculty member. Repeatable but total credit hours counted toward degree requirements must not exceed 2. Prerequisites: admission to graduate school in good standing, KSS 860, and departmental consent.

KSS 876. Thesis (1-2). Repeatable but total credit hours counted toward degree requirements must not exceed 2. Students must be enrolled in this course during the semester in which all requirements for the thesis are met. Prerequisites: KSS 875 and consent of the student's committee chair.

KSS 890. Special Topics (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent.

KSS 895. Applied Research (1-4). Provides opportunity for the student to develop, in collaboration with a departmental faculty member, objectives and protocol for independent work.

Music Education
See School of Music section, College of Fine Arts.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 40, 2L, means 4 hours of lecture and 2 hours of lab.
Modern technological developments in engineering have brought about considerable change in the College of Engineering's curriculum at Wichita State University. The curriculum provides a vigorous, challenging experience through a broad spectrum of fundamental technical knowledge as well as courses in humanities, social sciences, communications, mathematics and physical sciences. This balance in the curriculum prepares students for professional positions in the scientific-industrial community after the bachelor’s degree or allows them to continue in graduate studies for a more active participation in research and advanced study.

The College of Engineering is organized into four degree-granting departments: aerospace, electrical and computer, industrial and manufacturing, and mechanical.

The programs in engineering are offered in daytime and evening classes, and the courses are the same whether they are taught in the day or at night.

**Degrees Offered**

**Undergraduate**

The Bachelor of Science degree programs in aerospace, electrical, industrial, manufacturing and mechanical engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

**Graduate**

A Master of Science (MS) is offered in aerospace, electrical, industrial, and mechanical engineering. A Master of Engineering Management program is offered in the industrial and manufacturing engineering department. A Doctor of Philosophy (PhD) also is offered by each of the four departments of engineering.

Typical fields of specialization include aerodynamics, fluid mechanics, propulsion, structures, solid mechanics, composites, dynamics, and control; communication theory, signal processing, control theory, digital systems, energy, and power systems; thermodynamics, heat transfer, engineering materials, engineering design, kinematics, and operations research, management science, manufacturing processes, and human factors.

See the [Wichita State University Graduate Bulletin](#) for more information about the graduate programs.

**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 the following courses, each with a grade of C or better, within the first 24 hours: (a) English 101/100, English 102, and Communications 111, and (b) Mathematics 242, or their equivalents.

Transfer students must present an earned GPA of 2.00 or higher on a 4.000 scale for all prior college work in order to be fully admitted into the College of Engineering. Transfer students with a GPA of less than 2.000 may petition for probationary admission.

**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 6 hours in a grade point average at Wichita State University: (1) cumulative grade point average of all college/university work, (2) WSU grade point average and (3) engineering major grade point average. Attempted hours are defined as all hours appearing on the transcript with a grade of A, B, C, D, F, W, Cr, NCr, I, S, or U. 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 semester hours of credit work at Wichita State before probation may be removed.

Students on academic probation may not enroll for more than 12 semester hours in a 16-week term, 6 semester hours in an eight-week term, or 3 hours in a four-week term. Exceptions to these limitations may be made on the recommendation of the student’s department advisor with the approval of the student’s department chairperson.

**Academic Dismissal**

Students on academic probation are subject to academic dismissal from the College of Engineering if they fail to attain a cumulative WSU grade point average of 2.000 in the next 12 hours attempted, or a cumulative major grade point average of 2.000 in the next 9 hours attempted in their major field, and the grade point average for the most recent semester or Summer Session is below 2.000.

**Academic Advising and Enrollment**

Students in the College of Engineering are invited to seek academic advice from their advisors or the department chairs any time during the school year. 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 20 hours per semester during the academic year. Summer Session enrollments are limited to a maximum of 5 hours for each four-week session or 10 hours during the eight-week session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.000 or higher may petition their department chairperson for permission to enroll in excess hours.

Students who are employed full or part time should, in consultation with their academic advisor, reduce their enrollments 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 at the 300 level or above. Because there are legitimate reasons for qualified non-engineering students to enroll in an engineering course at the 300 level or above, the academic dean will consider petitions for exceptions to the preceding statement.

**Transfer Credit**

Students wishing to receive transfer credits for engineering courses taken at other institutions prior to admission to WSU must submit transcripts and course descriptions and syllabi to the College of Engineering for evaluation. Courses considered for transfer credit must have a grade of C or better.

Degree-bound WSU students should speak with an advisor before enrolling in courses at another institution.

**Graduation Requirements**

All engineering students who are pursuing bachelor's degrees must meet three sets of course requirements for graduation: (A) WSU General Education requirements, (B) College of Engineering requirements, and (C) the Accreditation Board for Engineering and Technology (ABET) requirements. Guidelines for these are given below:

**WSU General Education Requirements**

1. Communications skills courses: All WSU students must complete three courses in communication skills: English 101 or 100 (for non-native speakers), English 102, and Communication 111, each with a grade of C or better.

2. Four Introductory courses in the disciplines, to include one course each in the divisions of Fine Arts, Humanities, and Social and Behavioral Sciences, and an additional course in a different discipline in either Humanities or Social and Behavioral Sciences.

3. Two additional courses that are not introductory. One is to be a Further Study course in one of the disciplines to the division in which two introductory courses are taken. The second additional course is to be an Issues and Perspectives course in a different division.

All WSU students must complete courses in the division of Natural Science and Mathematics, however, because the engineering curriculum
requires 32-34 hours of mathematics and natural sciences, engineering students automatically satisfy the requirements in this division.

Refer to the section on the General Education Program in this Catalog for a description of the Introductory courses, Further Study courses, and Issues and Perspectives courses.

College of Engineering Requirements

(1) Effective fall 2001, PHIL 365, Engineering Ethics, is a required course in Humanities under the General Education requirements described above.

(2) Mathematics and Natural Sciences: 32-34 hours of mathematics and natural sciences must be completed, as prescribed by each department.

(3) Core requirements (13 hours): AE 222, Statics (3 hrs.); ECE 282, Circuits 1 (4 hrs.); IEN 233, Engineering Economy (3 hrs.); and ME 298, Thermodynamics (3 hrs.). These are courses that all engineering students must complete, regardless of major.

(4) 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 department check sheets.

(5) Technical electives: Additional courses required, but not specified, by the department. Each should be chosen in consultation with a department advisor.

ABET Requirements

ABET expects the curricular content of an engineering program to include the equivalent of at least three years of study in the areas of mathematics, basic sciences, humanities and social sciences, and engineering topics. The course work must include at least (1) one year of an appropriate combination of mathematics beyond trigonometry and basic sciences, (2) one-half year (17 hours) of humanities and social sciences, and (3) one and one-half years (51 hours) of engineering topics.

Studies in basic sciences must include both general chemistry and calculus-based general physics at appropriate levels, with at least a two-semester sequence of study in either area. The courses in humanities and social sciences must provide breadth and depth and not be limited to a selection of unrelated introductory courses. Engineering topics include subjects in the engineering sciences and engineering design.

All engineering students follow about the same general curriculum for the first two years. All engineering programs of study are designed to meet ABET criteria as well as satisfy WSU general education requirements, and all courses should be selected with the assistance of a College of Engineering advisor. The recommended sequence of courses for engineering students in all departments is outlined later in this section. Each sequence has been planned so that students can complete the program to meet all requirements in the minimum time.

As part of the institutional effort required to ensure continuous accreditation by ABET, students taking longer than five years to complete an undergraduate degree will be required to meet ABET engineering curricular criteria in effect at the time of their graduation.

Students must file an application for degree card in the engineering dean's office 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 (cumulative grade point average)
(2) All work attempted at WSU (WSU grade point average)
(3) All work in the student's major.

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

Cooperative Education Program

The College of Engineering offers a cooperative education program in conjunction with the University Cooperative Education Internship Program described in this Catalog.

The Co-op plan is a voluntary program in which the student works part-time (parallel program) or alternates paid professional work periods with classroom periods during the junior and senior years. The two most typical plans are illustrated in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>F</td>
<td>S</td>
<td>Su</td>
</tr>
<tr>
<td>Plan A</td>
<td>W</td>
<td>C</td>
<td>W</td>
</tr>
<tr>
<td>Plan B</td>
<td>C</td>
<td>W</td>
<td>C</td>
</tr>
</tbody>
</table>

C Indicates in college
W Indicates at work

These plans make it possible for each industrial position to be filled by two students, one from Plan A and one from Plan B. Other plans can be developed in cooperation with the coordinator.

To be eligible for the Co-op program, a student must demonstrate by academic performance during the freshman year the potential to complete the degree program satisfactorily. Generally, this means the earning of 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 cooperative education coordinator 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 Co-op coordinator who will provide the necessary application information. Upon acceptance into the program, the coordinator will assist the student in arranging interviews with cooperating industries.

Engineering—General Engineering (ENGR)

The following course explores general engineering topics.

Lower-Division Course

Engr. 101. An 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. Recommended for all new engineering students. Offered fall and spring.

Aerospace Engineering (AE)

The educational objectives of the aerospace engineering program are to provide (a) an undergraduate education that will allow successful graduates to become engineers who are sufficiently trained in the principles of aerospace engineering to meet the needs of potential employers and to provide (b) the foundation for capable students to pursue graduate studies in aerospace engineering and 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 communications, and humanities and social sciences. Students have access to an excellent array of laboratory facilities including six wind tunnels, a water tunnel, a computer lab, a structural testing lab, and a composite structures lab. These facilities are among the finest found in academic institutions.

The aircraft industries in Wichita include The Boeing Company, Cessna Aircraft Company, Bombardier Learjet Corporation, and Raytheon Aircraft. The presence of these companies has a strong positive influence on WSU's aerospace engineering program.

Bachelor of Science Degree in Aerospace Engineering

Sequence of Courses

The undergraduate program requires the completion of 155 semester hours for graduation, minus advanced
placement credit. The suggested course of study for aerospace engineering students is given in the following table.

**Model Program**

**Freshman**

**Course** | **Hrs.**
--- | ---
ENGL 101 or 102, College English I and II | 6
CHEM 111, General Chemistry | 5
MATH 242 and 243, Calculus I and II | 10
PHYS 313 and 315, University Physics I and Lab | 5
EN 222, Engineering Graphics | 3
AE 227, Engineering Digital Computation | 3

**Sophomore**

**Course** | **Hrs.**
--- | ---
COM 111, Public Speaking | 3
MATH 344, Calculus | 5
MATH 555, Ordinary Differential Equations | 3
PHYS 316, University Physics II | 4
AE 223, Statics | 3
AE 324, Fundamentals of Atmospheric Flight | 3
AE 333, Mechanics of Materials | 3
AE 373, Dynamics | 3
ME 250, Materials Engineering | 3
ME 398, Thermodynamics I | 3
HUM 201, Humanities and fine arts or social and behavioral sciences electives | 3

**Junior**

**Course** | **Hrs.**
--- | ---
ME 521, Fluid Mechanics | 3
AE 415, Introduction to Space Dynamics | 3
AE 424, Aerodynamic Theory | 4
AE 502, Aerospace Propulsion I | 3
AE 514, Flight Mechanics and Controls | 3
AE 525 and 625, Flight Structures I and II | 6
EN 225, Engineering Economy | 3
HUM 202, Humanities and fine arts or social and behavioral sciences electives | 3
PHIL 385, Engineering Ethics | 3

**Senior**

**Course** | **Hrs.**
--- | ---
AE 512, Experimental Methods in Aerodynamics | 2
AE 607, Flight Control Systems | 3
ECE 282, Circuits I | 4
AE 528 and 628, Airspace Design I and II | 8
Natural sciences elective | 3
HUM 203, Humanities and fine arts or social and behavioral sciences electives | 3
Technical electives | 6

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*To be chosen from a list of approved courses available from the college student records office.

**Refer to graduation requirements at the beginning of this section for details.

**Lower-Division Courses**

AE 115, Introduction to Astronautics (1). An introduction and overview of astronautics. Historical, technical, and practical aspects of rocketry, space dynamics, spacecraft design, and the space environment. Intended for freshman and sophomore AE students who have not taken AE 324, however, it may be taken by students at any level in other engineering departments or colleges.

**Upper-Division Courses**

AE 124, Introduction to Aeronautics (2). An introduction and overview of aeronautics. Historical and modern case studies are used to survey the aerodynamic, structural, stability, and control aspects of atmospheric flight vehicles. Intended for freshman and sophomore AE students who have not taken AE 324, however, it may be taken by students at any level in other engineering departments or colleges.

**Courses for Graduate/Undergraduate Credit**


AE 508. Systems Dynamics (3). Perturbation parameter modeling: classical, numerical, transform, and state model methods of solution; introduction to systems with feedback, analogies of various physical systems. Prerequisites: AE 373 and MATH 555.

AE 650. Selected Topics (1-3). New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: 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: 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: 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: 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 actuators, discretization of continuous dynamic systems, optimal design for digital controls, and effect of non-linearities and trim conditions on design considerations. Prerequisite: AE 514 or AE 714, and AE 667 or ECE 684 or ME 659.

AE 711. Intermediate Aerodynamics (3). A study of potential flow equations of motion, singularity solutions, principle of superposition, conformal mapping, thin airfoil theory, finite wing theory, effects of fluid inertia, three-dimensional singularities, swept wing theory, delta wing theory, introduction to panel methods, and introduction to automobile aerodynamics. Prerequisites: AE 424 or ME 521.

AE 712. Advanced Aerodynamics Laboratory (3). 1R; 3L. Advanced topics in wind tunnel testing including analysis and sensitivity, modeling techniques, flow 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: AE 512 or instructor's consent.

AE 713. Introduction to Aeroelasticity (3). Studies phenomena involving interactions among aerodynamic, inertial, and elastic forces. Explores influence of these interactions on aircraft design. Includes such specific cases as divergence, control effectiveness, control reversal, flutter, buffet, dynamic response to rapidly applied periodic forces, aerelastic effects on load distribution, and static and dynamic stability. Prerequisites: AE 333, 424 or equivalent.


AE 716. Compressible Fluid Flow (3). Analysis of compressible fluid flow for one- and two-dimensional cases, moving shock waves, one-dimensional flow with friction and heat addition, linearized potential equation, method of characteristics, conical shocks, and subsonic similarity laws. Prerequisites: AE 424, ME 521 or equivalent.

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: AE 424 or ME 521.

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: AE 625 or equivalent or instructor's consent.

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; and introduces energy principles and variational methods. Prerequisite: instructor's consent.


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 Hop-
field networks; applications in robotics, aircraft and vehicle
guidance, chemical processes, and optimal control. Prerequisites: AE 607 or ME 659 or ECE 684 or instructor's consent.

AE 760. Selected Topics (1-3). Prerequisite: instructor's consent.


AE 777. Vibration Analysis (3). A study of free, forced, damped, and undamped vibrations for one and two degrees of freedom, as well as classical, numerical, and energy solutions of multi-degree freedom systems. Introduces continuous systems. Prerequisites: MATH 555, AE 373 and 333.

Courses for Graduate Students Only


AE 807. Modern Flight Controls System Design II (3). Continuation of AE 707, emphasizing the effects of atmospheric turbulence and corrupted measurements; state estimation using the Kalman filter; input/output design concepts; flight controls: robustness requirements in the design; and extension to digital systems. Prerequisites: AE 707 and 714.

AE 811. Panel Methods in Aerodynamics (3). An introduction to panel method theory and application for inviscid incompressible attached flows. Utilization of some two- and three-dimensional computer codes. Prerequisites: AE 711 and MATH 757 or equivalent.

AE 812. Aerodynamics of Viscous Fluids (3). Viscous fluids flow theory and boundary layers. Prerequisite: AE 424 or ME 521.


AE 817. Transonic Aerodynamics (3). Experimental and analytical difficulties in flow and flight near Mach one; basic equations and solution methods; linearized potential equation; shock occurrence criteria on wings; Transonic Area Rule; nozzle throat design; detached shock wave computations; computational methods. Prerequisites: AE 424 or equivalent; and AE 711 or 716.

AE 818. Hypersonic Aerodynamics (3). Classical hypersonic theory and approximations; Newtonian flow; flight corridors and trajectories; hot gas effects; experimental difficulties; shock tunnel test facilities; computational techniques; propulsion methods; airframe-engine integration; scramjets. Prerequisites: AE 711 and 716 or equivalent.

AE 822. Finite Element Analysis of Structures II (3). Formulation of the finite element equations by variational methods; the use of isoparametric and higher order elements for analyzing two- and three-dimensional problems in solid mechanics; introduction to solutions of nonlinear problems. Prerequisites: AE 722 and 731.

AE 831. Continuum Mechanics (3). Introductory treatment of the fundamental unifying concepts of the mechanics of continua with applications to classical solid and fluid mechanics. Prerequisite: consent of the instructor.

AE 832. Theory of Plates and Shells (3). Small deflections of thin elastic plates; classical solutions for rectangular and circular plates; approximate solutions for plates of various shapes; introduction to the analysis of thin shells. Prerequisite: AE 731.


AE 860. Selected Topics (1-3). Prerequisite: instructor's consent.

AE 876. MS Thesis (1-6). Graded S/U only.

AE 878. MS Directed Project (1-3). A project conducted under the supervision of an academic advisor for the directed project option. Requires a written report and an oral presentation. Graded S/U only. Prerequisite: consent of academic advisor.

AE 890. 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: consent of supervising faculty member.

AE 911. Airfoil Design (3). Historical development of airfoils, underlying theories and experiments; modern airfoil design philosophies and techniques; theories used in modern airfoil computation methods; application of computer programs for practical airfoil design problems including lifting and control devices. Prerequisites: AE 711, MATH 757.

AE 913. Aerodynamics of Aeroelasticity (3). A study of thin airfoils and finite wings in steady flow and thin airfoils oscillating in incompressible flow. Includes extension to compressible and three-dimensional airfoils and modern methods for low aspect ratio lifting surfaces. Prerequisites: AE 711 and 777 or instructor's consent.

AE 919. Advanced Computational Fluid Dynamics (3). A study of structured grid generation schemes, transformation of the governing equations of fluid motion, numerical algorithms for the solution of Euler equations, parabolized Navier-Stokes equations, and Navier-Stokes equations. Explore the fundamentals of unstructured grids and finite volume schemes. Prerequisite: AE 719 or ME 858.

AE 936. Theory of Plasticity (3). Includes criteria of yielding, plastic stress-strain relationships, and stress and deformation in thick-walled shells, rotating discs and cylinders, bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Includes two-dimension and axisymmetric problems of finite deformation and variational and extremum principles. Prerequisite: AE 731.

AE 960. Advanced Selected Topics (1-3). Prerequisite: instructor's consent.


AE 990. Advanced Independent Studies (1-3). Prerequisite: Instructor's consent.

Electrical and Computer Engineering (ECE)

Students in the electrical and computer engineering (ECE) department have two degree programs from which to choose, electrical engineering or computer engineering.

The objectives of the electrical engineering program are 1) to enable students to enter the electrical engineering field by providing them with the fundamental knowledge necessary for the practice of electrical engineering, including scientific principles, rigorous analysis, and creative design to meet the requirements of employer constituents; and 2) to provide an undergraduate education that will enable qualified students to pursue graduate studies in electrical engineering and related fields.

The objectives of the computer engineering program are 1) to enable students to enter the computer engineering field by providing them with the fundamental knowledge for the practice of computer engineering in the areas of computer system design and computer networking, including scientific principles, rigorous analysis, and creative design to meet the requirements of employer constituents; and 2) to provide an undergraduate education that will enable qualified students to pursue graduate studies in computer engineering and related fields.

Both programs require a total of 128 credit hours minus hours from advanced placement credit. The
programs have a minimum of 93 credit hours in common. The common hours are made up of communications skills (9 hours), math and science courses (29 hours), general education courses (18 hours), and the courses covering the fundamentals common to each of the degree programs at WSU (13 hours). The remaining common courses are computer software and digital design courses and courses stressing the laws governing the individual behavior of electrical systems as well as their behavior when included as parts of more complex electrical systems (24 hours). The programs are structured to assure that electrical engineering students are familiar with computers and computer hardware and that computer engineers have a strong background in electrical engineering principles.

Electrical and computer engineering 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 students the opportunity to apply skills acquired during their course work to "real world" problems.

The electrical engineering degree has a sufficient number of technical electives to allow the student to develop skills in specialized areas such as communications and signal processing, control systems, electric power systems, electronics, and digital systems.

The computer engineering degree is a more specialized degree with more required courses and fewer electives.

Specific requirements and a suggested academic year breakdown for the electrical and computer engineering programs are given below.

**Model Program—Electrical Engineering**

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>ENGL 101/100 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>MATH 242 and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>ECE 194, Introduction to Digital Design</td>
<td>4</td>
</tr>
<tr>
<td>COMM 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ECE 282, Circuits I</td>
<td>3</td>
</tr>
<tr>
<td>ECE 229, Engineering Computing in C</td>
<td>3</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 555, Differential Equations I</td>
<td>3</td>
</tr>
<tr>
<td>ECE 284, Circuits II</td>
<td>3</td>
</tr>
<tr>
<td>ECE 238, Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>ECE 294, Digital Design Techniques</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 313 and 314, University Physics I and II</td>
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<tr>
<td>ECE 394, Introduction to Computer Architecture</td>
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<td>AE 223, Statics</td>
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**Junior**

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<th>Course</th>
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<tr>
<td>IEN 254, Engineering Probability and Statistics I</td>
<td>3</td>
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<tr>
<td>ECE 383, Signals and Systems</td>
<td>3</td>
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<tr>
<td>ME 398, Thermodynamics I</td>
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<tr>
<td>ECE 492 and 493, Electronic Circuits I and II</td>
<td>7</td>
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<tr>
<td>CS 300, Data Structures and Algorithms</td>
<td>4</td>
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<tr>
<td>ECE 477L, Unix</td>
<td>3</td>
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<tr>
<td>CHEM 111, General Chemistry</td>
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<tr>
<td>PHIL 385, Engineering Ethics</td>
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**Senior**

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<tr>
<td>IEN 255, Engineering Economy</td>
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<tr>
<td>ECE 594, Microprocessor-Based System Design</td>
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<tr>
<td>ECE 585 and 585, Electrical Design Project I and II</td>
<td>4</td>
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<tr>
<td>CS 540, Operating Systems</td>
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**Model Program—Computer Engineering**

**Freshman**

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<tr>
<td>ENGL 101/100 and 102, College English I and II</td>
<td>6</td>
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<tr>
<td>MATH 242 and 243, Calculus I and II</td>
<td>10</td>
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<tr>
<td>ECE 194, Introduction to Digital Design</td>
<td>4</td>
</tr>
<tr>
<td>COMM 111, Public Speaking</td>
<td>3</td>
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<tr>
<td>ECE 282, Circuits I</td>
<td>3</td>
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<tr>
<td>ECE 229, Engineering Computing in C</td>
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**Sophomore**

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<tr>
<td>MATH 555, Differential Equations I</td>
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<tr>
<td>ECE 284, Circuits II</td>
<td>3</td>
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<tr>
<td>ECE 238, Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>ECE 294, Digital Design Techniques</td>
<td>3</td>
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<tr>
<td>PHYS 313 and 314, University Physics I and II</td>
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<tr>
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**General education courses**

**Technical electives**

* Refer to graduation requirements at the beginning of this section for details.

**Lower-Division Courses**

**ECE 101. Introduction to Electrical Engineering (3).**

This course introduces students to the fundamental concepts of electrical engineering. It covers topics such as circuit analysis, electrical circuits, and basic electrical machinery. Students will learn how to analyze and design simple electrical circuits.

**ECE 194. Introduction to Digital Design (4). 3R; 3L.**

This course introduces students to the principles and concepts of digital design. Students will learn about digital logic, logic gates, and basic digital circuits. They will also learn how to use logic design tools and how to design simple digital systems.

**ECE 229. Engineering Computing in C (3).**

This course is an introduction to computer programming using the C language. Students will learn the basics of the C language, including syntax, data types, control structures, and functions. They will also learn how to use C to solve engineering problems.

**ECE 238. Assembly Language Programming for Engineers (3).**

This course introduces students to the principles and concepts of assembly language programming. Students will learn about the assembly language, including syntax, data types, control structures, and functions. They will also learn how to use assembly language to solve engineering problems.

**ECE 282. Circuits I (4). 3R; 3L.**

This course covers the fundamentals of electrical circuits. Students will learn about circuit analysis, Ohm's law, Kirchhoff's laws, and circuit models. They will also learn how to analyze and design simple circuits.

**ECE 284. Circuits II (3).**

This course covers the fundamentals of electrical circuits. Students will learn about circuit analysis, Ohm's law, Kirchhoff's laws, and circuit models. They will also learn how to analyze and design simple circuits.

**ECE 294. Digital Design Techniques (3).**

This course covers the fundamentals of digital design. Students will learn about digital logic, logic gates, and basic digital circuits. They will also learn how to use logic design tools and how to design simple digital systems.

**ECE 295. Microprocessor-Based System Design (3).**

This course covers the fundamentals of microprocessor-based system design. Students will learn about microprocessors, microcontroller architecture, and software development. They will also learn how to design simple microprocessor-based systems.

**ECE 381. Signals and Systems (3).**

This course covers the fundamentals of signals and systems. Students will learn about continuous and discrete-time signals, linear time-invariant systems, and Fourier analysis. They will also learn how to analyze and design simple signal processing systems.

**ECE 383. General Education Courses (3).**

This course covers the general education requirements at WSU. Students will learn about the basics of mathematics, science, and engineering.

**References**

* Refer to graduation requirements at the beginning of this section for details.

**Technical electives**

* Must be chosen with advisor's approval from a departmentally approved list.
Upper-Division Courses

ECE 363. Electromagnetic Field Theory (3). A vector development of electric and magnetic fields, including experimental laws, polarization phenomena, and Maxwell's equations. Prerequisites: ECE 282, MATH 344 and 555.

ECE 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 involve discrete as well as continuous systems. Prerequisites: MATH 555 and ECE 229. Co-requisite: ECE 284.

ECE 394. Introduction to Computer Architecture (3). Introduces memory systems, arithmetic circuits, and computer architecture. A small computer will be designed in class. Studies instruction set selection, bus systems, hard-wired design, and microprogrammed design. Prerequisite: ECE 294.

ECE 410. Distributed Parameter Circuits (3). 2R; 3L. A study of the theory and applications of distributed parameter circuits with emphasis on transmission lines. Treats telegraphers' equations, transient signals on lossless lines, steady state signals on lossless lines, effects of lumped impedances, and Smith Chart techniques. Prerequisite: ECE 383.

ECE 477. Selected Topics in Electrical Engineering (1-4). New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

ECE 481A. Co-op Education (1). Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating course work 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 assignment and need not be enrolled in any other course. Offered Cr/NCr only. Prerequisites: junior standing and approval by appropriate faculty sponsor.

ECE 481P. Co-op Education (1). Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating course work 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 hours of course work including this course in addition to a minimum of 20 hours per week at their Co-op assignment. Offered Cr/NCr only. Prerequisites: junior standing and approval by appropriate faculty sponsor.


ECE 492. Electronic Circuits I (3). 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. Prerequisite: ECE 229. Co-requisite: ECE 284.


Courses for Graduate/Undergraduate Credit


ECE 585. Electrical Design Project I (2). 3L. A design project under faculty supervision chosen according to the student's interest. Prerequisites: COMM 111 and departmental consent. May not be counted toward a graduate electrical major.

ECE 586. Introduction to Communication Systems (3). 3R; 3L. Fundamentals of communication systems; models and analysis of sources, 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 and white Gaussian noise channel. Additional topics such as PSK and FSK digital communication systems covered as time permits. Prerequisites: ECE 383 and either STAT 471 or EIN 254.

ECE 588. Advanced Electric Motors (3). Advanced electric motor applications and theory. Includes single-phase motors, adjustable speed ac drive applications, and stepper motors. Prerequisites: ECE 488 and 492.

ECE 594. Microprocessor Based System Design (4). 3R; 1L. Presents development of microprocessor based systems. Studies interfacing the address bus, data bus, and control bus to the processor chip. Memory systems and I/O devices interfaced to the appropriate busses. Vendor-supplied, special-purpose chips, such as interrupt controllers, programmable I/O devices, and DMA controllers, integrated into systems designed in class. Lab gives hands-on experience. Prerequisites: ECE 394, or 238 and 294.

ECE 595. Electrical Design Project II (2). 3L. A continuation of ECE 585. Prerequisite: ECE 585. Will not count toward a graduate electrical engineering degree.

ECE 596. 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 an introduction to symmetrical components. Prerequisite: ECE 282.

ECE 636. Telecommunications (3). Topics in circuit and packet switching, layered communication architectures, state dependent queues, traffic engineering, call processing, software organization, routing, and common channel signaling. Prerequisite: ECE 586 or departmental consent.

ECE 644. Advanced Digital Lab (2). An open laboratory experience for computer engineering students. Gives the student an opportunity to use state-of-the-art devices and equipment in designing complex digital systems. Will not count towards an electrical engineering degree. Prerequisites: ECE 394 and 594.

ECE 688. Power Electronics (4). 3R; 3L. 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 cycloconverter, emphasizing frequency, and voltage control and harmonic reduction techniques. Also presents requirements of forced commutation methods as applied to DC-DC control and firing circuit requirements and methods. Introduces applications of power electronics to control AC and DC motors using new methods such as microprocessor. Prerequisite: ECE 492.

ECE 691. Integrated Electronics (3). A study of BJT and MOS analog and digital integrated circuits. Includes BJT, MOS, and MOS fabrication; application specific semi-custom VLSI array; device performance and characteristics; and integrated circuit design and applications. Prerequisites: ECE 194 and 493.

ECE 698. Principles of Power Distribution (3). The distribution system is a vital contributor to the overall power system function of providing quality electrical service. Provides an overview of the engineering fundamentals of distribution system. Discusses distribution system planning and automation, primary and secondary distribution networks. Presents voltage regulation, protection, and reliability. Prerequisite: ECE 598 or departmental consent.

ECE 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, FSK, DPSK, QPSK, MSK, and other techniques appropriate for communicating digital information in both base-band and band-pass systems; intersymbol interference; effects of
C E 781. Analog Filters (3). A detailed study of analog filter design methods. Includes both passive and active filters. Discusses analog filter approximations; covers sensitivity and noise analyses. Prerequisite: ECE 383 and 492.


C E 783. Advance Computer Architecture I (3). Covers advanced architectural subjects—microprogramming, economics of chip design, instruction set performance, and pipelining. Prerequisites: ECE 594 or equivalent.

C E 784. Adaptive Filters (3). Concerned with estimating a signal of interest or the state of a system in the presence of additive noise, but without making use of priori statistical characteristics of the signal nor the noise. Concerned with the design, analysis, and application of recursive filtering algorithms that operate in an environment of unknown statistics. Content includes least mean-square (LMS) filters, recursive least-square (RLS) filters, and recursive least-squares lattice (LSL) filters. All are adaptive and self-designed. Includes concepts of convergence, tracking ability, and robustness. Prerequisite: ECE 754.

C E 786. Multi-Service Over IP (4). 3R; 3L. Advanced networking course: deals with challenges and solutions associated with sending video, voice, and data (multi-service) over IP. Includes Telephony signaling, call routing and dial plans, measuring voice quality, voice digitization and coding, quality of service issues, and current research. Hands-on lab allows students to design, troubleshoot, and test different VoIP scenarios. Prerequisites: ECE 764 and graduate standing in ECE.

C E 787. MS Thesis (1-6). Graded S/U only. Repeatable for credit toward the MS thesis option up to 6 hours. Prerequisite: prior consent of MS thesis advisor.

C E 788. Special Topics in Electrical Engineering (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

C E 789. MS Directed Project (1-3). A project conducted under the supervision of an academic advisor for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic advisor.

C E 826. Digital Communication Systems II (3). Studies modern digital communication systems. Discusses topics such as carrier and symbol synchronization techniques; fading multipath channels; frequency-hopped spread spectrum systems; smart antenna array systems; space-time codes (STC); space-time block codes (STBC); multi-input multi-output (MIMO); orthogonal frequency division multiplexing (OFDM) systems; and multi carrier code division multiple access (MC-CDMA) communications. Prerequisite: ECE 726.

C E 853. Digital Filters (3). A study of digital filter design methods. Includes both IIR and FIR filters. Discusses software and hardware implementations; introduces two-dimensional digital filters. Prerequisite: ECE 782 or departmental consent.
ECE 886. Error Control Coding (3). Introduces error control codes, including Galois fields, linear block codes, cyclic codes, Hadamard codes, Golay codes, BCH codes, Reed-Solomon codes, convolutional codes, Walsh Hadamard algorithm, Turbo codes, and ARQ protocols. Applies to digital 3G and 4G cellular and satellite communications systems. Prerequisite: ECE 726.

ECE 893. Optimal Control (3). Reviews mathematics relevant to optimization, including calculus of variations, dynamic programming, and other norm-based techniques. Formulates various performance measures to define optimality and robustness of control systems. Studies design methods for various classes of systems, including continuous-time, discrete-time, linear, nonlinear, deterministic, and stochastic systems. Prerequisite: ECE 722.

ECE 894. Advanced Computer Architecture II (3). Vector processors, memory-hierarchy design, input, and output. Prerequisite: ECE 844.

ECE 897. PhD Dissertation (1-16). Graded S/U only. Repeatable for credit. Prerequisite: admission to doctoral aspirant status.

ECE 906. Advanced Selected Topics in Electrical Engineering (1-3). Presents new or specialized advanced topics in engineering. Repeatable for credit. Prerequisite: instructor’s consent.


ECE 982. Speech Recognition (3). Reviews topics of speech digital signal processing and analysis as necessary for a study of speech recognition such as speech signal production and perception; acoustic-phonetic characterization of speech sounds; representing speech signals in time and frequency; and linear prediction of speech signals. Studies topics such as vector quantization, pattern comparison and template matching methods, dynamic time alignment or warping, stochastic methods such as hidden Markov models, linear prediction or phonetics as two methods of segmenting speech signals, language or context-dependent models, and small vs. large vocabulary models. Prerequisite: ECE 892 or departmental consent.

ECE 986. Wireless Spread Spectrum Communications (3). Explains what spread-spectrum communications is and why direct-sequence code-division multiple access (DS-CDMA) spread-spectrum is used for wireless communications. Studies the block diagrams of the IS-95 forward and reverse wireless communication links under multipath mobile fading environment using analysis techniques and simulation. Analyzes pseudo-random noise (PN) signal generation, the band-limited waveform shaping filter, convolutional coding, interleaver, Walsh code orthogonal modulation, rake finger receivers, non-coherent Walsh orthogonal sub-carrier demodulation, other simultaneously supportable subscribers, and third generation CDMA. Prerequisite: ECE 726.

ECE 990. Advanced Independent Study (1-3). Arranged individual, independent study in specialized content areas in engineering under the supervision of a faculty advisor. Repeatable toward the PhD degree. Prerequisite: advanced standing and departmental consent.

ECE 993. Large Scale Control Systems (3). Sensitivity analysis of deterministic and stochastic systems; sources of uncertainty in control systems, e.g., plant parameter variation, time delays, small non-linearities, noise disturbances, and model reduction; quantitative study of the effects of uncertainties on system performance; low-sensitivity design strategies, state and output feedback design; sensitivity function approach, singular perturbation, and model education techniques; adaptive systems, and near-optimal control. Prerequisite: ECE 893.

Industrial and Manufacturing Engineering

The industrial and manufacturing engineering (IMFE) 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 contributions of its constituents: students and alumni, potential employers of program graduates, and faculty.

The IMFE department offers two undergraduate degree programs, one in industrial engineering (ISE) and another in manufacturing engineering (MSMFE). The MSIE degree program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). The MSMFE degree program is new and accreditation for it has not yet been sought.

The department also offers three graduate degree programs: Master of Engineering Management (MEM), MS in IE, and PhD in IE. Both the MSIE and PhD programs allow concentrations in engineering systems, ergonomics/human factors engineering, and manufacturing systems engineering. The MEM program is geared toward helping engineers/technologists develop planning, decision making, and managerial skills while receiving advanced technical knowledge.

The department also offers graduate certificate programs in the following five areas: systems engineering, management, computer-aided design and manufacturing, industrial ergonomics and safety, production systems, and quality engineering and management.

Modern, well-equipped laboratories are available to supplement classroom theory in ergonomics, manufacturing engineering, and computer analysis. The department’s facilities include Cessna Manufacturing Processes Lab, Graphics Lab, Metrol- ogy Lab, Computer Integrated Manufacturing Lab, Automation and Controls Lab, Ergonomics Lab, and Open Computing Lab. Students in the academic programs offered by the industrial and manufacturing engineering department get ample opportunity to work on real-life problems in local industries as part of course requirements.

Bachelor of Science Degree in Industrial Engineering

Industrial engineers apply scientific knowledge to solve problems in manufacturing and other industries, businesses, and institutions, focusing on productivity improvement through better use of human resources, financial resources, natural resources and man-made structures and equipment. IE’s apply a full range of analytical, simulation, and experimental tools to problems in designing, planning, implementing, and operating systems. These problems are found in a wide variety of service 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 integration and improvement.

Program Educational Objectives

Educational objectives of the industrial engineering program are driven by WSU’s mission as a metropolitan university. Specifically, our IE program educational objectives are:

1. A majority of our graduates will be employed in jobs related to design, implementation, and improvement of systems in manufacturing and service sectors, including jobs in quality engineering, facilities management, man-machine systems, simulation, project planning, inventory management, ergonomics, and optimization.

2. Some of the graduates will pursue graduate studies in engineering or business.

3. Graduates will enjoy professional success because of the program’s emphasis on solving real-world problems in industries and organizations in the metropolitan area.

Sequence of Courses

The BS in industrial engineering program requires the completion of 128 semester hours for graduation, minus hours commensurate with advanced placement credit. Students may select 12 hours of technical electives to emphasize their study of engineering systems, ergonomics, 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. Specific requirements and a suggested schedule for the industrial engineering program are given in the accompanying table.
Model Program
Freshman
Course                  Hrs.
ENGL 101/102, College English I and II     6
MATH 242 and 243, Calculus I and II    10
PHYS 313, University Physics I    4
CHEM 111, General Chemistry     5
IEEN 222, Engineering Graphics     3
MFG E 258, Manufacturing Method I     3

Sophomore
Course                  Hrs.
COMM 111, Public Speaking     3
MATH 511, Linear Algebra     3
PHIL 385, Engineering Ethics     3
PHYS 314, University Physics II     4
AE 223, Statics     3
ECE 229, Engineering Computing in C     3
IEEN 254, Engineering Probability and Statistics I     3
IEEN 255, Engineering Economy     3
IEEN 452, Work Analysis and Design     3
IEEN 524, Engineering Probability and Statistics II     3
IEEN 550, Introduction to Operations Research     3

Junior
Course                  Hrs.
MATH 344, Calculus III     3
ECE 282, Circuits I     4
ME 250, Materials Engineering     3
IEEN 549, Industrial Ergonomics     3
IEEN 553, Production and Inventory Control     3
IEEN 554, Statistical Quality Control     3
IEEN 563, Facilities Planning and Design     3
IEEN 565, Systems Simulation     3
Technical electives*     9
Humanities, social science or fine arts electives**     6

Senior
Course                  Hrs.
ME 398, Thermodynamics I     3
IEEN 556, Information Systems     3
IEEN 590, Industrial Engineering Design I     3
IEEN 690, Industrial Engineering Design II     3
Technical electives*     9
Humanities, social science or fine arts electives**     6

*Refer to the College of Engineering graduation requirements in the WSU Undergraduate Catalog for details.
**To be chosen from an approved list (at least 6 hours must be taken within the MFG E department).

Bachelor of Science Degree in Manufacturing Engineering
Manufacturing engineering is concerned with converting raw materials and intermediate products into final and other intermediate products through the use of various design, processing, assembly, and automation techniques as well as the design and manufacturing of tools, jigs, and machines used in these processes. The strength of the BSMfgE program at Wichita State is its emphasis on the following three manufacturing engineering areas: materials and processes; product engineering and assembly; and manufacturing quality and productivity. Manufacturing engineers can apply their broad and comprehensive skills in a wide spectrum of industries.

Program Educational Objectives
Educational objectives of the manufacturing engineering program are driven by WSU’s mission as a metropolitan university. Specifically, our MFG E program educational objectives are:
1. A majority of our graduates will be employed in jobs related to design, planning and control, implementation, and improvement of manufacturing processes.
2. Some of the graduates will pursue graduate studies in engineering or business.
3. Graduates will enjoy professional success because of the program’s emphasis on solving real-world problems in industries and organizations in the metropolitan area.

Sequence of Courses
The BS in manufacturing engineering program requires the completion of 128 semester hours for graduation, minus hours commensurate with advanced placement credit. Students may select 9 hours of technical electives to emphasize their study of advanced manufacturing engineering concepts and related topics in other engineering disciplines. Selection of appropriate courses would allow the students to tailor their study to fit their individual interests and needs. Students’ programs of study are determined in consultation with their faculty advisors.
Specific requirements and a suggested schedule for the manufacturing engineering program are given below.

Model Program
Freshman
Course                  Hrs.
ENGL 101/102, College English I and II     6
MATH 242 and 243, Calculus I and II    10
PHYS 313, University Physics I    4
AE 223, Statics     3
ECE 229, Engineering Computing in C     3
IEEN 222, Engineering Graphics     3
MFG E 258, Manufacturing Methods and Materials I     3

Sophomore
Course                  Hrs.
COMM 111, Public Speaking     3
MATH 344, Calculus III     3
PHIL 385, Engineering Ethics     3
AE 223, Statics     3
ECE 229, Engineering Computing in C     3
IEEN 222, Engineering Graphics     3
IEEN 254, Engineering Probability and Statistics I     3
IEEN 255, Engineering Economy     3
MFG E 502, Manufacturing Measurement Analysis 3
MFG E 558, Manufacturing Methods and Materials II     3

Junior
Course                  Hrs.
MATH 555, Ordinary Differential Equations     3
PHYS 314, University Physics II     4
AE 333, Mechanics of Materials     3
ECE 282, Circuits I     3
ME 398, Thermodynamics I     3
IEEN 524, Engineering Probability and Statistics II     3
IEEN 554, Statistical Quality Control     3
MFG E 545, Manufacturing Systems     3
MFG E 554, Manufacturing Tools     3
Humanities, social science or fine arts electives**     6

Senior
Course                  Hrs.
ME 439, Mechanical Engineering Design I     3
IEEN 664, Engineering Management     3
MFG E 590, Manufacturing Engineering Design I     3
MFG E 690, Manufacturing Engineering Design II     3
Technical electives*     9
Humanities, social science or fine arts electives**     6

*To be chosen from an approved list (at least 6 hours must be from one of the engineering departments).

Industrial Engineering (IEEN)

Lower-Division Courses
IEEN 101. Introduction to Industrial and Manufacturing Engineering (1). Cross-listed as MFG E 101. An introduction and overview of the discipline areas within industrial and manufacturing engineering. Combines design, case study, and hands-on experience with lectures on the different emphasis areas.

IEEN 130. Workshop in Industrial Engineering (1-3). Offered from time to time on various topics in industrial engineering.

IEEN 222. Engineering Graphics (3). 1R; 3L. Uses computer graphics to produce technical drawings and solve engineering design problems. Studies basic spatial relationships involving orthographic projections, auxiliary views, and pictorial projections. Design implementation includes dimensioning, tolerancing, sectional views, threaded fasteners, blue print reading, and working drawings. Also uses descriptive geometry to find true lengths of lines; spatial relationships between points, lines, and planes; and intersections of solids, surfaces, and conic sections. Prerequisite: MATH 123 or equivalent.

IEEN 250. Topics in Engineering Graphics (2). 1R; 3L. The application of engineering graphics to the study of special problems and to methods of conveying information. Prerequisite: IEEN 222.

A study of the concepts of probability theory, random variables, distributions, moments, sample statistics, and confidence intervals. Prerequisite: MATH 243.

IEN 281P. Co-op 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. May be repeated. Offered Cr/NC only. Prerequisites: 30 hours toward bachelor of science in industrial engineering degree and approval by appropriate faculty sponsor.

IEN 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. Prerequisites: IEN 254 and 255.

IEN 480. Selected Topics in Industrial Engineering (1-4). New or special course material presented upon sufficient student demand. Repeatable for credit. Prerequisite: departmental consent.

IEN 481P. Co-op Education (1). See IEN 281P. Prerequisites: junior standing and approval by appropriate faculty sponsor.

IEN 490. Independent Study (1-3). Arranged individual independent study in specialized areas of industrial engineering under the supervision of a faculty member. May be repeated for credit. Prerequisite: consent of supervising faculty member.

Courses for Graduate/Undergraduate Credit

IEN 524. Engineering Probability and Statistics II (3). A study of hypothesis testing, regression analysis, analysis of variance, correlation analysis, and design of experiments emphasizing applications to engineering. Prerequisite: IEN 254 or STAT 471.


IEN 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. Prerequisite: IEN 524.

IEN 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. Prerequisites: IEN 452 and ECE 229.

IEN 557. Safety Engineering (3). Environmental aspects of accident prevention, industrial compensation, and safety legislation. Fundamental concepts of occupational health and hygiene. Prerequisite: IEN 254 or STAT 471.

IEN 563. Facilities Planning and Design (2). Quantitative and qualitative approaches to problems in facilities planning and design, emphasizing activity relationships, space requirements, materials handling and storage, and plant layout. Prerequisites: IEN 500 and MFG E 258. Co requisite: IEN 452.


IEN 566. Engineering Management (3). An 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. Prerequisites: IEN 254 and 255.

IEN 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. Cannot be used to fulfill degree requirements for the BS degree in industrial and manufacturing engineering. Prerequisite: MATH 243.


IEN 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. Prerequisites: IEN 254 and 255.

IEN 749. Advanced Ergonomics (3). A continuation of IEN 549. Includes principles and application of human factors to the design of the workplace, displays, control systems, hand tools, and video display terminals. Prerequisite: IEN 549.

IEN 750. Industrial Engineering Workshops (1-4). Various topics in industrial engineering. Prerequisite: departmental consent.

IEN 754. Reliability and Maintainability Engineering (3). Studies problems of failure, assessment, and evaluation, including reliability. Presents various factors that determine the capabilities of components emphasizing practical applications. Examples and problems cover a broad range of engineering fields. Prerequisite: IEN 524.

IEN 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 replications, and confounding. Prerequisite: IEN 524 or instructor's consent.


IEN 760. Ergonomics Topics (3). New or special courses on topics in ergonomics and human factors engineering. May be repeated for different topics. Prerequisite: departmental consent.

IEN 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. Prerequisites: IEN 254 and 255.

IEN 770. Industrial Automation (3). RE: SL. Teaches the design and application of manufacturing automated systems. Discusses automation components, such as sensors, actuators, and microprocessors, along with the use of programmable logic controllers. Introduces other areas of automation, such as robotics, machine vision, DNC machine tools, and their integration into automated systems. Prerequisite: ECE 229 or knowledge of a programming language.

IEN 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: ECE 229 or knowledge of a programming language. MFG E 558.

IEN 780. Topics in Industrial Engineering (3). New or special courses are presented under this listing. Repeatable for credit when subject matter warrants.

IEN 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 IE. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite: departmental consent and graduate GPA of 3.00 or above. Cr/No Cr only.

IEN 785. Tolerancing in Design and Manufacturing (3). Provides a basic understanding of the theory and application of tolerancing in design, manufacturing, and inspection. Reviews current literature in the area of tolerancing and inspection. Includes detailed discussion of the ASME standards on geometric dimensioning and tolerancing (GD&T), GD&T verification procedures, tolerance analysis and allocation, statistical tolerancing, and Taguchi's approach to tolerancing. Prerequisite: IEN 254 or instructor's consent.

Courses for Graduate Students Only

IEN 853. Applied Forecasting Methods (3). A study of the forecasting methods, including smoothing techniques, time series analysis, and Box-Jenkins models. Prerequisite: IEN 524.

IEN 842. Advanced Simulation (3). A study of advanced techniques and methods for statistically selecting input distributions for and analyzing output from simulation models. Also studies variance reduction and model validation techniques. Prerequisites: IEN 565 and 524.

IEN 854. Quality Engineering (3). A broad view of quality tools and their integration into a comprehensive quality management and improvement system. Covers the theory and approaches of the major quality leaders such as Deming, Juran, and Crosby. Explores off-line and on-line quality engineering techniques, including cost of quality, the seven "old" and seven "new" tools, Quality Function Deployment, and statistical process control methods. Explores design of engineering experiments, including Taguchi's methods. Prerequisite: IEN 524.

IEN 857. Environmental Hygiene Engineering (3). Evaluation and control of mechanical, physical, and chemical environments. Environmental factors considered include heat, cold, noise, vibration, light, pressure, acceleration, radiation, and air contaminants. Prerequisite: IEN 549.


IEN 877. Foundations of Neural Networks (3). For students from a variety of disciplines. Introduces the theory and practical applications of artificial neural networks. 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. Presents examples and discusses them from a variety of areas including quality control, process monitoring and control, robotics control, simulation metamodeling, economic analysis models, diagnostic models, combinatorial optimization, and machine vision. Prerequisite: instructor's consent.

IEN 878. MS Directed Project (1-3). A project conducted under the supervision of an academic advisor for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic advisor.

IEN 880. Topics in Industrial Engineering (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject matter warrants.

IEN 890. Independent Study in Industrial Engineering (3). Analysis, research, and solution of a selected problem. Prerequisite: instructor's consent.

IEN 901. Multiple Criteria Decision-Making (3). An extensive treatment of techniques for decision-making where the multiple criteria nature of the problem must be recognized explicitly. Prerequisite: IEN 550.

IEN 949. Work Physiology (3). The study of cardiovascular, pulmonary, and muscular responses to industrial work including aspects of endurance, strength, fatigue, recovery, and the energy cost of work. Utilization of physical work capacity and job demand for task design, personnel assignment, and assessment of work-rest scheduling. Prerequisite: IEN 549.

IEN 950. Occupational Biomechanics (3). Theoretical fundamentals of the link system of the body and kinetic aspects of body movement. Includes application of biomechanics to work systems. Prerequisites: IEN 549 and AE 223.

IEN 956. Knowledge-Based Systems (3). Introduction to the concepts and techniques in knowledge-based systems or expert systems. Includes design and development of knowledge-based systems using microcomputer-based software. Prerequisite: ECE 229 or AE 227 or departmental consent.

IEN 960. Advanced Selected Topics (1-3). New or special courses on advanced topics presented under this listing on sufficient demand. Prerequisite: instructor's consent.

IEN 976. PhD Dissertation (1-6). Graded S/U only. Repeatable for credit. Prerequisite: admission to doctoral aspirant status.

IEN 990. Advanced Independent Study (1-3). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent.

Manufacturing Engineering (MFG E)

Lower-Division Courses

MFG E 101. Introduction to Industrial and Manufacturing Engineering (1). Cross-listed as IEN 101. An introduction and overview of the discipline areas within industrial and manufacturing engineering. Combines design, case study, and hands-on experience with lectures on the different emphasis areas.

MFG E 258. Manufacturing Methods and Materials I (3). 2B; 3L. Provides a basic understanding of materials and processes used to manufacture products. Some of the major manufacturing processes covered include metal machining, metal forming, extrusion, casting, joining, and plastics forming. Emphasizes the use of materials, sciences and mathematics to understand the behavior of materials undergoing the manufacturing process. Includes an introduction to process planning. Students gain an extensive hands-on experience in different manufacturing processes and in teamwork. Prerequisite: MATH 123.

MFG E 490. Independent Study (1-3). Arranged individual independent study in specialized areas of industrial engineering under the supervision of a faculty member. May be repeated for credit. Prerequisite: consent of supervising faculty member.

Courses for Graduate/Undergraduate Credit

MFG E 502. Manufacturing Measurement Analysis (3). 2B; 3L. Covers methods for measurement and analysis of variables in the production of industrial parts. Topics include basic principles of measurement, data acquisition, data analysis, dimensional measurement techniques, basic understanding and evaluation of GD&T, force, temperature, surface finish measurement, principal of gage design, gage capability studies. process capability studies, and sampling techniques. Includes a laboratory component to familiarize students with different kinds of measurement devices such as CMM, non-contact optical measurement devices, surface profilometer, optical flats, and automatic data collection. Prerequisites: IEN 254 and MFG E 258.

MFG E 545. Manufacturing Systems (3). Cross-listed as IEN 553. A study of the design, planning, implementation, and control of manufacturing systems. Discusses types of manufacturing systems, material requirement planning, capacity planning, facilities planning, scheduling, and an introduction to computer-aided process planning. Prerequisite: MFG E 558.

MFG E 554. Manufacturing Tools (3). Introduces the principles behind the design and fabrication of machine tools and production tooling. Discusses tool materials;
machine tool kinematics, accuracy, instrumentation, and control; and designing fixtures and jigs. Includes an introduction to design of inspection tools, machining, and press working tools, and modular fixturing. Application of theories to labs and design problems. Prerequisites: MFG E 258. Corequisite: AE 223.

MFG E 558. Manufacturing Methods and Materials II (4). 3R: 3L. 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, materials joining, and coating. Also covers the fundamentals of electro-discharge machining, electro-chemical machining, chemical milling, and water-jet machining. Prerequisite: MFG E 558.

MFG E 622. Computer-Aided Design and Manufacturing (3). Introduction to 3-D computer graphics. Discusses concepts of CAD/CAM/CIM, design theory, automation, and knowledge-based CAD systems. Examines the basic principles of computer-aided manufacturing, NC programming, and CAD/CAM integration. Describes the design interface standards and the interface between CAD and CAM. Prerequisites: IEN 222 and ECE 229 or equivalent.

MFG E 654. Nontraditional Machining Processes (3). A study of the role and economics of nontraditional processes; use of laser and electron beams in inspection and measurement; heat treatment; material removal; thermal joining; and coating. Also covers the fundamentals of electro-discharge machining, electro-chemical machining, chemical milling, and water-jet machining. Prerequisite: MFG E 558.


Mechanical Engineering (ME)

Mechanical engineering is one of the broadest engineering fields. Mechanical engineers are found in virtually all productive industries, from aircraft and automotive to consumer products and building equipment. In these jobs, mechanical engineers design products, machines, and processes for manufacturing. They analyze, test, and develop these products, machines, and manufacturing processes to attain the best performance and durability within cost and time limits. 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.

The mechanical engineering program prepares students for these job possibilities, as well as possible entry to graduate school for those so inclined. This is accomplished through a broad course of study that covers not only the technical aspects required, but the ethical, professional, and communications skills needed to be a successful practicing engineer. The program includes components in mathematics and natural science, written and oral communications 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 specialized knowledge in areas 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.

Bachelor of Science Degree in Mechanical Engineering

Educational Objectives
1. Prepare students for employment as mechanical engineers.
2. Enable interested students to pursue graduate education.
3. Utilize the unique opportunities of a metropolitan location to provide graduates with industry-based project experiences.

Sequence of Courses
The program requires the completion of 128 semester hours for graduation, minus hours commensurate with advanced placement credit. Specific requirements and a suggested course of study for the mechanical engineering program follow.

Model Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Freshman</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101/100 and 102, College English I and II</td>
<td>6</td>
<td></td>
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<tr>
<td>CHEM 111, General Chemistry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>MATH 242 and 243, Calculus I and II</td>
<td>10</td>
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<tr>
<td>PHYS 331 and 335, University Physics I and lab</td>
<td>5</td>
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<tr>
<td>COMM 111, Public Speaking</td>
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<tr>
<td>Humanities and fine arts or social and behavioral sciences elective*</td>
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Sophomore

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<tr>
<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>MATH 344, Calculus III</td>
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<tr>
<td>MATH 355, Differential Equations I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 314, University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>AE 222, Statics</td>
<td>3</td>
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<tr>
<td>ECE 282, Circuits I</td>
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<tr>
<td>IEN 222, Engineering Graphics</td>
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<tr>
<td>IEN 255, Engineering Economy</td>
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<td>ME 250, Materials Engineering</td>
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<td>ME 251, Materials Engineering Lab</td>
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<tr>
<td>ME 325, Computer Applications</td>
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<tr>
<td>Humanities and fine arts or social and behavioral sciences elective*</td>
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Junior

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>AE 333, Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>AE 373, Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ME 339, Design of Machinery</td>
<td>3</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>ME 403, Mechanical Engineering Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>ME 439, Mechanical Engineering Design I</td>
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</tr>
<tr>
<td>ME 502, Thermodynamics II</td>
<td>3</td>
</tr>
<tr>
<td>ME 521, Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>ME 522, Heat Transfer</td>
<td>3</td>
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<tr>
<td>PHIL 385, Engineering Ethics</td>
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<tr>
<td>Natural science electives**</td>
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Senior

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<tr>
<th>Course</th>
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<tr>
<td>ME 503, Mechanical Engineering Systems Laboratory</td>
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<tr>
<td>Mechanical Design electives§</td>
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<tr>
<td>Thermal Design electives§</td>
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<tr>
<td>ME 659, Mechanical Control</td>
<td>3</td>
</tr>
<tr>
<td>ME 662, Mechanical Engineering Practice</td>
<td>3</td>
</tr>
<tr>
<td>Additional mechanical engineering electives§</td>
<td>6</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives*</td>
<td>9</td>
</tr>
</tbody>
</table>

* Refer to graduation requirements at the beginning of this section.
** To be chosen from a list of approved courses available from the College of Engineering.
§ One thermal design elective and one mechanical design elective must be taken from those being offered.
Lower-Division Courses

ME 101. Introduction to Machines and Design (2). 6L
Students participate in mechanical dissection where they disassemble and reassemble a machine to learn how it operates and develop an understanding of mechanical devices. The knowledge and experience from the mechanical dissection forms the basis for an introduction to the design process. Students design and build a mechanical device to perform some task in the design project. Prerequisite: mechanical engineering major declared or departmental consent.

ME 150. Workshop in Mechanical Engineering (1-3).
Provides specialized instruction in areas relevant to mechanical engineering. Variable format. Repeatable for credit.

ME 250. Materials Engineering (3). Studies important structural materials used in engineering, including metals, polymers, and composites, primarily from a phenomenological viewpoint. Prerequisites: CHEM 111, MATH 242.

ME 251. Materials Engineering Laboratory (1). 3L
A companion laboratory course to ME 250. Experimental study of important structural materials used in engineering, including metals, polymers, and composites. Corequisite: ME 250.

Upper-Division Courses

ME 325. Computer Applications (3).
Introduces the essential computer tools necessary for the mechanical engineering (ME) curriculum. Covers basic word processing and spreadsheet skills, C programming language as applied to ME problems. Also covers Matlab. Includes fundamentals of linear algebra and other computational tools. Prerequisite: MATH 243.

ME 339. Design of Machinery (3).
Introduces engineering design processes: 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 as an approach in engineering design; projects on practical engineering designs for machinery. Prerequisite: IEN 222. Corequisite: AE 373.

ME 360. Selected Topics in Mechanical Engineering (1-3).
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisites: as published or departmental consent.

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. Prerequisites: MATH 243 and PHYS 313.

ME 439. Mechanical Engineering Design I (3).
Principles of mechanical design, emphasizing practice in the application of many mechanical design elements: shafts, bearings, gears, brakes, clutches, thread fasteners, etc. Includes machine elements design, materials selection, fatigue, stress concentration, statistical concepts, and cost standardization. Innovative practical applications demand the integration of machine elements into a practical device. Prerequisites: ME 250 and 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: departmental consent.

ME 451. Technical Entrepreneurship (3).
A junior/senior level course which covers the concept of entrepreneurship and the basics of starting a business. The engineering student gains an appreciation for issues faced by a business in bringing a new or improved design to the marketplace. Also, the student is encouraged to "take the next step" toward taking their own engineering ideas beyond the prototype stage and to the marketplace. Exposes the student to a wide range of business topics, including market gap analysis, financial planning, incentive programs, personnel decision making, and business plan preparation. Corequisite: junior/senior standing in engineering or instructor's 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: ME 398.

ME 481A. Co-op Education (3).
Introduces the student to an engineering practice by working in industry in an engineering-related job and 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 assignment and need not be enrolled in any other course. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated. Offered Cr/NC only.

ME 481P. Co-op Education (1).
Introduces the student to engineering practice by working in industry in an engineering-related job and 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 assignment and are currently enrolled in courses leading to a mechanical engineering degree. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated. Offered Cr/NC only.

ME 484. Design of HVAC Systems (3).
Analysis and design of heating, ventilating, and air-conditioning systems based on psychrometrics, thermodynamics, and heat transfer fundamentals. Focuses on design procedures for space heating and cooling loads in buildings. Prerequisites: ME 521 and 522 or equivalent.

ME 550. Selected Topics in Mechanical Engineering (1-3).
New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

The courses numbered 502 through 780 are not automatically applicable toward an advanced degree in engineering. They must be approved by the student's advisor, the graduate coordinator, and the chairpersons of the department. Courses required for the BS degree normally are not permitted for use toward the graduate degree in mechanical engineering.

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. Prerequisite: ME 398 with a grade of C or better.

ME 521. Fluid Mechanics (3).
Fluid statics. Basic equations of fluid mechanics. Study of flow in closed conduits and over immersed bodies. Includes compressible flow, turbomachinery, and measurements in fluid mechanics. Prerequisites: ME 398 with C or better and MATH 535 and AE 373.

ME 522. Heat Transfer (3).
Temperature fields and heat transfer by conduction, convection, and radiation. Steady and transient multidimensional conduction, free and forced convection, and combined heat transfer. Discusses various analytical methods, analogies, numerical methods, and approximate solutions. Prerequisite: ME 521.

ME 533. Mechanical Engineering Laboratory (3).
A laboratory course to ME 532. Introduces the basics of engineering measurements. Discusses theory, followed by applications in such areas as strain, sound, temperature, and pressure measurements. Format includes lectures, recitation (which presents 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. Prerequisites: ECE 282 and AE 333. Corequisite: ME 532.

ME 541. Mechanical Engineering Design II (3).
Applications of engineering design principles to the creative design of mechanical equipment. Problem definition, conceptual design, feasibility studies, design calculations to obtain creative solutions of current real engineering problems. Introduction to human factors, economics, and reliability theory. Group and individual design projects. Prerequisite: ME 439.

Analysis and design of heating, ventilating, and air-conditioning systems based on psychrometrics, thermodynamics, and heat transfer fundamentals. Focuses on design procedures for space heating and cooling loads in buildings. Prerequisites: ME 521 and 522 or equivalent.
ME 602. Engineering for the Environment (3). Engineering for the environment, air, water, and noise pollution, and handling of hazardous wastes. Covers briefly the main pollutants, their major sources, their effects, and their attainment levels set by the U.S. Environmental Protection Agency. Emphasizes engineering systems for pollution control. Prerequisites: ME 398, AE 223, EEN 250, or departmental consent.

ME 631. Heat Exchanger Design (3). Covers analytical models for forced convection through tubes and over surfaces, experimental correlations for the Nusselt number and pressure drop; design of single and multiple pass shell and tube heat exchangers; compact baffled, direct contact, plate, and fluidized bed heat exchangers; radiators, recuperators, and regenerators. Prerequisites: ME 521 and 522, or equivalent.

ME 633. Mechanical Engineering Systems Laboratory (3). 2R, 3L. 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. Prerequisite: ME 439 or equivalent.

ME 637. Computer-Aided Engineering (3). 2R, 3L. 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: ME 439 or equivalent.

ME 639. Applications of Finite Element Methods in Mechanical Engineering (3). 2R, 3L. 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 fluid mechanics, heat transfer, solid mechanics, and vibrations. Includes Galerkin's and variational finite element models. Introduces commercial finite element computer tools such as ALGOR and ANSYS. Prerequisites: ME 439, 522 or equivalent.

ME 641. Thermal Systems Design (3). Modeling, simulation, and optimization used as tools in the design of thermal systems. Engineering design principles, characteristics of thermal equipment, and economic considerations. Studies open-ended problems, including work on design projects in small groups. Prerequisites: ME 502 and 521.

ME 650. Selected Topics in Mechanical Engineering (1-3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 653. Internal Combustion Engines (3). A broad coverage of the basics of internal combustion engines emphasizing spark ignition and diesel engines. Definition of engine types and configurations and important variables used to evaluate engine performance and efficiency. Fundamentals learned in thermodynamics, chemistry, and mechanical design are used to understand engine design, performance, and control. Applications discussed are focused primarily on automotive use and involve power output, fuel consumption, and exhaust emissions. Prerequisite: ME 398.

ME 659. Mechanical Control (3). Modeling and simulation of dynamic systems. Theory and analysis of the dynamic behavior of control systems, based upon the laws of physics and linear mathematics. Concerns classical methods of feedback control systems and design. Prerequisites: ME 403, ECE 262, and MATH 555.

ME 662. Mechanical Engineering Practice (3). 1R, 6L. An exercise in the practice of mechanical engineering; students engage in a comprehensive design project requiring the integration of knowledge gained in prerequisite engineering science and design courses. Team effort and both oral and written presentations are a part of the experience. Prerequisite: mechanical engineering students in their last semester of study.

ME 664. Introduction to Fatigue and Fracture (3). Deals with the primary analytical methods used to quantify fatigue damage. These are the stress life approach, strain life approach, and the fracture mechanics approach. Prerequisites: ME 250, AE 333.

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. Prerequisites: ME 250, AE 333.

ME 666. Materials in Manufacturing Processes (3). Deals with fundamental principles of materials and their applications to manufacturing processes. Prerequisite: ME 250.

ME 667. Mechanical Properties of Materials I (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: ME 250 or departmental consent.

ME 669. Acoustics (3). Fundamentals of acoustics including the study of simple harmonic systems, acoustic waves, transmission phenomena, and environmental and architectural acoustics. Prerequisites: MATH 555, AE 373.

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: departmental consent.

ME 719. Basic Combustion Theory (3). Introduction to the fundamental principles of combustion processes. Examines the chemistry and physics of combustion phenomena, that is, detonation and flames, explosion and ignition processes. Prerequisites: CHEM 111 and ME 502.

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. Open-ended student projects on engineering applications such as vehicle ride stability simulations for different terrains. Prerequisites: ME 399, AE 373, and MATH 555.

ME 737. Robotics and Control (3). A systems engineering approach to robotic science and technology. Fundamentals of manipulators, sensors, actuators, 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: ME 659 or equivalent.

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: ME 541 or instructor's consent.

ME 747. Microcomputer-Based Mechanical Systems (3). 2R, 3L. Micro-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: ME 659 or Instructor's consent.

ME 750. Special Topics in Mechanical Engineering (1-3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 755. Intermediate Thermodynamics (3). Laws of thermodynamics, introduction to statistical concepts of thermodynamics, thermodynamic properties, chemical thermodynamics, Maxwell's relations. Prerequisites: ME 502 or departmental consent.
ME 759. Neural Networks for 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: ME 659 or departmental consent.

ME 760. Fatigue and Fracture (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: ME 250 or departmental consent.

ME 762. Polymeric Composite Materials (3). A basic understanding and knowledge about the structure and mechanical properties of polymeric composite materials in detail. Discusses both short fiber and continuum fiber composites. Emphasizes special design considerations for composite materials including fracture mechanics and performance of composites under adverse conditions (fatigue and impact). Prerequisite: ME 250 or equivalent or departmental consent.

ME 764. Thermodynamics of Solids (3). Presents basic thermodynamic concepts which will form the working tools throughout the course. Discusses the interpretation of certain types of phase diagrams—upon the use of thermodynamics to assist phase diagram construction but upon the use of phase diagrams to obtain thermodynamic quantities. Also, the thermodynamics of defects and defect interactions in metals, ceramics, polymers, elemental semiconductors, and compounds. Prerequisites: ME 250 and 398 or departmental consent.

ME 766. SEM and EDAX (3). Introduces Scanning Electron Microscopy (SEM), a powerful tool in materials science and engineering which can be used to analyze structural defects in materials. Discusses both the theory and experimental methods, as well as the application of these methods. Prerequisite: ME 250 or departmental consent.

ME 767. X-Ray Diffraction (3). Theory of X-ray diffraction, experimental methods, and their applications which can include determination of the crystal structure of materials, chemical analysis, stress and strain measurements, study of phase equilibria, measurement of particle size, and determination of the orientation of a single crystal. Prerequisites: ME 250 and AE 333 or departmental consent.

ME 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 mechanical engineering. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite: graduate standing, department's consent, and graduate GPA of 3.000 or above. Offered On/NC only.

Courses for Graduate Students Only

ME 801. Boundary Layer Theory (3). Development of the Navier-Stokes equation, laminar boundary layers, transition to turbulence, turbulent boundary layers, and an introduction to homogeneous turbulence. Prerequisite: ME 521 or departmental consent.

ME 802. Turbulence (3). An overview of the theory, practical significance, and computation of turbulent fluid flow. Prerequisites: ME 521 and 801.

ME 829. Advanced Computer-Aided Analysis of Mechanical Systems (3). Computational methods in modeling and analysis of spatial multibody mechanical systems. Includes Euler parameters; automatic generation of governing equations of kinematics and dynamics; numerical techniques and computational methods; computer-oriented projects on ground vehicles with suspension and steering mechanisms, crushworthiness, and biodynamics. Prerequisite: ME 729 or instructor's consent.

ME 832. Failure Analysis Applications in Mechanical Design (3). Application of engineering fundamentals to the study of mechanical failure brought about by the stresses, strains, and energy transfer in machine elements that result from the forces, deflections, and energy inputs applied. Emphasizes recognition, identification, prediction, and prevention of failure modes that are prevalent in machine-element design. Prerequisite: ME 439 or departmental consent.

ME 847. Applied Automation and Control Systems (3). Control theory condensing to engineering practice with the analysis, design, and construction of operating control systems. Experiments with pneumatic, hydraulic, and electro-mechanical servo-systems. Implementation of feedback and feedforward control schemes for various industrial systems and machine tools. The experiments are project-oriented and intended to be representative of the current state-of-the-art in classical and modern control practice. Prerequisite: ME 659 or equivalent.

ME 850. Special Topics in Mechanical Engineering (3). Open to graduate students for credit on a limited basis. May be repeated for credit with different topics or credit. Prerequisite: departmental consent.

ME 851. Principles and Applications of Conduction Heat Transfer (3). Theory and measurement, Fourier's equation, steady and unsteady state with and without heat sources, and sinks and numerical methods. Prerequisites: ME 522, MATH 757, or departmental consent.

ME 852. Principles and Applications of Convective Heat Transfer (3). Free and forced convection in laminar and turbulent flow. Includes analysis and synthesis of heat transfer equipment. Prerequisite: ME 522 or departmental consent.

ME 853. Principles and Applications of Radiative Heat Transfer (3). Radiative properties of real surfaces, configuration, radiative factor analysis, radiative transfer in participating media, exchange factor analysis, Monte Carlo methods. Prerequisite: ME 522 or departmental consent.

ME 854. Two-Phase Flow Heat Transfer (3). Thermodynamic and mechanical aspects of interfacial phenomena, boiling, condensation, and condensation near immersed surface, pool boiling, internal flow convective boiling, and condensation. Prerequisites: ME 522, MATH 555, or departmental consent.


ME 856. Introduction to Ceramics (3). Introduces the fundamental principles of ceramic science and engineering with application on ceramics processes and fabrications. Presents the concepts and properties utilizing the crystal structure background. Discusses non-equilibrium aspect of phase relation in ceramics systems and their influence on processing parameters. Covers the microstructure form by liquid, solid-liquid, and solid-state reaction with some detail in combination with heat treatment. Students are expected to have backgrounds in chemistry, physics, math, thermodynamics, mechanics of solids, and introduction to materials in undergraduate engineering courses.

ME 864. Physical Metallurgy (3). Covers a range of basic concepts in physical metallurgy essential for further study in materials engineering. Topics include structure and deformation, dislocations, defects and thermal processes, solid solution and hardening, diffusion, and phase diagrams and transformations. Prerequisites: ME 250 and 398, AE 333, or departmental consent.

ME 866. Advanced Fracture Mechanics (3). Covers the fracture mechanics of elastic-plastic, ductile, fatigue, and fracture in heterogeneous materials at an advanced level. The material is suitable for graduate study only in metallurgy and materials, mechanical engineering, and aerospace engineering where a combined materials-fracture mechanics approach is stressed. Prerequisites: ME 250, AE 333, or departmental consent.

ME 867. Mechanical Properties of Materials II (3). After a brief review of pertinent concepts of the macro-mechanical behavior of deformable bodies, course focuses on deformation mechanisms and on crystal defects that significantly affect mechanical properties and strengthening mechanisms. This includes point, line, and plane crystal defects; distortion dynamics; and various hardening and strengthening mechanisms. Concludes with discussion of physical properties and testing methods to measure these properties. Prerequisite: ME 667 or departmental consent.
ME 876. Thesis (1-4). Graded S/U only. Repeatable for credit toward the MS thesis option up to 6 hours. Prerequisite: consent of MS thesis advisor.

ME 878. MS Directed Project (1-3). A project conducted under the supervision of an academic advisor for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic advisor.

ME 890. Independent Study in Mechanical Engineering (1-3). Arranged individual, independent study in specialized content areas. Prerequisite: instructor's consent.

ME 901. Advanced X-Ray Diffraction Theory (3). First part concentrates on the fundamental X-ray diffraction theories including dynamical theory of X-ray and anomalous absorption, with which a serious student in this field must be thoroughly familiar. Second part emphasizes the general theory of X-ray diffraction in a concise and elegant form using Fourier transforms. The general theory is then applied to various atomic structures, ideal crystals, imperfect crystals, and amorphous bodies. Prerequisites: ME 767, MATH 757.

ME 958. Computational Fluid Dynamics and Heat Transfer II (3). Vector form of the Navier-Stokes and energy equations; generalized transformation of the flow equations to the computational domain; numerical methods for inviscid flow equations, boundary layer-type equations, "parabolized" Navier-Stokes equations, and the Navier-Stokes equations. Prerequisite: ME 858 or equivalent.

ME 960. Advanced Selected Topics (1-3). New or specialized advanced topics in mechanical engineering. Prerequisite: instructor's consent.

ME 962. Advanced Ceramics (3). Covers concepts in ceramics science and engineering essential to understanding and using advanced ceramic materials such as high temperature metal-ceramics. Expands coverage of fundamental concepts and physical properties presented in ME 860. Provides deeper understanding of crystalline solids and characteristic properties of ceramics. Incorporates many of the most recent advances in the area. Students are expected to have backgrounds in chemistry, physics, math, thermodynamics, mechanics of solids, and introduction to materials in undergraduate engineering courses.

ME 976. PhD Dissertation (1-16). Graded S/U only. Repeatable for credit. Prerequisite: admission to doctoral aspirant status.

ME 990. Advanced Independent Study (1-16). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and instructor's consent.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L means 4 hours of lecture and 2 hours of lab.
College of Fine Arts

Elaine Bernstorf, Interim Dean
415 Jardine Hall • (316) WSU-3389
dinearts.wichita.edu

The College of Fine Arts is responsible for instruction, scholarly inquiry, performance, teacher education (excepting theatre/dance), and applied study in music, dance, theatre, and visual arts. The School of Art and Design, the School of Music, and the School of Performing Arts (Dance, Theatre, and Musical 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 their ability to respond to changes and challenges within the world of the arts. The college strives to develop and utilize 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, and the Dance Program is accredited by the National Association of Schools of Dance. Both programs adhere to requirements for entrance and graduation that accord with the associations' published criteria.

Degrees Offered

Undergraduate

The College of Fine Arts offers five undergraduate degrees: Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Art Education (BAE), 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 concentrations in ceramics, painting, printmaking, and sculpture; the Master of Arts (MA) in communication/theatre; a Master of Music Education (MME) with concentrations in elementary music, instrumental music, choral music, and music in special education; and a Master of Music (MM) with concentrations in history-literature, performance, piano pedagogy, instrumental conducting, opera performance, and theory-composition.

For information concerning requirements for entrance and curricula, consult the Wichita State University Graduate Bulletin.

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 students' academic programs. 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.

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 and Design; Music; Performing Arts—Theatre and Dance). All students must maintain a grade point average of 2.00 or above to remain in good standing (see Academic Probation and Dismissal Standards, p. 16).

Transfer students must present an earned GPA of 2.00 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 a cumulative and overall WSU grade point average of at least 2.00. 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 Education, (316) 978-3300.

Students who do not achieve or maintain the required 2.00 grade point average will be placed on probation at the conclusion of each semester in which their cumulative and overall WSU grade point average falls below 2.00. 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 the semester in which they accumulate 12 attempted credit hours per semester and WSU grade point average below the minimum required after being placed on probation. 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 semester hours with a grade point average of 2.000 on work at Wichita State before probation may be lifted. If a grade point average of 2.00 is not achieved for the first attempt 12 hours of Wichita State work, transfer students admitted on probation will be dismissed from the University.

Students who have been dismissed for poor scholarship may be readmitted by the 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 hours of upper division courses, plus the college requirements described with each program.

General Education Requirements

Basic Skills .......................................................... 12
English 100 or 101, and 102 ........................................ 12
Communication 111 .................................................... 9
Mathematics 111 or 112 ................................................. 9
Fine Arts and Humanities ........................................... 12
One introductory course from a fine arts discipline
One introductory course from two humanities disciplines.
One further study course from the same discipline as one of the introductory courses above or an Issues and Perspectives course in fine arts or humanities
Social and Behavioral Sciences .................................... 9
One introductory course each from two different social and behavioral science disciplines
One further study course from the same discipline as one of the introductory courses above or an Issues and Perspectives course in social and behavioral sciences
Natural Sciences and Mathematics ................................ 9
One introductory course each from two different natural sciences and mathematics disciplines.
One further study course from the same discipline as one of the introductory courses above or an Issues and Perspectives course in natural sciences and mathematics

An Introductory course meets general education objectives and serves as an introduction to the discipline. A Further Study course is taken in a discipline once a student has completed an Introductory course in the same discipline. An Issues and Perspectives course is designed as an interdisciplinary course or is intended to inform students of issues or problems from a disciplinary perspective. Students may take either a second course in a discipline represented by an introductory course or an Issues and Perspectives course from the division housing that discipline. Students must complete at least one and not more than two Issues and Perspectives courses to fulfill General Education Program requirements. Courses within the student's major discipline do not count toward General Education Program requirements.
Fine Arts—General (FA)

Lower-Division Course

FA 101. Introduction to the University (3). An elective class which helps the incoming freshman/transfer student make an easier transition to the demands and challenges of a four-year university. Includes personal assessment, time management, learning styles, career exploration, library/study/test-taking skills, and campus policies/procedures and resources. Students taking this class have been shown to do better academically and enjoy their university experience more, and are more likely to complete their degree.

Upper-Division Courses

>FA 301. An Introduction to Entrepreneurship in the Arts (3). General education further study course. Helps students focus on business and marketing aspects of the arts. An examination from the artist's perspective of 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 310. Arts and Technology (3). General education further study course. Multimedia, high-technology fast-paced presentations describing each of the art disciplines (music, theatre, movies, dance, visual arts) in relation to new technologies. Approaches each discipline from the perspective of performance, pedagogy, and history with presentations on computer hardware and software, synthesizer, audio and video recordings, and CD-ROM. Presents ideas and information on how technology has affected the arts and how the arts have actually affected technology.

FA 481. Cooperative Education (1-8). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the student's academic program. May be repeated for credit. Prerequisite: satisfactory academic standing prior to the first job assignment.

Course for Graduate/Undergraduate Credit

FA 590. Special Topics in the Fine Arts (1-4). For group instruction. May be repeated for credit. Involves interdisciplinary upper-division/graduate-level topics with the fine arts (music, art, dance, and theatre). Prerequisite: senior undergraduate or graduate standing or instructor's consent.

School of Art and Design

finearts.wichita.edu/design

Donald Byrum, Chair

The School of Art and Design offers four program areas: graphic design, studio art, art history, and art education. These programs offer professional courses within the BA, BAE, and BFA degrees to train and educate art and design majors. Students in academic programs other than art are encouraged to enroll in art history and studio courses to gain an understanding of art and extend their visual literacy.

The programs of study at the School of Art and Design demand from each student the self-discipline needed to expand options while pursuing a chosen direction. Many entering students have not yet identified the art discipline in which they wish to develop their strength. 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 curriculum develops technical skills. These fundamental skills provide the basis for the development of understanding and creating art forms. The same professional faculty members who teach advanced art courses teach these fundamental skills.

Art students have excellent classroom and laboratory facilities in the McKnight Art Center and renovated Henrici Annex. The center provides extensive space for exhibiting student work. The Clayton Staples Art Gallery offers guest artist and thematic exhibits in addition to featuring BFA and MFA graduating shows.

At the Edwin A. Ulrich Museum of Art in McKnight Art Center, 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.

Attendance

The undergraduate art and design student is expected to attend all scheduled classes and examination periods. At the discretion of the faculty member, the student may be failed in a course, or given a lowered grade, on the basis of excessive absences. In high enrollment demand classes, a student who misses the first two class meetings may be asked to drop the course. In cases of serious illness, or extended absence, the Chair of the School of Art and Design should be notified.

Supplies Charge

As part of University fees, the School of Art and Design requires that students pay a supplies charge on a per-course basis for enrollment in certain courses where materials such as clay, plaster, or printers ink must be provided for the class rather than purchased individually.

Transfer Students

The School of Art and Design accepts transfer students from accredited institutions of higher education and strives to keep the loss of credit to a minimum. The transfer student must be prepared to complete a minimum of 30 semester hours of undergraduate art courses work on the Wichita State University campus.

Student Art Work

The School of Art and Design reserves the right to keep art work submitted for course credit. In practice, this right is exercised sparingly, but in certain studio areas the selection of one piece by each graduating student contributes to an important instructional collection which is of great value to other students. The faculty also reserves the right to temporarily withhold art work for exhibition, and 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 art work for exhibition purposes or take responsibility for its loss or damage under any circumstances. At the end of each semester, all students are required to remove from classrooms, laboratories, lockers, and studios all personal supplies and valued art work.

Graduation Requirements

Minor in Art

All students except art and design majors may complete 18 credit hours of art and be awarded the Minor in Art. Recommended plans of study for studio art, art history, graphic design, advertising design, or art education are available in the School office, 302 McKnight.

Certificate in Decorative and Ornamental Painting and Design

The 18-credit-hour Certificate in Decorative and Ornamental Painting and Design offers introductory studio courses in color theory, drawing, and painting which lead to advanced and terminal project courses in decorative and ornamental media. Students focus on the historical relevance, technical and stylistic influences, aesthetic value, and effective utilization of decorative and ornamental painting and design. Contemporary art, utilitarian art, theatre applications, historical restoration, and preservation of buildings are studied. The certificate is recognized by the National Society of Tele and Decorative Painters, Inc.

Bachelor of Arts in Art

The School of Art and Design offers a Bachelor of Arts degree (BA) in Art with a concentration in either studio art or graphic design. This program is designed for students who want a strong liberal arts education with a concentration in art. By requiring two-thirds the number of art requirements of the BFA degree, the BA allows the student to attain a more developed academic education while still gaining a breadth of art experiences. The core curriculum and the required introductory art courses prepare students for the advanced level courses listed in the concentrations. In addition to the University's scholastic, residence, and general education requirements, candidates for the BA must complete the core curriculum (15 hours), art history (6 hours), introductory art (15 hours), fine art electives (9 hours), and the concentration (15 hours). The specific course requirements for the BA with a concentration in studio art or graphic design are given in the studio art or graphic design sections of the Catalog. Model programs of study are available in the School office.

Bachelor of Arts in Art History

The Bachelor of Arts degree in art history has a liberal arts perspective and is the initial professional degree that prepares students for graduate study in art history. The introductory art history curriculum and the foundation courses prepare students for advanced-level courses in the concentration. In addition to the University's scholastic, residence, and general education requirements, candidates for the BA in art history
must complete the introductory curriculum (9 hours), foundation (9 hours), art history concentration (21 hours), and a reading proficiency in at least one foreign language to support research of primary source materials. A model program of study is available in the School office.

Bachelor of Fine Arts

The Bachelor of Fine Arts degree is the initial professional degree in art and design. Its primary emphasis is on the development of skills, concepts, and sensitivities essential to the professional artist or designer.

The School of Art and Design offers the Bachelor of Fine Arts degree (BFA) in graphic design or studio art—ceramics, painting/drawing, printmaking, or sculpture. In addition to the University’s scholastic residence, and general education requirements, candidates for the BFA must complete the foundation curriculum (21 hours), art history (6 hours), introductory art (21 hours), art electives (6 hours), and the concentration (24 hours). The specific requirements for the BFA with a concentration in design or studio art are described under the appropriate program sections of the Catalog. Model programs of study are available in the School office.

Bachelor of Art Education

Competence in basic studio skills is emphasized in the Bachelor of Art Education (BAE) degree. In addition to the common core of studio skills and general studies, the student electing a career in teaching develops competencies in professional education and in specific studio areas. The professional education component is dealing with in a practical context, relating the learning of educational theories and strategies to the student’s day-by-day artistic experience. Students are provided opportunities for various types of teaching and directed observation through the period of undergraduate art education study.

In addition to meeting the University’s scholastic residence and general education requirements for graduation, candidates for the BAE must complete the foundation curriculum (21 hours), art history (6 hours), introductory art (12 hours), art specialization (9 hours), the art education concentration (21 hours), and professional education courses (32 hours). Courses within the art education curriculum fulfill both the University general education requirements for graduation and the Kansas certification requirements for teaching art at the elementary and secondary levels. The specific requirements for the BAE are given in the Art Education section of the Catalog. Model programs of study are available.

School Requirements and Course Listings

Foundation Studies (ART F)

The following courses are required of all undergraduate art major students. Either the Foundation curriculum (21 hours) or the Core curriculum (15 hours) as designated in respective BFA or BA programs must be completed by the time students have completed 60 credit hours or junior status or prior to entry to classes where individual courses serve as prerequisites.

Transfer students with 60 hours and Foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry. Lower-Division Courses

ART F 102. Introduction to Art and Design (3). Introduces the sub-disciplines of art, fundamental concepts in visual art, and resources available in the University and community. Emphasizes lectures and experiential modes of learning. Written assignments introduce students to the formal analysis of works of art and to methods of determining meaning and value in art. Attendance at visual art activities is expected. Prerequisites: ART F 136 and 145.

ART F 136. Foundation Design I (3). An introduction to design for visual communication. A study of 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.

ART F 137. Foundation Design II (3). A continuation of ART F 136 emphasizing the study of color, including vocabulary, pigment mixing, color organization, and a review of the psychological effects of color as used in visual communications. Instructional process includes lecture, critique, and supervised studio practice. Prerequisite: ART F 136.

ART F 145. Foundation Drawing I (3). Introduction to 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.

ART F 146. Foundation Drawing II (3). Reinforcement and elaboration of the concepts studied in ART F 145 through introduction of abstraction, use of color, visualization, and other strategies for manipulating imagery. Students apply concepts to problems associated with composition, imaginative reconstructions, and idea generation. Structured homework assignments. Prerequisite: ART F 145.

ART F 189. Foundation 3-D Design (3). Lectures, research, and studio methods on the evolutionary role of three-dimensional design in contemporary society utilizing a variety of combination of materials, techniques, forms, and concepts. Also emphasizes learning to handle equipment and tools properly.

ART F 240. Foundation Life Drawing (3). Introduction to drawing the human form emphasizing critical inquiry and analytical observation. Includes the study of skeletal and muscular structure. Students develop an understanding of the structure of the figure and demonstrate a degree of facility in its representation from observation and from imagination. Structured homework assignments. Lab fee. Prerequisites: ART F 145 and 146.

Art History (ART H)

The art history program offers the BA degree in art history and also offers support courses for graphic design, art education, studio art, and general education. Students develop a fundamental knowledge of art and architecture within a cultural and historical framework, and an understanding of terms, concepts, and theory relevant to all visual art studies. Advanced level courses prepare students for professional pursuit of art history, museum studies, conservation, criticism, and art education.

Bachelor of Arts in Art History

The Bachelor of Arts degree in art history has a liberal arts perspective and is the initial professional degree that prepares the student for graduate study in art history. The primary emphasis is on the monuments and artists of all major art periods of the past, a broad understanding of the art of the 20th century, and acquaintance with the art history of non-Western cultures. This knowledge is augmented by study in greater depth and precision of several periods in the history of art and concentration in at least one area to the advanced seminar level.

Requirements. A major in art history requires the completion of a minimum of 124 credit hours, including the University’s General Education Program and 36 course hours in art and art history (9 hours in lower-division courses, 9 hours in the foundation curriculum, and 21 hours of upper-division work) with a minimum grade point average of 2.000. Among the upper-division courses, the student must complete ART H 426 (normally taken in the junior or senior year) and at least one other course at the seminar level. Students are required to have a reading proficiency in at least one foreign language to support research through the reading of primary source materials. The language requirement is normally fulfilled in French or German, but Spanish, Latin, or Ancient Greek can be substituted with the advisor’s permission. Each student is required to prepare a Plan of Study with their advisor leading to candidacy for a degree no later than their junior year. Art history majors are also encouraged to complete a minor in a related area of the arts, humanities, or social sciences.

Area 2 Hrs.
BA Art History: three courses from the following.........................................................9
ART H 121, Survey of Western Art: Ancient
ART H 122, Survey of Western Art: Renaissance and Baroque
ART H 123, Survey of Western Art: Medieval
ART H 124, Survey of Western Art: Modern
ART H 125, Non-Western Visual Traditions: North American Indian, Oceanic, and African Art

Foundation Curriculum .................................................................................................................9
ART F 102, Introduction to Art and Design
ART F 136, Foundation Design I
ART F 145, Foundation Drawing I
Art History Concentration: five upper-division or 500-level courses chosen in consultation with faculty advisor

ART H 426. Seminar: Techniques of Art History
ART H 520. Seminar in Art History or 533. Seminar: Topics in Modern Art

Minor in Art History
A minor in art history complements other degree programs in the School of Art and Design, as well as degrees in anthropology, classical studies, history, and women's studies in Fairmount College of Liberal Arts and Sciences. The requirement is 18 semester hours in art history, with 9 hours in lower-division courses and 9 hours in upper-division work chosen in consultation with the student's art history advisor.

Lower-Division Courses

ART H 100. Introduction to Art in the Western World (3). Provides general students (not art majors) with some visual and intellectual tools, enabling them to confront and experience a number of the more significant works of art in the history of Western Culture.


>ART H 122. Survey of Western Art: Renaissance and Baroque (3). General education introductory course. A historical survey of art from the Renaissance to the 18th century.

ART H 123. Survey of Western Art: Medieval (3). A historical survey of early Christian and Gothic art and architecture from the 5th through 14th centuries.

>ART H 124. Survey of Western Art: Modern (3). General education introductory course. An introduction to art through the study of a selected group of art objects produced in Europe and America from the 18th to the present.

ART H 125. Non-Western Visual Traditions: North American Indian, Oceanic, and African Art (3). Explores the native arts of Africa, the Americas, and Oceania; the importance of the cultural, social, and political background of these arts and their function in society.

ART H 281. Cooperative Education (1-8). Allows students to participate in the cooperative education program. Offered On/Off only.

Upper-Division Courses

>ART H 322. Medieval Art I (3). General education further study course. A study of the art of Europe and Byzantium from the time of Constantine to Charlemagne. Emphasizes style and iconography as it develops in mosaics and illustrated manuscripts.

>ART H 323. Medieval Art II (3). General education further study course. A study of Romanesque and Gothic architecture and sculpture with special attention to the developments in France.

>ART H 325. Art of the Ancient Near East and Egypt (3). General education further study course. Survey of the arts of ancient Egypt, Mesopotamia, and the Bronze Age cultures of the Aegean, concluding with a consideration of the interaction between Near Eastern and classical art. Prerequisite: ART H 121 or instructor's consent.

>ART H 326. Architecture (3). General education issues and perspectives course. Studies architecture as both a fine art and historical discipline. The design and historical roots of 20th-century architecture lead toward an understanding of the context of modern architecture. Explores, through study of major monuments and indigenous architecture from the Neolithic through the Renaissance, the relationship of architecture to the societies that produced them. Also includes the role of architecture in contemporary society and the responsibilities of the designer, the historical development of urban planning, and the use of traditional and industrial materials and methods in the past and present.

>ART H 421. Greek Art and Architecture (3). General education further study course. A study of Greek art and architecture beginning with the Bronze Age and concluding with the Hellenistic period. Emphasizes understanding Greek art in its context and the methods and sources used in its analysis. Prerequisite: ART H 121 or instructor's consent.

>ART H 422. Roman Art and Architecture (3). General education further study course. A study of Roman art and architecture beginning with their predecessors, the Etruscans, and concluding with early Christian art. Emphasizes understanding Roman art in its context and the methods and sources used in its analysis. Prerequisite: ART H 121 or instructor's consent.

ART H 426. Seminar: Techniques of Art History (3). A culminating study for senior art history majors which considers the history of the discipline, its research methods, and theory. Requires extensive readings and reports. Prerequisite: instructor's consent.


Courses for Graduate/Undergraduate Credit

ART H 520. Seminar in Art History (3). Systematic study in selected areas of art history. Course content varies but individual areas are not repeatable for credit.

>ART H 521. Italian Renaissance (3). General education further study course. Painting, sculpture, and architecture in Italy from the 13th to the 16th centuries. Prerequisite: ART H 122 or instructor's consent.

>ART H 522. Southern Baroque (3). General education further study course. Painting, sculpture and architecture in Italy and Spain from 1600 to 1750. Prerequisite: ART H 122 or instructor's consent.

>ART H 523. 18th and 19th Century European Art (3). General education further study course. A history of European art from early 18th-century Rococo art through Impressionism in the late 19th century. Prerequisite: ART H 124 or instructor's consent.

>ART H 524. 18th and 19th Century American Art (3). General education further study course. Survey of American art from the colonial period through the 19th century, emphasizing its European roots. Prerequisite: ART H 124 or instructor's consent.

>ART H 525. 20th Century Art Before 1945 (3). General education further study course. Art in the United States from 1945 to the present, stressing the relationship between contemporary trends in criticism, theory, and artistic practice. Prerequisite: ART H 124 or instructor's consent.

ART H 526. Art Since 1945 (3). General education further study course. Art in the United States from 1945 to the present, stressing the relationship between contemporary trends in criticism, theory, and artistic practice. Prerequisite: ART H 124 or instructor's consent.

ART H 527. Museum Techniques I (3). Primarily for the graduate student interested in museum work. Includes specialized research related to administrative responsibilities of a museum: collection, exhibition, recording, preservation, and financial activities.

ART H 530. The Art of Classical Greece (3). A study of painting, sculpture, and architecture of Greece during the 5th and 4th centuries B.C.

ART H 531. The Art of Hellenistic Greece (3). A study of the painting, sculpture, and architecture of Greece during the Hellenistic period, 4th to 1st centuries B.C.

ART H 532. Independent Study in Art History (1-3). Work in a specialized area of the study of art history. Directed readings and projects. Prerequisite: instructor's consent.

ART H 533. Seminar: Topics in Modern Art (1-3). Selected readings and problems in art of the modern era. Course content varies but individual areas are not repeatable for credit.

ART H 534. History of Photography (3). History of photography stressing techniques, media, processes, interrelations with other visual arts, style questions, genres, and criticism.

ART H 535. Northern Renaissance (3). Painting and printmaking in France, Germany, and the Netherlands in the 14th through 16th centuries. Explores northern European pictorial traditions and considers their relationship to Italian Renaissance art. Prerequisite: Art H. 122 or instructor's consent.

ART H 536. Northern Baroque (3). Painting and printmaking in Flanders and Holland of the 17th century, including the art of Rubens, Rembrandt, and Vermeer. Prerequisite: ART H 122 or instructor's consent.
ART H 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: instructor's consent.
COURSES FOR GRADUATE STUDENTS ONLY
ART H 828-829. Thesis (2; 2).
ART H 832. Independent Study (1-3). Individually supervised work in a specialized area of the study of art history. Directed readings, research, and projects. Repeatable for credit. Prerequisites: preparation for graduate work in art history (e.g., BA or BFA in art history) and instructor's consent.

Graphic Design—Visual Communication Art (ART G)
Design programs are often classified as the communication arts, advertising arts, or visual communication. The professional practitioners are concerned with ideas and problem-solving to effectively meet the communication needs of clients as diverse as corporations, publishers, advertising agencies, public and private institutions, and television stations. Design majors are trained to analyze visual communication problems as presented by client case studies and define the most appropriate approach and implement creative and aesthetic solutions. The broad range of media used to investigate solutions to design problems include print, advertising, packaging, presentation, computer graphics, photography, video, illustration, and television.

Bachelor of Fine Arts in Graphic Design
The design area offers the Bachelor of Fine Arts in Graphic Design which is the professional education and training degree for the visual communication arts field. The Foundation Curriculum and the preparatory course work in the graphic design program enable design majors to meet their graduation requirements. Students are required to participate in the Portfolio Review during the second semester of their junior year and enroll in ART G 434 and 435 during their final two semesters.

The graphic design concentration provides student-selected courses in typography, illustration, photography, book design, advertising, computer graphics, design, and drawing.

Requirements: A minimum total of 126 hours is required for the BFA in Graphic Design and includes 84 semester hours of art courses listed below.

Area
Foundation Curriculum
ART F 102, Introduction to Art and Design .......................... 21
ART F 136 & 137, Foundation Design I & II ............................. 21
ART F 245 & 246, Foundation Drawing I & II ............................ 21
ART F 137, Foundation 3-D Design ........................................ 21
ART F 240, Foundation Life Drawing ...................................... 21
ART History ........................................................................... 6
ART H 124, Survey of Western Art: Modern ......................... 21
ART H 300+ ........................................................................... 21
BFA Graphic Design Program Studies .................................. 21
ART G 200, Introduction to Computer Graphics

ART G 16, Typography 1
ART G 200, Introduction to Computer Graphics
ART G 204, Graphic Design Studio 1
ART G 205, Graphic Design Studio 2
ART G 208, Graphic Design Studio 3
ART G 209, Graphic Design Studio 4
ART G 210, Graphic Design Studio 5
ART G 230, Graphic Design Studio 6
ART G 330, Still Photography for Graphic Design

ART electives ................................................................. 15

Graphic Design Concentration ............................................. 24

ART G 334, Graphic Design Studio 3
ART G 335, Graphic Design Studio 4
ART G 336, Graphic Design Studio 5
ART G 337, Drawing for Visual Communication 1
ART G 338, Junior Portfolio Review
ART G 430, Graphic Design Studio 6
ART G 431, Design Media Topics
ART G 432, Multimedia
ART G 436, Editorial Illustration
ART G 481, Cooperative Education
ART G 493, Book Design and Production
ART G 530, Advanced Television
ART G 530, Advanced Computer Graphics
ART G 550, Graphic Design Workshop
ART S 251, Introductory Watercolor Painting
ART S 252, Introductory Acrylic Painting
ART S 260, Printmaking I
ART S 240, Life Drawing Studio
ART S 245, Intermediate Drawing
ART S 262, Intermediate Intaglio Print II
ART S 264, Printmaking III—Lithography
ART S 265, Basic Screenprinting and Papermaking
ART S 254, Advanced Drawing Studio
ART S 258, Independent Study in Drawing
ART S 500, Advanced Printmaking Studio-Intaglio
ART S 561, Advanced Printmaking Studio-Lithography

COMM 324, Introduction to Integrated Marketing Communications
COMM 570, Magazine Production
COMM 626, Integrated Marketing Communications Campaigns
MKT 300, Marketing
THEA 345, Stage Lighting
THEA 359, Directing I
THEA 544, Advanced Stagecraft

Note: 40+ upper-division hours are required for graduation.

Courses eligible for the concentration and electives:
ART G 331, Film/Video for Graphic Design
ART G 339, Package Design
ART G 350, Graphic Design Workshop
ART G 360, Introductory Photography (3)
ART G 365, Basic Screenprinting and Papermaking
ART G 434, Graphic Design Studio 5
ART G 435, Graphic Design Studio 6
ART G 437, Drawing for Visual Communication 2
ART G 453, Graphic Design Senior Exhibition

1. No more than two courses can be used to fulfill the concentration requirement.

Lower-Division Courses
ART G 200. Introduction to Computer Graphics (3). Introduces computer graphic programs in the Macintosh computer environment. Prerequisites: ART F 136 and 145 or instructor's consent.

ART G 210. Visual Communication (3). Introductory study of visual images and their use as symbols in communicating information in the mass media.

ART G 216. Typography 1 (3). Introduces typography, including history, composition, character design, and homogeneity, stylistic considerations, and visual and informational hierarchical arrangement upon a single page. Prerequisite: ART F 137.

ART G 230. Introduction to Photography (3). Introduces beginning photo student to basic camera operations, film and paper characteristics, darkroom procedures, and a historical overview of the development of photography. Students have an opportunity to acquire skills and techniques appropriate to photographic materials emphasizing the application of fundamentals of design for students not majoring in graphic design.

ART G 231. Basic Photography (Motion Picture) (3). Introduces film production. Students may be required to furnish their own cameras.

ART G 234. Graphic Design Studio 1 (3). Studies graphic design theory, philosophy, history, and approaches to problem-solving in visual communication. Prerequisites: ART F 136 and 137.


ART G 238. Graphic Materials and Processes (3). Introduces a variety of graphic processes and materials including printing processes, cut-paper techniques, lithography, embossing, foil and blind stamping, letterpress printing, marbling, box building, and assorted binding and presentation techniques. Prerequisite: ART F 137 or instructor's consent.

ART G 281. Cooperative Education (1-8). Allows students to participate in the cooperative education program. Graded CR/NC only.

Upper-Division Courses
ART G 316. Typography 2 (3). Studies type as form, symbol, and communication with exploration of letterforms and their applications utilizing traditional and computer skills and media. Prerequisites: ART G 200 and 216.

ART G 330. Still Photography for Graphic Design (3). Introduces still photography with a design emphasis. Development of photographic vision and skills for graphic design.
ers in traditional black and white photography with exposure to digital scanning of traditional silver-based images for computer usage. Students may be required to furnish their own cameras. Prerequisite: ART F 137 or Instructor’s consent.

ART G 331. Film/Video for Graphic Design (3). Introduces film and video as a design emphasis. Examines the language and theory of sequential and moving images in traditional film/television and computerized multi-media forms as applied to graphic design. Prerequisites: ART F 235, and ART G 230 and 330.

ART G 334. Graphic Design Studio 3 (3). Continuation of ART G 235 emphasizing the use of color with image and type. Prerequisite: ART G 235.


ART G 337. Drawing for Visual Communication 1 (3). Applied drawing for the design field emphasizing shape simplification, visualization, and perspective. Employs freehand and mechanical approaches. Prerequisite: ART F 146.

ART G 339. Package Design (3). Box construction and surface treatment in product design. Prerequisites: ART G 258 and 334.

ART G 350. Graphic Design Workshop (1-3). Repeatable for credit. Area covered is determined at the time the course is offered.

ART G 353. Junior Portfolio Review (1). A forum for the student to analyze and present their portfolio to the faculty and invited community design professionals for commentary. Prerequisite prior to the last 30 hours or prior to entering senior standing within the graphic design program.

ART G 350. Television for Graphic Design (3). Examination and application of creative technical design media aesthetics. Graphic design application of traditional order and computerized imagery utilizing the television studio. Prerequisites: ART G 200, 330, or instructor’s consent.

ART G 351. Design Media Topics (3). Advanced study of photography, cinematography, or television with a design emphasis. Repeatable for credit. Prerequisites: ART G 330, or instructor’s consent.

ART G 352. Graphic Design Studio 5 (3). Logo design and its application to graphic design. Prerequisite: ART G 334. Repeatable for credit.

ART G 355. Graphic Design Studio 6 (3). Use of media and formats to create visual advertising and promotional cohesive campaigns. Prerequisite: ART G 334. Repeatable for credit.


ART G 388. Advanced Color and Design (3). Studies color as it relates to format, typography, visual images, and print reproduction in communication design. Includes integration of computer and hand techniques for visualization and production. Prerequisites: ART G 200 and 234.

ART G 439. Editorial Illustration (3). Concentration in editorial and narrative illustration emphasizing visualization and creative problem solving while exploring a variety of color media and techniques. Prerequisite: ART G 337. Repeatable for credit.

ART G 445. Senior Terminal Project (1-3). Supervised independent study. Students in their final two semesters must present a Plan of Study for and complete a design project. Project and Plan of Study must be approved by the graphic design faculty. Repeatable for credit. Prerequisite: senior standing in graphic design.

ART G 453. Graphic Design Senior Exhibition (2). A public exhibition of works produced for their superior demonstration of concept and layout execution involving a variety of visual communication problems. The student presents the exhibit in a professional manner. Prerequisite: completed during the last semester of the senior year.


ART G 493. Book Design and Production (3). A laboratory course encompassing all facets of the book including design, type composition, proofreading, illustration, manufacturing, binding materials (cloth, paper, and boards), distribution, copyright, royalties, and remaining. Students are responsible for the development and publication of a limited edition book. Prerequisites: ART G 334 and 337, or instructor’s consent.

ART G 495. Graphic Design Senior Exhibition (2). A public exhibition of works produced for their superior demonstration of concept and layout execution involving a variety of visual communication problems. The student presents the exhibit in a professional manner. Prerequisite: completed during the last semester of the senior year.

ART G 498. Book Design and Production (3). A laboratory course encompassing all facets of the book including design, type composition, proofreading, illustration, manufacturing, binding materials (cloth, paper, and boards), distribution, copyright, royalties, and remaining. Students are responsible for the development and publication of a limited edition book. Prerequisites: ART G 334 and 337, or instructor’s consent.

Courses for Graduate/Undergraduate Credit

ART G 530. Seminar in Graphic Design (3). Supervised study and research. Requires weekly consultation and reports. Repeatable for credit. Prerequisite: departmental consent.

ART G 550. Graphic Design Workshop (1-3). Repeatable for credit. Area covered is determined at the time the course is offered.

Studio Art (ART S)

The studio art area offers the Certificate in Decorative and Ornamental Painting and Design, BA in Studio Art, and the BFA in Studio Art with concentrations in ceramics, drawing/painting, printing, and sculpture for students preparing for careers in art and design. The programs of study provide a thorough grounding in fundamental principles and techniques of the visual arts.

Certificate in Decorative and Ornamental Painting and Design

The certificate offers each student a broad range of experiences in a variety of media and processes in addition to an understanding and awareness of design and conceptual concerns in decorative ornamentation. Courses in color theory, drawing, oil painting, watercolor painting, acrylic painting, mixed media ornamental design, and a terminal project are required of each student and provide the foundation for successfully completing ornamental commissions after the certificate is completed. The knowledge and experience attained from these courses allow each student the flexibility necessary to pursue individual directions in ornamental design at a professional level. Students are required to complete a terminal project in decorative and ornamental painting and design prior to completion of the certificate program.

Requirements: 18 semester hours are required for the certificate:

Certificate curriculum .................................................. 18
ART F 137, Foundation Design II
ART F 145, Foundation Drawing I
ART S 250, Introductory Oil Painting
ART S 251, Introductory Watercolor Painting
ART S 252, Introductory Acrylic Painting
ART S 352, Decorative and Ornamental Painting and Design
ART S 550, Terminal Project: Decorative and Ornamental Painting and Design

Bachelor of Arts in Studio Art

The Bachelor of Arts in Studio Art degree provides a liberal arts emphasis on studio and design studies rather than the more intensive professional program of the BFA. The curriculum aims primarily towards breadth of experience and understanding rather than professional specialization.

Requirements: A minimum total of 124 semester hours is required for the BA in Studio Art and includes 60 semester hours of art courses as listed below.

Area

Core Curriculum .......................................................... 15
ART F 102, Introduction to Art and Design
ART F 136, Foundation Design I
ART F 145, Foundation Drawing I
ART F 189, Foundation 3-D Design
ART F 240, Foundation Life Drawing
Art History ................................................................. 6
ART H 124, Survey of Western Art: Modern
ART H 300+
BA Art Studio Program Studies .................................... 15
ART F 146, Foundation Drawing II
ART S 250, Introductory Oil Painting
ART S 260, Printmaking I
ART S 270, Basic Ceramics Studio
ART S 272, Hand building with Clay
ART S 280, Sculpture
Bachelor of Fine Arts in Studio Art

The Bachelor of Fine Arts in Studio Art is the initial professional degree in the field in preparation for graduate study in studio art. This studio experience of prime importance in the preparation of students for professional careers in art. In this intense program, the student becomes familiar with every aspect, technique, and direction in their chosen BFA concentration. The studio major is then expected to achieve the highest possible level of technical skill in that concentration and its expressive possibilities.

Upper-Division Course

ART S 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. Not repeatable for credit. Prerequisite: junior standing in a studio art major or instructor's consent.

Courses for Graduate Students Only

ART S 800. Seminar in Art Topics (3). Explores areas of common interest in the arts. Supervised study, research, and discussion. Repeatable for credit.

ART S 895. 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 graduate studio art major in building a successful professional career. Not repeatable for credit. Prerequisite: junior standing in a studio art major or instructor's consent.

BFA in Studio Art—Ceramics

The Bachelor of Fine Arts in Studio Art with a concentration in ceramics offers the basic techniques of clay forming (hand building, casting, and throwing), the use of slips and glazes, and firing processes such as stoneware, low-fire, and raku, with an emphasis on experimentation with the medium to investigate individual interests.

Requirements: A minimum total of 129 semester hours is required for a ceramics major, including 84 credits as listed below.

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<tr>
<th>Area</th>
<th>Hrs.</th>
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<tr>
<td>Foundation Curriculum</td>
<td>21</td>
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<tr>
<td>ART F 102. Introduction to Art and Design</td>
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<tr>
<td>ART F 136 &amp; 137. Foundation Design I &amp; II</td>
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<td>ART F 145 &amp; 146. Foundation Drawing I &amp; II</td>
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<td>ART F 189. Foundation 3-D Design</td>
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<td>ART F 240. Foundation Life Drawing</td>
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<td>Center</td>
<td>6</td>
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<td>ART H 124. Survey of Western Art: Modern</td>
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<td>ART H 300</td>
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<tr>
<td>BFA Ceramic Program Studies</td>
<td>21</td>
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<tr>
<td>ART S 250. Introductory Oil Painting</td>
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<td>ART S 251. Introductory Watercolor Painting</td>
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<td>ART S 260. Printmaking I</td>
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<tr>
<td>ART S 270. Basic Ceramics Studio</td>
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<td>ART S 272. Hand Building with Clay</td>
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<td>ART S 280. Sculpture</td>
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<td>ART S 310. Life Drawing Studio</td>
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<tr>
<td>ART S 340 or 345. Intermediate Drawing</td>
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<tr>
<td>Electives</td>
<td>12</td>
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<tr>
<td>Courses which complement the Introductory Art courses and the Ceramics Concentration</td>
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<tr>
<td>Ceramics Concentration</td>
<td>24</td>
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<tr>
<td>ART S 360. Intermediate Intaglio Print I or ART S 351. Intermediate Lithography Print I</td>
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<tr>
<td>ART S 370. Intermediate Ceramics Studio I</td>
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<td>ART S 371. Intermediate Ceramics Studio II</td>
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<td>ART S 372. Intermediate Hand Building</td>
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<tr>
<td>ART S 545, Advanced Drawing Studio</td>
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<td>ART S 570, Advanced Ceramics Studio I or ART S 572, Advanced Hand Building Ceramics Studio I</td>
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<tr>
<td>ART S 571, Advanced Ceramics Studio II or ART S 573, Advanced Hand Building Studio II</td>
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Note: 40+ upper-division hours are required for graduation.

Lower-Division Courses

ART S 270. Basic Ceramics Studio (3). Experience in hand building, wheel throwing, glazing methods. Lecture periods involve general knowledge of clays, glazes, kilns, and historical and contemporary pottery. Repeatable for credit.

ART S 272. Hand Building with Clay (3). Uses various hand building techniques in the context of the vessels, the figure, and architecture or wall reliefs. Emphasizes the creative use of clay to make a personal statement. Explores various surface treatments and firing techniques. Emphasizes issues of content and one’s ideas. Required for upper-level courses.

ART S 275. Study of Ceramic Materials I (3). Lab fee. Lectures and research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Prerequisites: ART F 189 and ART S 270, or departmental consent for non-majors.

Upper-Division Courses

ART S 370. Intermediate Ceramics Studio I (3). First course in an intermediate 300-level series. Introduces students to various forming and construction methods related to the use of the potter’s wheel. Introduces new forms and through critical analysis, students develop a personal statement with clay. Prerequisites: ART S 270.


ART S 372. Intermediate Hand Building (3). Hand building—forming methods and drying-firing procedures relate to the various hand building techniques. Activities include lectures, demonstrations, and research related to historical as well as contemporary studies of clay vessels and sculptural forms. Prerequisite: ART S 272 or 280.


ART S 374. Kiln Methods (3). Studies kiln design and construction with research in the area of refractory materials. Includes reading assignments, notebook, and laboratory research. Prerequisites: completion of foundation program and ART S 370.

Courses for Graduate/Undergraduate Credit

ART S 570. Advanced Ceramics Studio I (4). Builds on ART S 370. Investigates advanced studies of clay bodies, glazes, and firing methods. Prerequisites: ART S 373 and/or instructor’s consent.

ART S 571. Advanced Ceramics Studio II (1-3). Second course in advanced 500-level series. Builds on ART S 570. Prerequisites: ART S 570 and/or instructor’s consent.


ART S 574. Advanced Study of Kiln Methods (3). Advanced study of kiln design and construction with research in the area of refractory materials. Requires reading assignments, notebook, and laboratory work. Prerequisite: ART S 374.
ARTS 575. Study of Ceramic Materials II (3). Lab fee. Lectures and research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Prerequisites: ARTS 275 and 370.

ARTS 576. Study of Ceramic Glazes II (3). Lab fee. The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Requires notebook, formulation records, and laboratory work. Prerequisite: ARTS 575.

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: departmental consent.

Courses for Graduate Students Only

ARTS 870. Special Problems in Ceramics (1-5). Research in advanced problems in ceramics. Repeatable for credit.

ARTS 875. Advanced Research of Ceramic Materials (3). Lectures and advanced research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Requires notebook and outside lab work.

ARTS 876. Advanced Study of Ceramic Glazes (3). The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Requires notebook, advanced formulation records, and laboratory work. Prerequisite: ARTS 875.

ARTS 878-879. Terminal Project—Ceramics (1-3; 1-5).

BFA in Studio Art—Painting/Drawing
The Bachelor of Fine Arts in Studio Art with a concentration in painting/drawing offers intensive studio work organized within a pattern of courses designed to promote the development of concepts and their realization in vital material form. 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.

Requirements: A minimum total of 129 semester hours is required for a painting/drawing major with 84 credits distributed as listed below:

Area 1: Foundation Curriculum
- ART F 102, Introduction to Art and Design
- ART F 136 & 137, Foundation Drawing I & II
- ART F 145 & 146, Foundation Drawing I & II
- ART F 189, Foundation 3-D Design
- ART F 240, Foundation Life Drawing
- Art History

Area 2: BFA Painting/Drawing Program Studies

ARTS 250, Introductory Oil Painting
ARTS 251, Introductory Watercolor Painting
ARTS 260, Printmaking I
ARTS 270, Basic Ceramics Studio or ARTS 272, Hand building with Clay
ARTS 280, Sculpture
ARTS 340, Life Drawing Studio
ARTS 360, Intermediate Intaglio Print I or ARTS 361, Intermediate Lithography Print I

Art Electives

Note: 40+ upper-division hours are required for graduation.

Drawing Courses
Drawing is the integral discipline of the four major programs of the studio art area—painting, printmaking, sculpture, and ceramics—as well as the areas of graphic design and art education.

Upper-Division Courses

ARTS 340. Life Drawing Studio (3). Lab fee. Emphasizes individual development, personal interpretation, and creativity. Repeatable for credit. Prerequisite: completion of foundation program.

ARTS 345. Intermediate Drawing (3). Drawing projects, figurative or nonfigurative. Includes problems of style, suites of related works, and history of drawing techniques and materials. Prerequisite: completion of foundation program.

Courses for Graduate/Undergraduate Credit

ARTS 345. Advanced Drawing Studio (1-3). Drawing with a variety of media. Uses graphic problems relative to individual technical and aesthetic development. Critiques are given. Repeatable for credit. Prerequisites: ARTS 340 and 345.

ARTS 348. Intermediate Study in Drawing (1-3). A 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. Prerequisites: ARTS 340, 345, and instructor's consent.

Courses for Graduate Students Only

ARTS 840. Special Problems in Life Drawing (1-3). Drawing from life. Requires sketchbooks and/or portfolio. Repeatable for credit.

ARTS 845. Special Problems in Drawing (1-3). Advanced drawing in various media emphasizing independent work and the development of personal expression. Repeatable for credit.

Painting Courses

Lower-Division Courses

ARTS 250. Introductory Oil Painting (3). Introduces oil and alkyd painting emphasizing studio practices, fundamental principles, and techniques.

ARTS 251. Introductory Watercolor Painting (3). Introduces transparent and opaque watercolor painting emphasizing studio practices, fundamental principles, and techniques.

ARTS 252. Introductory Acrylic Painting (3). Introduces acrylic painting emphasizing studio practices, fundamental principles, and techniques.

Upper-Division Courses

ARTS 351. Intermediate Watercolor Studio (3). Emphasizes individual development, personal interpretation, and creativity. Repeatable for credit. Prerequisites: completion of the foundation program and ARTS 251, or departmental consent.

ARTS 352. Decorative and Ornamental Painting and Design (3). An overview of historical and contemporary decorative and ornamental art utilizing slide lecture, classroom demonstration, and studio activity to study techniques including trompe l'oeil, marbling, graining, faux finishes, stenciling, and ornamental methods for their adaptation to interior, exterior, and furniture decoration and design. Classroom projects can become part of a professional job portfolio. Repeatable for credit.

ARTS 354. Intermediate Painting I (3). Continued development of technical, formal, and conceptual skills studied in introductory painting courses. Preparation for ARTS 356. Prerequisites: completion of foundation program, ARTS 250, 251 or 252, or departmental consent.

ARTS 356. Intermediate Painting II (3). Builds upon concepts in ARTS 354, while emphasizing individual development and a personal response to subject matter. Preparation for ARTS 358. Prerequisite: ARTS 354 or instructor's consent.

ARTS 358. Intermediate Painting III (3). Continued emphasis on individual development and personal interpretation and response to subject matter while furthering formal understanding. Preparation for study in advanced painting courses. Repeatable for credit. Prerequisite: ARTS 356 or instructor's consent.
Courses for Graduate/Undergraduate Credit

ART S 551. Advanced Watercolor Studio (3). For the professionally oriented student. Emphasizes independent study. Repeatable for credit. Prerequisite: four semesters of ART S 351 and interview with instructor.

ART S 552. Advanced Decorative and Ornamental Painting and Design (3). Projects in decorative and ornamental painting and design developed and completed by the student with faculty supervision. Preparation for more independent work. A plan of study defining projects must be submitted and approved by the instructor. Prerequisite: ART S 352 or instructor’s consent.

ART S 553. Independent Study in Painting (1-3). A professional emphasis on technical or artistic 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 prior to registration. Prerequisite: departmental consent.


ART S 559. Terminal Project: Decorative and Ornamental Painting and Design (3). Supervised independent study. A plan of study for a project in decorative and ornamental art must be submitted for faculty approval prior to registration. Repeatable for credit. Prerequisite: ART S 552.

Courses for Graduate Students Only

ART S 850. Special Problems in Painting (1-5). Professional and experimental painting emphasizing the development of maturity, ideas, independent thinking, and personal expression. Mediums include oil, watercolor, and synthetic media. Repeatable for credit with the consent of the drawing/painting faculty.

ART S 858-859. Terminal Project—Painting (1-5; 1-5).

BFA in Studio Art—Printmaking

The Bachelor of Fine Arts in Studio Art with a concentration in printmaking offers a broad range of studio experiences in two primary printmaking disciplines: intaglio and lithography. Supplementing these areas are relief, screen printing, collagraph, and papermaking. The program provides a wide exposure to traditional and contemporary techniques.

Requirements: A minimum total of 129 semester hours is required for printmaking major with 84 credits distributed as listed below.

Courses for Graduate/Undergraduate Credit

ART S 365. Basic Screenprinting and Papermaking I (3). Part I introduces basic screenprinting technology (stencil-block out) and resists, as well as basic photographic methods. Emphasizes multi-color printing. Second part involves basic papermaking methods (sheet forming and paper cast from a mold). Prerequisites: completion of foundation program and ART S 260.

ART S 560. Advanced Intaglio Print I (4). Fourth in a series of classes for the printmaking major. Students may specialize in any of the various intaglio, relief, collage, paper-making techniques while emphasizing personal aesthetic development. Prerequisites: ART F 145; ART S 260, 360, and 362.

ART S 561. Advanced Litho Print I (4). Third in a series of four printmaking courses for the printmaking student wishing to specialize in lithography. Students may specialize in any of the various lithography techniques while developing a personal aesthetic direction. Prerequisites: ART F 145; ART S 260, 361, and 363.

ART S 562. Advanced Intaglio Print II (4). Fifth in a series of five classes for the printmaking major. Stress a professional emphasis on technical and aesthetic research in intaglio lithography. Prerequisites: ART F 145; ART S 260, 360, 362, and 560 or departmental consent.

ART S 563. Advanced Litho Print II (4). Fourth in a series of four printmaking courses for the printmaking student wishing to specialize in lithography. Stress a professional emphasis on technical and aesthetic research in stone lithography. Prerequisites: ART F 145; ART S 260, 361, 363, and 561 or departmental consent.

ART S 565. Independent Study in Printmaking (1-3). A 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 prior to registration. Prerequisite: departmental consent.

Courses for Graduate Students Only

ART S 860. Special Problems in Printmaking—Intaglio (1-5). Advanced printmaking on an individual basis. Gives encouragement to investigation, combined with a craftsman-like approach. Techniques include all intaglio, relief, and combined methods, black and white and color. Repeatable for credit.

ART S 862 & ART S 863. Special Problems in Printmaking—Lithography (1-5; 1-5). Advanced printmaking on an individual basis. Gives encouragement to investigation, combined with a craftsman-like approach. Includes lithography and allied techniques, black and white and color. Repeatable for credit.

ART S 868-869. Terminal Project—Printmaking (1-5; 1-5).
BFA in Studio Art—Sculpture

The Bachelor of Fine Arts in Studio Art with a concentration in sculpture offers a varied and rich learning experience in three-dimensional media. The sculpture studios in Hendriksen Annex, where clay figure modeling, steel fabricating, wood and stone carving, and bronze or aluminum casting take place continually, exposes the student to the diverse sculpture-making processes and how they relate to other artists’ concepts.

Requirements: A minimum total of 129 semester hours is required for a sculpture major with 84 credits distributed as listed below.

**Area** | **Hrs.**
--- | ---
Foundation Curriculum | 21

**Courses which complement the Introductory Art courses and the Sculpture Concentration**

**Sculture Concentration** | **24**
--- | ---
ART S 380, Sculpture Studio (take 2 times) | 8
ART S 381, Cast Sculpture Studio | 4
ART S 546, Advanced Drawing Studio* | 6
ART S 580, Advanced Sculpture Studio | 4
ART S 300+, sculpture elective (take 2 times) | 8

*repeatable courses

Note: 40+ upper-division hours are required for graduation.

**Lower-Division Course**

**ART S 280, Sculpture (3)**. Introduces sculptural techniques in welded steel, assemblage, kinetics, and optics. Prerequisites: ART F 145 and 189.

**Upper-Division Courses**

**ART S 380, Sculpture Studio (1-3)**. Emphasizes the main approaches to sculpture. Stresses the form, concept, and construction of sculpture. Includes carving techniques in wood, stone, and/or plastic construction and assemblage techniques selected from wood, plastic, metal (welded, brazed, riveted, etc.) and/or combined materials. Repeatable once for credit. Prerequisites: completion of foundation program and ART S 280.

**ART S 381, Cast Sculpture Studio (0)**. Casting techniques for bronze and aluminum sculpture. Uses plaster investment, CO2 sand, foam vaporization, and vitrified sand molds to develop individual and unique approaches to cast sculpture. Prerequisites: completion of foundation program and ART S 280.

**Courses for Graduate/Undergraduate Credit**

**ART S 580, Advanced Sculpture Studio (1-3)**. Sculpture in any medium, emphasizing individual development and creativity. Repeatable for credit. Prerequisite: ART S 380.

**ART S 585, Independent Study in Sculpture (1-3)**. A 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: departmental consent.

**Courses for Graduate Students Only**

**ART S 580, Special Problems in Sculpture (1-3)**. Advanced sculpture emphasizing experimentation and high quality work on an individual basis. Stresses special projects in casting architectural sculpture, mixed media, or new materials and techniques. Repeatable for credit.

**ART S 888-889, Terminal Project—Sculpture (1-5)**

**Art Education (ART E)**

The art education area offers the Bachelor of Art Education degree for students interested in an art education teaching career. The goal of the program is to develop a highly competent art teacher who is intellectually informed, skilled in studio performance, and able to communicate with and motivate students. All art education majors are required to specialize in studio art, design, or art history as an emphasis area. Students observe teaching techniques, teach in public schools, and attend seminars in education and art education topics.

**Bachelor of Art Education**

The Bachelor of Art Education has the same Foundation and art history requirements as the BFA in Studio Art. This degree serves the students who plan to teach art on the elementary, middle, or secondary level. Its studio component emphasizes a breadth of studio art experience.

Requirements: A minimum total of 146 semester hours is required for an art education major with 73 art credits and 31 education credits distributed as listed below.

**Area** | **Hrs.**
--- | ---
Foundation Curriculum | 21

**ART F 102, Introduction to Art and Design** | 3
ART F 136 & 137, Foundation Design I & II | 6
ART F 145 & 146, Foundation Drawing I & II | 6
ART F 189, Foundation 3-D Design | 4
ART F 240, Foundation Life Drawing | 6

Note: 40+ upper-division hours are required for graduation.

**Student Teaching**

Admission into the student teaching year requires senior standing (90 hours or 200 credit points); a minimum cumulative grade point average of 2.500 and 2.500 in art courses at the time of application for student teaching; a grade of C or better in College Algebra; a grade of C or better in English Composition (ENGL 101 and 102 or their equivalent); a grade of C or better in oral communication, completion of curriculum and instruction and art education prerequisites; satisfactory physical examination; and recommendation by the art education program following a formal interview. Admission to teacher education is determined early in the student's program (see College of Education—Admission to Teacher Education Programs). Students must apply for student teaching by midterm of the fall semester prior to the student teaching year. A grade of C or better in student teaching is necessary to receive a recommendation for a teaching certificate.

Graduates of the program applying for teacher certification in Kansas are required to complete the Principles of Learning and Teaching (PLT) examination as established by the Kansas State Department of Education in order to qualify for their initial certificate.

Review of course content will be required for transfer of art education credits from other institutions.
Lower-Division Courses

ART E 315. Human Experience and the Arts (3). Telecourse. Surveys sculpture, architecture, film, drama, music, literature, and painting. Examines each art form from four perspectives: historical context, elements of the art, form/meaning, and criticism/evaluation. Contains 30 half-hour video programs which are coordinated and integrated with the test and study guide. Requires attendance at periodic Saturday sessions.

ART E 150. Art Workshop (1-3). Repeatable for credit. Area covered is determined at the time course is offered.

ART E 281. Cooperative Education (1-8). Allows students to participate in the cooperative education program. Offered CO/NC only.

Upper-Division Courses

ART E 302. Jewelry Design/Construction (3). Emphasizes metal working processes (forming, forming, casting, sawing, cutting, fusing, soldering) with subordinate emphasis on soft jewelry and ceramic processes applicable to jewelry.

ART E 303. Stimulating Creative Behavior (3). General education issues and perspectives 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.

ART E 311. Art Education Curriculum in the 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.

ART E 312. 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 twist techniques which result in a fabric or web. Explores simple dye techniques.

ART E 350. Art Workshop (1-3). Repeatable for credit. Area covered is determined at the time course is offered.

ART E 410. Art Education in the Middle School (3). A study of the philosophy, psychology, and artistic development of the middle school/junior high school student, emphasizing the content, objectives, methods, and evaluation of the middle school/junior high school art program. Students participate in a field experience in a middle school/junior high school. Students enroll in this course during the Fall semester preceding Spring semester student teaching. Prerequisites: ART E 311, 414.

ART E 413. Independent Study (1-3). Directed independent study in art education not normally covered in other course work. Prerequisite: instructor's consent.

ART E 414. Art Education in the Senior High School (3). A study in the philosophy, psychology, and artistic development of the senior high student, emphasizing the content, objectives, methods, and evaluation of the senior high school art program. Students participate in a field experience in a senior high school. Prerequisite: ART E 310 or equivalent.

ART E 419. Micro-Computer Applications to Art Education (1-3). A study of the instructional and curricular uses of the Macintosh computer to art education. Students learn a variety of procedures for generating computer art images for instruction and self-expression and use a variety of microcomputer software and hardware. Students apply the Macintosh computer to art curriculum and instruction. Prerequisite: ART E 310 or equivalent.

ART E 481. Cooperative Education (1-6). Allows students to participate in the cooperative education program. Offered CO/NC only.

Courses for Graduate/Undergraduate Credit

ART E 514. Aesthetic Inquiry (3). Focuses on contemporary trends in aesthetics relative to the visual arts. Students write critical analyses and interpretations in response to art work. Prerequisite: upper-division art major.

ART E 515. Developing Visual Materials for Art Education (3). A production laboratory that emphasizes the integration and selection of appropriate visual media for art instruction. Prerequisite: ART E 311.

ART E 517. Student Teaching Seminar in Art (1). Analyzes problems encountered in the art classroom during student teaching. Requires concurrent enrollment in 8 hours of student teaching courses. Prerequisites: ART E 516 and departmental approval for student teaching.

ART E 559. Art Workshop (1-3). Repeatable for credit. Area covered is determined at the time the course is offered.

ART E 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: ART E 302 or instructor's consent.


ART E 711. Seminar in Art Education Topic to be Announced (1-3). Supervised study and research of contemporary issues in art education. Repeatable for credit with advisor's consent.

ART E 712. Development of Art Understanding in the Educational Program (3). Includes readings, observation, and evaluative techniques in the development of concepts and materials for art understanding. Repeatable once for credit. Prerequisite: instructor's consent.

ART E 713. Fiber and Fabric Processes (2-3). 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: instructor's consent.

ART E 714. Aesthetics for the 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.

ART E 715. Research Problems in Art Education (3). Orientation to research methods, findings, and designs related to the analysis of studies and current problems in art education. Repeatable once for credit. Prerequisite: instructor's consent.

ART E 719. Electronic Imaging (1-3). Emphasizes Macintosh and other computer programs and their application to art and art education. Students generate computer images using digitizing, scanning, and animation with a variety of software and hardware. Makes application of this technology to problems of design, art history, and art criticism. Develops curriculum materials for art instruction employing computer graphic instruction. The graduate student prepares a research paper on a selected topic related to computer graphics and art learning.

ART E 750. Art Workshop (1-3). Repeatable for credit. Area to be covered is determined at the time course is offered.

Courses for Graduate Students Only

ART E 815. Individual Research Problems in Art Education (1-4). Directed independent study in art education not normally covered in other graduate course work. Repeatable for credit. Prerequisite: instructor's consent.

ART E 816-817. Thesis—Art Education (1-3; 1-3).

ART E 818-819. Terminal Project—Art Education (1-3).

School of Music

finearts.wichita.edu/music

J. William Thomson, Chair

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 theater in Wiedemann Hall, which was constructed in 1988 to house the first Marcusen organ in North America.
Policies
Proficiency Examinations
Students eligible for University enrollment may enter a music degree program. However, majors in music must demonstrate their performance ability on a minimum of one instrument or in voice. After their initial registration, students have their proficiency judged by their major professor; thereafter, they 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 that 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 whose background indicates that they are competent in piano may pass the requirement before approval may be granted.

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 MUS P 050, Recital, 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; it must be enrolled in Recital during that semester. 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 present a recital examination on materials in their chief performing medium.

Graduation Requirements
Bachelor of Music Requirements
Students receiving the BM choose either a performing major (voice, strings, wind, or percussion) or theory-composition as their major area of concentration.

The general graduation requirements of the University must be met as described in the Catalog under General Education Program. In addition, certain music requirements must be met for the different degree emphases in the School of Music.

BM in Theory-Composition

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>16</td>
</tr>
<tr>
<td>Other performing medium</td>
<td>4</td>
</tr>
<tr>
<td>or Chief performing medium</td>
<td>4</td>
</tr>
<tr>
<td>Keyboard performing medium</td>
<td>8</td>
</tr>
<tr>
<td>Other performing media</td>
<td>4</td>
</tr>
<tr>
<td>Theory and Composition</td>
<td>40</td>
</tr>
<tr>
<td>MUS C 127-129, 128-130, 129-229, 228-230, 523, 561 or 661, 661, 667, 672</td>
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</tr>
<tr>
<td>History and Literature of Music</td>
<td>12</td>
</tr>
<tr>
<td>MUS C 113, 334, 335, and 3 hours of upper-division electives in music history or literature</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>MUS P 217 or 218 and 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Ensembles</td>
<td>8-10</td>
</tr>
<tr>
<td>Electives (music or non-music courses)</td>
<td>7</td>
</tr>
<tr>
<td>Senior Recital (MUS C 400)</td>
<td>4</td>
</tr>
</tbody>
</table>

See degree checklists for specified ensembles.

Ensembles are counted by semester.

Theory-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.

BM in Performance—Instrumental Emphasis

<table>
<thead>
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<th>Area</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Applied Music</td>
<td>28</td>
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<td>Second performing medium</td>
<td>24</td>
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<tr>
<td>(four semesters)</td>
<td></td>
</tr>
<tr>
<td>Theory</td>
<td>22</td>
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<tr>
<td>MUS C 127-129, 128-130, 129-229, 228-230, 523, 561 or 661, 641, 345, or 753</td>
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</tr>
<tr>
<td>History and Literature of Music</td>
<td>12</td>
</tr>
<tr>
<td>MUS C 113, 334, and 3 hours of Music History or Literature elective</td>
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</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Course</td>
<td>Units</td>
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<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>MUS P 217 and 651 Ensembles</td>
<td>10</td>
</tr>
<tr>
<td>Electives</td>
<td>14</td>
</tr>
<tr>
<td>Pedagogy (MUS P 620 for violin/viola; MUS P 680 for woodwind; MUS P 681 for brass; MUS P 682 for percussion; MUS P 790 for all other instrumental BM majors)</td>
<td>2</td>
</tr>
<tr>
<td>Senior Recital (MUS P 400)</td>
<td>4</td>
</tr>
<tr>
<td>Recital attendance (specified number of recitals) per semester for four semesters, MUS P 050</td>
<td>8</td>
</tr>
<tr>
<td>See degree checklists for specified ensembles. Ensembles are counted by semester.</td>
<td></td>
</tr>
</tbody>
</table>

**BM in Performance—Keyboard Emphasis**

**Arias**

**Applied Music**

- Chief performing medium (see specific major below)...
- Second performing medium...

**Recital Attendance**

- MUS P 050 (enrollment for four semesters in a specified number of recitals)...

See degree checklists for specified ensembles. Ensembles are counted by semester.

**Specific Keyboard Program Requirements**

**Piano Performance Emphasis**

- Applied Piano...
- Second Performing medium...

**Organ Emphasis**

- Applied Organ...
- Theory...

**BM in Performance—Vocal Emphasis**

**Arias**

- Applied Music...
- Voice...
- Piano (two semesters)...
- Study in another instrument may be substituted if student meets piano proficiency requirement.

- Theory...

- MUS C 127-129, 128-130, 227-229, 228-230, and 523 or 661 History and Literature of Music...
- MUS C 113, 334, and 335 Conducting...
- MUS P 218 Performance Studies...
- Dance 227 or 210, MUS P 211E or 411E and MUS P 681 Voice Pedagogy, Literature and diction...
- MUS P 121, 122, 221, 222, 625, and MUS C 726 Ensembles...
- Electives...

Choose from:
- MUS P 211E or 411E, 340, 762, 790E Dance 227 or 210
- Theatre 243, 254

Recital attendance (specified number of recitals) per semester for four semesters, MUS P 050...

See degree checklists for specified ensembles. Ensembles are counted by semester.

**BM with Elective Studies in Business**

**Arias**

- Applied Music...
- Theory...

**Electives**...

- Piano majors require three diction classes Piano majors require MUS P 380
- Senior Recital (MUS P 400)...
- Recital attendance (specified number of recitals)...

See degree checklists for specified ensembles. Ensembles are counted by semester.
BM with Elective Studies in Journalism
News Editorial Emphasis

<table>
<thead>
<tr>
<th>Area</th>
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<tbody>
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<td>Second performing medium (four semesters)</td>
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</table>

<table>
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<tr>
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<tbody>
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<td>MUS C 127-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345</td>
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<td>History and Literature of Music</td>
<td>9</td>
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<tr>
<td>MUS C 113, 334, and 335</td>
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<tr>
<td>Conducting</td>
<td>4</td>
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<tr>
<td>Ensembles*</td>
<td>4</td>
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</tbody>
</table>

Vocal majors require three diction classes
Piano majors require MUS P 580
Senior Recital (MUS P 400) \*1
Recital attendance (specified number of recitals) \*4 per semester for four semesters, MUS P 050

<table>
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<th>Journalisms Requirements</th>
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<tbody>
<tr>
<td>COMM 130 (3); 301 (3); 304 (3); 324 (3); 502 or 525 (3); 580 (3); 630 (3); 675 (3)</td>
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</tbody>
</table>

\*See degree checksheets for specified ensembles.
\*Ensembles are counted by semester.

BM with Elective Studies in Journalism
Advertising/Public Relations Emphasis

<table>
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<td>History and Literature of Music</td>
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<td>Piano majors require MUS P 580</td>
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<td>Senior Recital (MUS P 400) *1</td>
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<tr>
<td>Recital attendance (specified number of recitals) *4 per semester for four semesters, MUS P 050</td>
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</table>

\*See degree checksheets for specified ensembles.
\*Ensembles are counted by semester.

BM with Elective Studies in Journalism
Broadcasting Emphasis

<table>
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<tbody>
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<td>History and Literature of Music</td>
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</tr>
<tr>
<td>MUS C 113, 334, and 335</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Ensembles*</td>
<td>4</td>
</tr>
</tbody>
</table>

Vocal majors require three diction classes
Piano majors require MUS P 580
Senior Recital (MUS P 400) \*1
Recital attendance (specified number of recitals) \*4 per semester for four semesters, MUS P 050

<table>
<thead>
<tr>
<th>Journalisms Requirements</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 130 (3); 301 (3); 304 (3); 324 (3); 502 or 525 (3); 580 (3); 630 (3); 675 (3)</td>
<td></td>
</tr>
</tbody>
</table>

\*See degree checksheets for specified ensembles.
\*Ensembles are counted by semester.

Bachelor of Music Education
Requirements

Students receiving the BME must meet the state requirements for the secondary three-year certificate and three-year elementary certificate. Students may select from three 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, piano, organ, or guitar and who plan to enter the field of vocal and general music teaching in the public schools;
3. 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 hours—200 credit points); a grade of C or better in Eng 101 or its equivalent and ENGL 102, College English I and II, COMM 111, Public Speaking, and MATH 111, College Algebra; 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 program fulfills both the University requirements for graduation and the Kansas certification requirement and must be taken by all Bachelor of Music in Music Education candidates. In completing the BME program, the student must meet the general education program requirements of the University given in the Academic Information—Requirements for Graduation section of the Catalog.

Professional Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>29</td>
</tr>
<tr>
<td>CESP 334</td>
<td>2</td>
</tr>
<tr>
<td>CESP 433</td>
<td>3</td>
</tr>
<tr>
<td>CI 271</td>
<td>2</td>
</tr>
<tr>
<td>MUS 272</td>
<td>1</td>
</tr>
<tr>
<td>CI 311</td>
<td>1</td>
</tr>
<tr>
<td>CI 312</td>
<td>1</td>
</tr>
<tr>
<td>CI 328</td>
<td>5</td>
</tr>
<tr>
<td>CI 427*</td>
<td>2</td>
</tr>
<tr>
<td>CI 430</td>
<td>3</td>
</tr>
<tr>
<td>CI 451</td>
<td>4</td>
</tr>
<tr>
<td>CI 457</td>
<td>1</td>
</tr>
<tr>
<td>CI 469</td>
<td>4</td>
</tr>
</tbody>
</table>

*These courses are taken during the student teaching semester.

Additional Courses Required for Instrumental Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>16</td>
</tr>
<tr>
<td>Instrumental majors</td>
<td></td>
</tr>
<tr>
<td>chief medium</td>
<td>14</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
<tr>
<td>Keyboard majors</td>
<td></td>
</tr>
<tr>
<td>chief medium</td>
<td>14</td>
</tr>
<tr>
<td>second instrument</td>
<td>2</td>
</tr>
<tr>
<td>Electric bass majors</td>
<td></td>
</tr>
<tr>
<td>electric bass</td>
<td>10</td>
</tr>
<tr>
<td>string bass</td>
<td>4</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
</tbody>
</table>

Students must be enrolled in applied music during the semester of their senior recital

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Music</td>
<td>33-35</td>
</tr>
<tr>
<td>MUS C 113, 127-129, 128-130, 227-229, 228-230, 334, 335, 523, 641, MUS P 217</td>
<td></td>
</tr>
<tr>
<td>or 218, 651 or 691 or MUS P 620 for strings</td>
<td></td>
</tr>
<tr>
<td>Required for piano majors, MUS P 307 and 407; MUS E 666 required.</td>
<td></td>
</tr>
<tr>
<td>Ensembles*</td>
<td>7</td>
</tr>
</tbody>
</table>

(see degree sheet for specified ensembles)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recital attendance</td>
<td>5</td>
</tr>
<tr>
<td>MUS E 171 and 172; two semesters of MUS P 050 plus MUS P 400, Senior Recital</td>
<td></td>
</tr>
<tr>
<td>Music Education</td>
<td>18</td>
</tr>
<tr>
<td>MUS E 204, 304, 404* and 611</td>
<td></td>
</tr>
<tr>
<td>MUS E 235, 236, 237, 238, 239, 240, and 342</td>
<td></td>
</tr>
</tbody>
</table>
Additional Courses Required for Vocal (Keyboard) Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>16</td>
</tr>
<tr>
<td>Vocal majors—voice</td>
<td>14</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
<tr>
<td>Keyboard majors—piano</td>
<td>14</td>
</tr>
<tr>
<td>MUS P 342</td>
<td>2</td>
</tr>
</tbody>
</table>

Students must be enrolled in applied music during the semester of their senior recital.

General Music: 33-37
MUS C 113, 127-129, 128-130, 227-229, 228-230, 334, 335, 523, 641, MUS P 217 or 218, 651 or 691; 1 hr. of music electives for vocal majors for piano majors, MUS P 580 or 581, 307, and 407 required

Ensembles: 7 or 9
Vocal: 9
piano majors: 7
(see degree sheets for specified ensembles)
Recital attendance: 5
MUS E 171 and 172; two semesters of MUS P 050 plus MUS P 400, Senior Recital
Piano pedagogy majors: MUS P 580 or 581, 790
Music Education: 14
MUS E 241, 242, 303, 323, 342, 403, 611

Bachelor of Arts in Music

Students who wish to earn a Bachelor of Arts in music are required to complete courses in Fairmount College of Liberal Arts and the College of Fine Arts as indicated in the music degree check sheets and to elect 50 music hours as specified in the following areas and course listings.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocal music majors</td>
<td>3</td>
</tr>
<tr>
<td>Group I</td>
<td></td>
</tr>
<tr>
<td>Music Literature and History</td>
<td>9</td>
</tr>
<tr>
<td>MUS C 113, MUS C 334-335</td>
<td></td>
</tr>
<tr>
<td>Group II</td>
<td></td>
</tr>
<tr>
<td>Music Theory</td>
<td>22</td>
</tr>
<tr>
<td>MUS C 127-129, 128-130, 227-228, 228-230, 523, 561 or 601, 641</td>
<td></td>
</tr>
<tr>
<td>Group III</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUS P 217 or 218</td>
<td></td>
</tr>
<tr>
<td>Group IV</td>
<td></td>
</tr>
<tr>
<td>Applied Music</td>
<td>6</td>
</tr>
<tr>
<td>Voice, piano, organ, guitar, or orchestral instrument</td>
<td></td>
</tr>
<tr>
<td>Group V</td>
<td></td>
</tr>
<tr>
<td>Ensembles</td>
<td>4</td>
</tr>
<tr>
<td>Selected in consultation with advisor</td>
<td></td>
</tr>
<tr>
<td>Group VI</td>
<td></td>
</tr>
<tr>
<td>Electives from areas of music literature, music theory, music applied, counterpoint, conducting, orchestra, and ensembles</td>
<td>9</td>
</tr>
<tr>
<td>Group VII</td>
<td></td>
</tr>
<tr>
<td>Recital attendance</td>
<td>4</td>
</tr>
<tr>
<td>Four semesters, MUS P 050</td>
<td></td>
</tr>
</tbody>
</table>

Music Minor

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 hours as indicated:
MUS C 113, 127, 128, 129, 130, and 9 additional hours selected from among the following:
MUS C 160, 227, 228, 229, 230, 334, 335, 523, music applied (4-hour maximum), and music ensembles (4-hour maximum).

Music Education (MUS E)

Lower-Division Courses

MUS E 171. Orientation to Music Education (1). Look at the concepts of comprehensive musicianship and develop strategies for leading music activities in a variety of scenarios. Learn observation techniques appropriate for viewing a wide range of instrumental and vocal performances.

MUS E 172. Introduction to Music Education (1). 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: MUS E 171.

MUS E 204. Fundamentals of Instrumental Music for Secondary Schools (3). Techniques and materials for teaching instrumental music in junior and senior high schools. Emphasizes instrumental organization and administration, pedagogical practices, laboratory experiences, guiding student behavior, evaluation, and professional responsibilities. For students primarily interested in teaching instrumental music in the secondary schools. Includes teaching techniques for jazz ensemble. Grades 6-12. Prerequisite: music education major or instructor's consent.

MUS E 235. Methods of Teaching Orchestral Instruments (Violin and Viola) (1). Procedures and materials for class and private teaching. Techniques for fundamentals in first position and theory and reading knowledge of positions two through five. Includes band and orchestra laboratory. Grades 4-12.

MUS E 236. Methods of Teaching Orchestral Instruments (Cello and String Bass) (1). Procedures and materials for class and private teaching. Techniques for fundamentals, includes knowledge of more difficult positions and special techniques. Includes band and orchestra laboratory. Grades 4-12.

MUS E 237. Methods of Teaching Band and Orchestral Instruments (Clarinet and Saxophone) (1). Prepares the prospective instrumental music instructor to effectively teach clarinet and saxophone in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials, music applied, adjustment, instrument brands, and the development of sufficient playing skills. Grades 4-12.

MUS E 238. Methods of Teaching Band and Orchestral Instruments (Flute and Double Reeds) (1). Prepares the prospective instrumental music instructor to effectively teach flute and double reeds in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care of instrument, instructional materials, music applied, adjustment, instrument brands, and the development of sufficient playing skills. Grades 4-12.

MUS E 239. Methods of Teaching Band and Orchestral Instruments (Brass) (1). Procedures and materials for class and private instruction. Includes application of snare drum fundamentals and a study of basic techniques for all percussion instruments. Grades 4-12.

MUS E 240. Methods of Teaching Band and Orchestral Instruments (Percussion) (1). Procedures and materials for class and private instruction. Includes application of snare drum fundamentals and a study of basic techniques for all percussion instruments. Grades 4-12.
MUS E 241. String Rehearsal Methods (1). String rehearsal techniques and materials for grades 4 through 12. Required of majors on choral/keyboard program and choral/keyboard majors on special music education program.

MUS E 242. Wind and Percussion Rehearsal Methods (1). Wind and percussion techniques and materials for grades 4 through 12. Required of majors on choral/keyboard program and choral/keyboard majors on special music education program.

MUS E 272. Introduction to Professional Education (1). Gives prospective teachers the opportunity to consider seriously their suitability for a career in education. Students begin to develop skills in observing educational situations and settings which help them develop a teacher perspective, seeing schools as prospective workplaces and teachers as colleagues. Prerequisites: C or better in English I and II, Communication, and College Algebra; sophomore standing, 2.750 GPA, in the 35th hour; and concurrent enrollment in CI 271.

Upper-Division Courses

MUS E 303. Survey of Vocal Music for Elementary Schools (3). An overview of activities in the elementary general music program. Includes a study of objectives for elementary classes and consideration of materials and methods. Includes autoharp, recorder techniques, and music theatre for public schools. For students primarily interested in teaching music in the elementary schools. Grades K-8. Prerequisite: MUS E 232.

MUS E 304. Survey of Instrumental Elementary School Music (3). A survey of methods and materials in the elementary school instrumental program of instruction. For students primarily interested in teaching instrumental music in the elementary schools. Prerequisite: MUS E 204, Grades 4-8.

MUS E 309. Survey of Music for Special Education (3). Consideration of methods and problems in preparation for student teaching of music with special education students at early childhood elementary and secondary levels in public schools. Includes musical settings (self-contained and mainstreamed) in regular and alternative schools and classes; identification, objectives, appropriate activities, materials, and planning and implementation techniques. Also includes observation, demonstration-participation experiences, and/or media presentations. Grades K-12. Prerequisites: MUS E 204 or 323 with instructor's consent.

MUS E 323. Fundamentals of Vocal Music for Secondary Schools (3). 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. Includes classroom guitar. Grades 6-12. Prerequisites: MUS P 218 and music education major or instructor's consent.


MUS E 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.

MUS E 403. Advanced Techniques of Vocal/General School Music (1). Emphasizes special problems related to preparation for student teaching: consideration of the vocal and general music programs at all levels. Prerequisites: MUS E 303 and 323; also 309 for special music education majors. Includes content area reading modules. To be taken during student teaching semester. Grades K-12.

MUS E 404A. Advanced Techniques of Instrumental School Music (1). Consideration of special problems related to preparation for student teaching in instrumental music programs at all levels. Prerequisites: MUS E 204 and 304; also 309 for special music education majors. Includes content area reading modules. To be taken during student teaching semester. Grades 4-12.


Courses for Graduate/Undergraduate Credit

MUS E 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.

MUS E 611. Music for Special Education (3). Open to upper-division or graduate students and intended for the potential practicing music teacher, classroom teacher, or special education teacher. Includes identification of dysfunctional 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.

MUS E 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 and corps-style marching utilizing 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.

MUS E 732. Music in the Junior High School (3). Includes administrative structures, the curriculum, adolescent development, teaching as behavior, and competencies needed for successful teaching of general and choral music in grades 6-9.

MUS E 750. Music Education Workshop (1-4). Repeatable for credit.

MUS E 781. Cooperative Education (1-8). A field placement which includes course work 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 enrolled in Co-op 781 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of 6 hours of course work 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. Prerequisite: satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/Nr only.

MUS E 785. Instrumental Music Organization and Administration (2). Problems of developing school instrumental music programs.

MUS E 790. Special Topics in Music (1-4). For individual or group instruction. Individual study enrollment requires departmental consent. Repeatable with departmental consent.

Courses for Graduate Students Only

MUS E 821. Administering Elementary Music (3). Investigates research and strategies in music education relating to communication, classroom management, current trends, and teaching and learning styles. Includes teacher assessments and evaluation issues.

MUS E 822. Advanced Techniques in Special Music Education (3). For special music education MME candidates only. Studies research literature and trends in special music education. Includes an evaluation of materials and techniques and special projects exploring the development of musical understanding in the dysfunctional child. Course 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. Prerequisite: MUS E 403 or 404.

MUS E 823. Special Music Education Practicum (3). For special music education MME candidates only. Supervised teaching in special education classrooms. A companion course to MUS E 822; gives the MME special education candidate experience in teaching in special education classrooms. Prerequisite: MUS E 822 or concurrent enrollment.

MUS E 831. Developing the Child's Musical Understanding (5). Definition of understandings necessary for the attainment of musical awareness in the child. Directs the
MUS E 841, Special Project in Music (1-3). Individually supervised study or research emphasizing the student's personal needs. Repeatable for credit. Prerequisite: instructor's consent.

MUS E 842, Special Project in Music (1-3). Individually supervised study or research emphasizing the student's personal needs. Repeatable for credit. Prerequisite: instructor's consent.

MUS E 844, Terminal Conducting Project (2). Individually supervised project for those accepted for the conducting option on the instrumental or choral emphasis under the MME degree. Prerequisite: instructor and departmental consent.


MUS E 851, Psychology of Music (2). An overview of music behaviors from a psychological perspective. Relates recent literature concerning human psychoacoustics, melodic, rhythmic, and harmonic perception, and major learning theories to current trends in music education.

MUS E 854, Research Seminar in Music Education (3). Extended application of techniques of research. Requires the completion of a major research project. May be selected as the MME terminal requirement for specified programs. Prerequisite: MUS C 852.

MUS E 871, History and Philosophy of Music Education (2), A study of historical trends and contemporary philosophies relevant to music education. Prerequisite: MUS E 851.

MUS E 875, Thesis Research (1-2).

MUS E 876, Thesis (2).

Music Performance

Applied Music Private Study (MUS A)

MUS A 112, Applied Music Instruction for Non-majors (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.

MUS A 231 (1). For majors only; study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUS A 232 (2). For majors only. Repeatable for credit. Lower division.

MUS A 431 (1). For majors only; study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUS A 432 (2). For majors only. Repeatable for credit. Upper division.

MUS A 434 (4). For performance, pedagogy, and accompanying majors only. Repeatable for credit. Upper division.

MUS A 712, Applied Music Instruction for Non-majors (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.

MUS A 731 (1). For majors only; study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUS A 732 (2). For majors only. Repeatable for credit. Graduate.

MUS A 734 (4). For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

Applied Music Media Designations

A Bassoon  B Piano
B Cello  R String Bass
C Clarinet  S Trombone
D Euphonium  T Trumpet
E Flute  F Tuba
F French Horn  V Viola
G Guitar  W Violin
H Harp  X Saxophone
J Lute  K Voice
L Oboe  M Organ
M Organ  N Percussion


MUS A 114P, Piano Class, Level 2 (1). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

MUS A 115P, Piano Class, Level 3 (3). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

MUS A 116P, Piano Class, Level 4 (1). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

MUS A 117P, Piano Class (1). Non-piano music majors. Prerequisite: class placement interview. Repeatable.

MUS A 117W, Violin Class for Adult Beginners (2). Beginning violin class: violin fundamentals, emphasizing tone and intonation development; basic techniques for reading (notes and rhythm). May not be applied to music major requirements. Repeatable for credit.

MUS A 119P, Piano Class (1). Non-piano music majors. Prerequisite: class placement interview. Repeatable.

MUS A 120P, Piano for Fun—Non-majors (2). Non-majors. Repeatable.

MUS A 232O, Voice—Musical Theatre (2). Applied voice instruction emphasizing musical theatre techniques. Students work on repertoire from "legit" and "belt" repertoire. Not applicable to music major requirements. Repeatable for credit.

MUS A 717W, Violin Class for Adult Beginners (2). Beginning violin class: violin fundamentals, emphasizing tone and intonation development; basic techniques for reading (notes and rhythm). May not be applied to music major requirements. Repeatable for credit.

General Performance (MUS P)

Non-credit Courses

MUS P 050, Recital (1). Recital attendance and performance. Laboratory observation of performance media, literature, and recital techniques. Elective is required for BA and BM majors according to the requirements of the degree checklist at the time of enrollment. Repeatable.

MUS P 080, Topics in Music (1-3). Topics exploring events, conditions, relationships, styles, etc. in music. See Schedule of Courses for current listing. Not applicable to degree. Repeatable.

Lower-Division Courses

MUS P 121, Italian Diction (1). For the vocal performer, including a comprehensive study of Italian consonant and vowel sounds.

MUS P 122, English Diction (1). For the vocal performer, including a comprehensive study of English consonant and vowel sounds.

MUS P 148, Double Reed-Making and Adjusting (1). Making and adjusting oboe, English horn, and bassoon reeds. Repeatable for credit. Prerequisite: MUS E 238 or instructor's consent.

MUS P 150, Music Performance Workshop (1-4). Repeatable for credit.

MUS P 207, Piano Repertoire (1-4). Gives performing and listening experience to piano major. Repeatable for credit.

MUS P 210-211-212-213-214, Ensembles (1 except 210B, 211A, 212F [A Cappella Choir], 213B, 213F [Concert Chorale], 2). (A) Orchestra; (B) Symphonic Wind
MUS P 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. Audition is required.

MUS P 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 orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

MUS P 211U. Musical Theatre Performance (1). Cross-listed as DANCE 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.

MUS P 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 orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

MUS P 215. Voice for Musical Theatre (2). Studies vocal techniques necessary for performance in contemporary musical theatre productions, including belt and legitimate styles. Repeatable for credit. Prerequisite: MUS P 128 and 130.

MUS P 217. Instrumental Conducting (2). Fundamentals of baton technique, elementary score reading and musical leadership. Practical experience in conducting laboratory and classroom groups. Prerequisites: MUS C 128 and 130.

MUS P 218. Choral Conducting (2). Fundamentals of conducting, score reading, and rehearsal techniques. Practical experience conducting classroom groups. Prerequisites: MUS C 128 and 130.

MUS P 221. German Diction (1). For the vocal performer, including a comprehensive study of German consonant and vowel sounds.

MUS P 222. French Diction (1). For the vocal performer, including a comprehensive study of French consonant and vowel sounds.


MUS P 251. Cooperative Education (1-8). A field placement which integrates course work 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 course work 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. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Credit/No Credit only.

Upper-Division Courses

MUS P 300. Junior Recital (1). Required for BM piano majors, performance or accompanying emphasis. Prerequisite: departmental consent.

MUS P 330. Musical Theatre Workshop I (2). Cross-listed as DANCE 150I and THEA 330. An interdisciplinary practicum class with opportunities for student performers to refine rehearsal and performance skills necessary to musical theatre. Students prepare songs and scenes and staging from the musical theatre repertory culminating in a workshop performance. Admission is by audition.

MUS P 340. Vocal Coaching (1). Vocal coaching offers intense focus on diction and the dramatic, musical and stylistic interpretation of musical theatre, art song, and opera literature. Prerequisites: Upper class or graduate level majors only, and permission of the instructor.

MUS P 400. Senior Recital (1). Prerequisite: departmental consent.

MUS P 407. Piano Repertoire (1-1). Gives performing and listening experience to piano majors. Repeatable for credit.


MUS P 411E. Opera Lab (1). See MUS P 211E.

MUS P 411K. Opera Theatre (2). See MUS P 211K.

MUS P 412K. Opera Theatre (2). See MUS P 212K.

MUS P 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 orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

MUS P 415Y. Voice for Musical Theatre (2). Studies vocal techniques necessary for performance in contemporary musical theatre productions, including belt and legitimate styles. Repeatable for credit. Prerequisite: musical theatre major.


MUS P 450-451. Accompanying Recital (1-1). Required for BM piano majors, accompanying emphasis. Prerequisite: departmental consent.


Courses for Graduate/Undergraduate Credit

MUS P 530. Musical Theatre Workshop (2). An interdisciplinary practicum course with opportunities for student performers to refine techniques by performing scenes from a variety of musical theatre genres, including opera, book musicals, and rock musicals. Advanced students gain experience in directing and choreographing under faculty guidance and supervision. Jr. or Sr. Musical Theatre, Dance, and Voice majors only; or permission of the instructors.

MUS P 555. Senior Project (1). Cross-listed as THEA 555. An interdisciplinary course to showcase the talents of graduating seniors in professional productions, including directing, acting, design, and choreography. For majors only. Prerequisite: Instructor's consent.

MUS P 580. Piano Pedagogy (2). Primarily the art and science of teaching. Includes observations of master teachers in the University and community.


MUS P 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: violin or viola performance major or instructor's consent.

MUS P 625. Voice Pedagogy (2). Acquaints the voice major with vocal techniques, concepts, and materials of private and class instruction.

MUS P 651. Advanced Conducting and Score Reading (2). Baton technique, score reading, and musicianship. Prerequisite: MUS P 217 or 218 or equivalent.
MUS P 680. Woodwind Pedagogy (2). A comprehensive study of woodwind instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a woodwind instrument or instructor’s consent.

MUS P 681. Brass Pedagogy (2). A comprehensive study of brass instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a brass instrument or instructor’s consent.

MUS P 682. Percussion Pedagogy (2). A comprehensive study of percussion instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on percussion instruments or instructor’s consent.

MUS P 691. Advanced Choral Conducting (2). A comprehensive study of conducting and rehearsal techniques, analysis, and ear training and types of choral composition for the advanced student. Prerequisite: MUS P 217 or 218 or equivalent.


MUS P 710-711-712-713-714. Ensembles (1 except 710B). (A) Symphony Orchestra; (B) Chamber Orchestra; (C) Wind Ensemble; (D) Choir; (E) Jazz Ensemble; (F) Medieval Singers; (G) Medieval Chorus; (H) Wind Ensemble; (I) Saxophone Quartet; (J) Brass Chamber Ensemble; (K) Percussion Ensemble; (L) Beginning String Ensemble; (M) Jazz Ensemble I; (N) Guitar Ensemble; (O) New Music Ensemble. Prerequisite: audition required. Repeatable for credit.

MUS P 711E. Opera Lab (1). See MUS P 211E.

MUS P 711K. Opera Theatre (1). See MUS P 211K.

MUS P 711U. Musical Theatre Performance (1). Cross-listed as DANCE 320 and THEA 590E. See MUS P 211U.

MUS P 712K. Opera Theatre (2). See MUS P 212K.

MUS P 714K. Opera Theatre (4). See MUS P 414K.

MUS P 715Y. Voice for Music Theater (2). Basic repertoire and singing techniques with weekly master class devoted to music theater techniques and cohorts. Restricted to persons other than vocal majors. Repeatable.

MUS P 723. Applied Piano Accompanying (4). Individual private study of standard accompaniment literature with preparation of a terminal project recital (either vocal or instrumental). Prerequisite: successful completion of two semesters of graduate piano study.

MUS P 724. Applied Piano Accompanying (4). Individual private study of standard accompaniment literature with preparation of a terminal project recital (either vocal or instrumental). Prerequisite: successful completion of two semesters of graduate piano study.


MUS P 760. Group Piano Practicum (2). Supervised group piano teaching for graduate students. Prerequisites: MUS P 580 and 581.

MUS P 761. Studio Piano Practicum (2). Supervised studio teaching for graduate students. Prerequisites: MUS P 580 and 581.

MUS P 762. Opera Styles (2). A comprehensive study of the performance styles and practices in operatic singing, ranging from the sixteenth century to the present. Prerequisite: professor’s permission.

MUS P 773. Acting for Singers (3). A study of 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: instructor’s consent.

MUS P 790. Special Topics in Music (1-2). For individual or group instruction. Repeatable with departmental consent.

MUS P 790E. Musical Theatre and Opera Audition (3). Cross-listed as THEA 600. A practical course which develops techniques and audition repertoire for students who wish 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: instructor’s consent.

MUS P 841. Special Project in Music (1-3). Individually supervised study or research emphasizing the personal needs of the student. Repeatable for credit. Prerequisite: instructor’s consent.

MUS P 842. Special Project in Music (1-3). Individually supervised study or research emphasizing the personal needs of the student. Repeatable for credit. Prerequisite: instructor’s consent.

MUS P 843. Piano Pedagogy Seminar (2). Variable topics, such as (1) advanced techniques in class piano or private piano (college curriculum); (2) class piano in early childhood; (3) class piano for leisure-age students; (4) class piano in public (or private) schools, extending the advanced preparation of piano students as needed. Repeatable for credit. Prerequisite: MUS P 580.

MUS P 871. Graduate Accompanying Recital (1+1hrs). MUS P 720-721: Graduate Accompanying Recital, 1+1hrs. cr. Required for MM piano majors, accompanying emphasis. Prerequisite: the student must complete 18 hours toward the degree, including two semesters of applied piano and be enrolled in MUS. P 732 or 734.

MUS P 872. Graduate Accompanying Recital (1+1hrs). MUS P 720-721: Graduate Accompanying Recital, 1+1hrs. cr. Required for MM piano majors, accompanying emphasis. Prerequisite: the student must complete 18 hours toward the degree, including two semesters of applied piano and be enrolled in MUS. P 732 or 734.

MUS P 873. Graduate Recital (2). Performance of a full recital featuring the chief performing medium. Prerequisite: consent of instructors in applied area.

MUS P 874. Professional In-Service Presentation Project (2). Planning, organizing, and presenting a three-hour inservice presentation (workshop) to in-service private piano teachers, perhaps in conjunction with an established community piano teacher’s league, etc. Available as a terminal requirement alternative (in lieu of performance recital) in the Master of Music—piano pedagogy emphasis. Students approved for this terminal requirement option will also be required to perform a major piano work, prepared at acceptable recital level, during spring jury examination within the final year (two semesters) of the degree program. Requires approval of piano performance area faculty. Prerequisite: departmental consent.

Musicology-Composition (MUS C)

Lower-Division Courses

MUS C 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 the staff, clefs, keys, meter, tempo, notes, rests, and other basic knowledge.

MUS C 113. Introduction to Music Literature (3). An introduction to the masterpieces of Western music literature. Includes composition of contrasting styles of both Western and non-Western music. For general students with some musical background to 100. Required for music majors.

MUS C 114. Music Literature Survey (2). A survey of representative works from the vocal and instrumental repertoire. Prerequisite: MUS C 113 or instructor’s consent.

MUS C 127. Theory I (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), basic orchestration, and simple harmonic background and contrapuntal relationships applied to literature from all periods of music. Studies one selected score being performed during the semester by a University ensemble. Prerequisite: concurrent enrollment in MUS C 129.

MUS C 127H. Theory I Honors (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), simple harmonic
relationships, and fundamental voice-leading techniques. Prerequisites: concurrent enrollment in MUS C 129 and departmental consent.

MUS C 128. Theory II (2). A continuation of Theory I. Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures. Studies another score being performed by a University ensemble. Prerequisites: MUS C 127 and concurrent enrollment in MUS C 129 or 130.

MUS C 128H. Theory II Honors (2). Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures. Prerequisites: MUS C 127 or 127H, concurrent enrollment in MUS C 129 or 130, and departmental consent.

MUS C 129. Aural Skills I (2). Recognition, singing, and dictation of melodies from all periods of music. Emphasizes interval training. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation 61-80: "the ability to teach reading skills appropriate to the level of the student and to the subject content."

MUS C 130. Aural Skills II (2). Continuation of melodic, rhythmic perception. Includes recognition and dictation of diatonic harmonic structures. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation 61-80: "the ability to teach reading skills appropriate to the level of the student and to the subject content."

MUS C 169. The Heritage of Western Music (3). General education introductory course. Acquaints the non-major with the central tradition of Western music. Emphasizes the development of listening techniques by which the student may perceive and understand fundamental musical processes as they exist in the various styles within the Western heritage.

MUS C 160. Music through the Ages (3). General education further study 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.

MUS C 162. World Music (3). General education introductory 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.

MUS C 227. Theory III (2). The study of contrapuntal forms and textures from music of all periods. Explores melodic, harmonic, and rhythmic aspects of this music, as well as basic orchestration techniques related to these textures. Includes study of an appropriate score being performed by a University ensemble. Prerequisite: MUS C 128.

MUS C 227H. Theory III Honors (2). See MUS C 227. Prerequisites: MUS C 126 or 128H and departmental consent.

MUS C 228. Theory IV (2). Study of the larger homophonic forms (sonata, rondo) using techniques acquired in previous semesters. Includes analysis of an appropriate score being performed by a University ensemble. Partially fulfills State Certification and Teacher Education Regulation 61-80: "the ability to teach reading skills appropriate to the level of the student and to the subject content."

MUS C 228H. Theory IV Honors (2). See MUS C 228. Prerequisites: MUS C 227 or 227H and departmental consent.

MUS C 229. Aural Skills III (2). Recognition, singing, and dictation of contrapuntal textures with continued harmonic practice emphasizing elementary chromaticism. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation 61-80: "the ability to teach reading skills appropriate to the level of the student and to the subject content."

MUS C 230. Aural Skills IV (2). Summation and expansion of previous skills further emphasizing harmonic chromaticism and atonal contexts. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation 61-80: "the ability to teach reading skills appropriate to the level of the student and to the subject content."

MUS C 245. Jazz Improvisation (3). Melodic, harmonic, and rhythmic creation emphasizing the relationship of scale patterns and seventh chords. Repeatabl e for credit. Prerequisites: MUS C 128 or 130 or instructor's consent.

MUS C 259 & 260. Applied Composition (2 & 2). Individual study in fundamentals of musical composition emphasizing the development and expansion of music materials. May be taken as an elective. May be repeated as an elective by those not majoring in theory-composition. Prerequisites: MUS C 128 or equivalent and instructor's consent.

Upper-Division Courses

MUS C 310. Interrelated Arts (3). General education issues and perspectives course. Presents an aesthetic analysis of three fine arts. Emphasizes style and commonality among the fine arts (art, music, drama).

MUS C 315. Music of the 20th Century (2). An aesthetic approach to music of this century, its major composers, and stylistic and formal characteristics. Primarily for the non-major who has musical interest and background.

MUS C 335. History of Music II (3). A survey of the evolution of musical styles and practices in the Western world from ca. 1750 to the present. Includes lectures, reference readings, and the study of representative examples of music. Prerequisites: MUS C 113 and 228 or instructor's consent.

MUS C 345. Jazz Arranging (2). Arranging for small and large jazz ensembles emphasizing current big band styles. Prerequisites: MUS C 228 and 230 or instructor's consent.

MUS C 346. Styles of Jazz (3). General education further study course. A survey of all eras in the evolution of the many styles in the jazz idiom from the end of the 19th century to the present. Open to majors and non-majors.

MUS C 493. American Popular Music (3). General education further study 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.

Courses for Graduate/Undergraduate Credit

MUS C 523. Form and Analysis (2). Extensive analysis of the forms and formal processes of musical literature. Prerequisite: MUS C 228.

MUS C 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.


MUS C 561. 18th Century Counterpoint (2). Contrapuntal devices of the 18th century as found in the works of J.S. Bach. Prerequisite: MUS C 228.

MUS C 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 MUS C 234 and 235.

MUS C 623. Opera Literature (3). A comprehensive survey of Italian, German, French, Russian, English, and American opera literature from the 17th century to the present. MUS C 113 is strongly recommended before taking the course. Should be only upper-division or graduate students. Not limited to music majors.

MUS C 624. Oratorio and Cantata Literature (2). A study of the solo vocal literature of the larger sacred and secular forms from the 17th century to the present. Not limited to music majors.

MUS C 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: MUS C 227.

MUS C 660. Applied Composition (2). Individual study in musical composition emphasizing writing for both small ensembles and larger groups in the larger forms. Repeatable. Prerequisites: MUS C 560 and instructor's consent.

MUS C 661. 16th Century Counterpoint (2). Analysis and application of the contrapuntal composition techniques of the 16th century. Prerequisite: MUS C 228.
MUS C 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: MUS C 228.

MUS C 672. Contemporary Techniques (2). Advanced study of music from impressionism to the present emphasizing related literature and creative writing. Prerequisite: MUS C 228.

MUS C 685. String Literature and Materials (2). A survey and stylistic analysis of music for solo strings and chamber combinations, beginning with the early Baroque period.


MUS C 754. Choral Literature II (2). A historical and stylistic survey of choral literature of the Classical, Romantic, and Contemporary eras.

MUS C 782-783. Piano Literature (3-3). Survey of the historical era of professional piano repertory.

MUS C 790. Special Topics in Music (1-4). For individual or group instruction. Repeatable with departmental consent.

MUS C 791. Seminar in Music History (3). Develops areas of interest in music history as time permits. Makes no effort at a chronological survey. Includes ideas evoking the most interest and considered by the instructor to be of the greatest professional benefit when interest warrants.

Courses for Graduate Students Only

MUS C 830. Seminar in Music Theory (3). An analytical study of the materials used in musical composition from antiquity to the present, employing analytical approaches such as Schenker, Hindemith, and serial techniques. Develops analytical perspective rather than compositional skills.

MUS C 840A-C. Seminar in the Techniques of Composition (2). Examines the nature of compositional techniques through selected works in different media: (A) large ensembles, (B) small ensembles, and (C) solo literature. Prerequisites: MUS C 671, 672, and 641, or departmental consent.

MUS C 841. Special Project in Music (1-3). Individually supervised study or research emphasizing the professional needs of the student. Repeatable for credit. Prerequisite: instructor's consent.

MUS C 852. Introduction to Bibliography and Research (3). Techniques of research and development of bibliography in music and music education. Course must be elected the first available semester of enrollment in MM or MME programs.

MUS C 860. Advanced Composition (2). Original work in the large forms and a continuation and expansion of MUS C 659-660. Prerequisite: MUS C 660 or equivalent.

MUS C 875. Thesis Research (2).

MUS C 876. Thesis (2).

MUS C 893. Music of Antiquity Through the Renaissance (3).

MUS C 894. Music of the Baroque Era (3).

MUS C 895. Music of the 18th Century (3).

MUS C 896. Music of the 19th Century (3).

MUS C 897. Music of the 20th Century (3).

School of Performing Arts

finearts.wichita.edu / performing

Bela Kinizsfaleti, Chair

The School of Performing Arts includes the areas of dance and theatre. The school offers the Bachelor of Fine Arts in Performing Arts/Dance and Bachelor of Fine Arts in Performing Arts/Theatre.

All candidates for the BFA degree must complete THEA 253, Costuming for the Stage; and THEA 345, Stage Lighting.

Dance (DANCE)

Major emphasis is placed on modern dance technique with strong supportive classes in ballet and jazz. Major course offerings include study in modern, ballet, and jazz techniques; tap; choreography; dance history; dance terminology; repertoire; music for dance; lighting; and costume. Additional classes are offered in music theatre dance, mime, ballroom, country-western, and other special forms.

The Wichita State University Dance Ensemble (WSUDE), the resident faculty-student performance company, presents at least two fully produced concerts annually and acts to produce guest residencies with internationally recognized dance artists, lecture demonstrations for area schools, master classes, an annual undergraduate dance concert, informal showings, and senior choreography concerts. Membership in WSUDE is by audition only.

Any student who intends to pursue dance as a major should contact the director of dance early in their educational career for assignment to an academic advisor.

Graduation Requirements

Dance majors must complete two semesters of DANCE 501, Modern Dance IV, and one semester of DANCE 410, Ballet III, with a minimum grade of B. A minimum of 10 hours is required in technique with at least 24 hours in modern dance technique. Proficiency exams are available for those with a developed technical skill. Students are encouraged to take concurrent ballet and modern dance technique classes each semester they are enrolled. Contact the director of dance for consideration of exception.

Advancement in technique is not automatic and is possible only with faculty consent and approval. Students will be placed at the technical level the faculty feel is appropriate for their 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 techniques of dance.

All dance majors are required to perform in WSUDE and/or dance program productions each semester. Junior and senior dance majors who are not accepted in WSUDE are required to perform in an approved dance-sponsored performance. This requirement does not apply to senior dance majors during the semester in which they present their senior concert. Approval for dance majors to perform in off-campus productions, which may conflict with dance program or WSUDE events, is made on a case-by-case basis. While we encourage students to work professionally as part of their training, we do not feel this should be done at the regular expense of student involvement in dance program/WSUDE productions. Students accepted in WSUDE may register for DANCE 320, Dance Performance, each semester.

All majors present a senior choreography concert to include choreography and performances determined in consultation with your major advisor and the director of dance. At least half of the concert must be choreographed by the student. The total length of the concert should be between 25 and 30 minutes. A written documentation of the choreography (including major artistic influences, compositional constructs used and approaches to choreography/performance) is supported by a creative notation of the project. These materials are submitted to the major advisor for approval. Following approval by the major advisor, students are scheduled for an oral defense of their work before the dance major faculty.

The dance faculty work with each student to create the best “fit” between student goals and interests in choreography/performance and faculty appraisal of each student’s needs for true artistic development. We seek to produce graduates who will be competitive with graduates of any other outstanding BFA training program in the country.

Bachelor of Fine Arts

The general graduation requirements of the University must be met as described in the Academic Information—Requirements for Graduation section of the Catalog. In addition, the following course requirements must be met.

Course Hrs

DANCE 201, Modern Dance Technique I:..........................24
DANCE 301, 401, 501, Modern Dance II, III, IV (Placement and advancement by audition and/or faculty consent only)..........................24
DANCE 210, 310, 410, Ballet I, II, III (Placement and advancement by audition and/or faculty consent only)..........................18
DANCE 120, 220, Jazz I, II
DANCE 105, 205, 305, Choreography I, II, III
DANCE 225, Survey of Dance History
DANCE 130B, Tap I
DANCE 315, Music for Dance
DANCE 330, Dance Performance
DANCE 415, Dance Kinesiology
THEA 253, Costuming for the Stage
THEA 345, Stage Lighting

In addition to the above required courses, a minimum of 6 hours should be selected from the following theatre, music, art, and dance courses with at least 3 hours in two disciplines.

THEA 143, The Art of the Theatre; 243, Acting I; 244, Stagecraft; 254, Stage Make-up; 623, Development of the Theatre I; or 624, Development of the Theatre II
MUS C 160, The Heritage of Western Music; 315, Music of the 20th Century; or 346, Styles of Jazz
ART H 122, Survey of Western Art: Renaissance and Baroque; 124, Survey of Western Art: Modern; 525, 20th Century Art Before 1945; 526, Art Since 1945; or ART F 136, Foundation Design I
DANCE 120J Advanced Tap; 227 Mime/Physical Theatre I; 230, Musical Theatre Dance I; 330, Musical Theatre Dance II; 335, Jazz III; 545, Methods of Teaching Dance; 605, Choreography for the Musical Theatre; 645, Practice in Teaching Dance

The remaining hours should be selected to fulfill General Education program requirements.

Dance Minor
A minor in dance consists of the following: 105, 120, 140, 201, 210, 225, 301, and 320.

Lower-Division Courses

DANCE 105. Choreography I (3). Focuses on the choreographic process. Students are required to do compositional studies which may include time, space, energy, design, dynamics, rhythm, movement, sequencing, phrasing, movement qualities, and transitions. Prerequisites: one semester of modern dance and equivalent to intermediate technical level. Corequisite: appropriate-level modern dance or ballet technique class required.

DANCE 120. Jazz I (3). Introduces jazz technique, emphasizing work in body isolation, rhythmic patterns and directions, basic steps, and history and development of jazz dance in America. Repeatable for credit.

DANCE 130. Varieites of Dance (1-2). No previous experience in dance required. A different form of dance may be offered each semester. Repeatable for credit.

DANCE 130B. Tap I (3). Introduces the principles of tap dance including rhythm, clarity of sound, syncopation, and weight shift.

DANCE 130C. Tap II (3). Continuation of DANCE 130B. An 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. Prerequisites: DANCE 130B and/or instructor's consent.


DANCE 150. Dance Workshop (1-4). Repeatable for credit.

DANCE 201. Modern Dance Technique I (2-3). 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.

DANCE 205. Choreography II (3). Further work in improvisation and composition. Study of form in composition. Culminates in a performance of solo works, duets, and small groups for an invited audience. Prerequisite: DANCE 105. Corequisite: appropriate-level modern dance or ballet technique class.

DANCE 210. Ballet I (2-3). Introduces basic technique, positions, basic steps, proper body alignment, classroom structure, and develop ballet vocabulary. Repeatable for credit.

DANCE 220. Jazz II (3). Continuation of DANCE 120 at intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 225. Survey of Dance History (3). General education introductory course. Overview of dance history emphasizing the development of the western tradition in social, cultural, and concert dance forms from ancient Greece to the present, including classical ballet, dance in the Americas, the development of modern dance, and current trends in "world dance."

DANCE 227. Mime/Physical Theatre I (3). An introductory course in creating non-verbal theatre to create conceptual statements, short plays, and abstract movement art. Student experiences gesture; isolation; 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.

DANCE 230. Musical Theatre Dance I (3). Introduces various musical theatre dance styles from different historical periods including social dance styles from 1900s through 1980s. Includes the dance audition and how to prepare and market the dancer for the stage. Repeatable for credit. Prerequisite: DANCE 120 and/or instructor's consent.

Upper-Division Courses

DANCE 301. Modern Dance II (2-3). Continuation of DANCE 201 emphasizing movement phrases. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 310. Ballet II (2-3). Continuation of DANCE 210. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.


DANCE 320. Dance Performance (1). Cross-listed as MUS 211U, 411U, 711U, THEA 180E, 380E. Wichita State University Dance Ensemble (WSUDE). Senior and/or Choreography concerts, musical theatre, or outside performances approved by dance faculty. Prerequisite: audition. May be repeated for credit.

DANCE 330. Musical Theatre Dance II (3). Continuation of DANCE 230 and further refinement of musical theatre dance styles. Emphasizes knowledge of past and present renowned Broadway choreographers. Integrates original choreography into course work as well as performance methods. Repeatable for credit. Prerequisite: DANCE 230 and/or instructor's consent.

DANCE 335. Jazz Dance III (3). Continuation of DANCE 220 at a higher level of technical skill. Includes advanced kinetic memory; flexibility, isolation, and controlled syncopation, and reflex. Prerequisites: DANCE 120, 220, and/or instructor's consent.

DANCE 401. Modern Dance III (3). Continuation of DANCE 301. Upper-intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 410. Ballet III (3). Continuation of DANCE 310. Upper-intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 415. Dance Kinesiology (3). Introduces principles of kinesiology for dance. Includes anatomy, physiology, and beginning concepts in the body therapies and movement analysis. Stresses structural and neuromuscular analysis of the human body as it relates to the demands of dance.

Courses for Graduate/Undergraduate Credit

DANCE 501. Modern Dance IV (3). Advanced level. Continuation of DANCE 401. Emphasizes professional technique and performance quality. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 505. Choreography III (3). Focuses on the choreographic process. Students create choreographic studies for
DANCE 510. Ballet IV (3). Continuation of DANCE 410. Advanced level. Emphasizes professional technique and performance quality. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 545. Methods of Teaching Dance (3). 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: DANCE 401 or 410.

DANCE 580. Senior Project (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 oral presentation are required. May be taken concurrently with DANCE 565 with instructor's consent. Prerequisite: Concurrent enrollment in appropriate level technique class, senior standing.

DANCE 605. Choreography for the Musical Theatre (3). Introduces the process of choreography for the musical theatre from casting the chorus in a musical to staging a solo to choreographing an ensemble of 15 dancers/singers. Includes interpreting the score and script for dance, staging numbers, and other projects to develop the craft of choreography for the musical stage. Prerequisite: DANCE 350 or instructor's consent.

DANCE 690. Special Topics in Dance (1-6). For individual or group instruction. Repeatable for credit with departmental consent.

Theatre (THEA)

Theatre offers a broad academic program, balanced by the extensive production schedule of the University Theatre—Mainstage, Second Stage; Readers Theatre; and Summer Theatre, a semi-professional company whose members are chosen by audition. The musical theatre program is a collaborative one in which students participate in musicals presented as part of the Theatre Series and the Opera and Musical Theatre Series, as well as in other performances in theatre, dance, and music.

Graduation Requirements

All theatre majors must participate in some area of the production of all University theatre plays, after consultations with faculty and staff. Students may choose one of four options: a BFA in performing arts/theatre performance, a BFA in performing arts/design and technical theatre, a BA in theatre, and a BFA in music theatre. In addition to the general education requirements, candidates for the BFA in performing arts must meet the following requirements.

Theatre Performance Track

A minimum of 80 hours, including THEA 143, 180, 221, 222, 225, 230, 241, 243, 244, 253, 254, 272, 342, 345, 350, 350, 455, 462, 624, 643, 650, 728; with 3 hours chosen from the following: THEA 218, DANCE 201, DANCE 210; and 6 hours chosen from the following: THEA 516, 517, 559, 560, 575, or 725.

Technical Theatre and Design Track

A minimum of 80 hours, including ART F 145, THEA 143, 180, 243, 244, 253, 254, 272, 342, 345, 350, 380, 450, 451, 544, 546, 623, 624, 647, 649, 653, 657, 728; with 3 hours chosen from the following: THEA 375 or 675; and with 5 hours chosen from theatre electives.

Musical Theatre Track

The BFA in musical theatre requires a minimum of 93 hours in three disciplines: 25 credits in theatre, 25 credits in art, and 10 in interdisciplinary studies. Theatre courses include: THEA 243Q, 254, 342, 610, 643; any two of the following: THEA 244, 253, 345; and any two of the following: THEA 222, 272, 375, 375/675, 651. Dance courses include: 120, 130B, 130O, 201, 210, 220, 230, 310, 330. Music requirements include: MUS A 113P, MUS 114F, 222Y, 322Y, MUS C 127Q, 128, 129, 380; Interdisciplinary courses include: THEA 180E, 330, 380E, 530, 555, 630. In addition, musical theatre majors will be expected to complete the 42 general education credits including THEA 260 as their Introduction to Fine Arts course and THEA 629Q or 624Q as a Fine Arts Further Study course. The total needed for graduation is 135 credits.

Bachelor of Arts in Theatre

A minimum of 42 hours in theatre, including the following required classes: THEA 221, 243, 254, 359, 623, 624, 728, and 1 credit each of 180 and 380; 8 hours of THEA 244, 253, and 345; and 12 hours of electives chosen from the remaining courses in the theatre curriculum, 6 of which must be upper-division.

Theatre Minor

A minimum in theatre consists of the following required classes: THEA 243, 244, 272, 359, 253, or 345 and 3 hours from the following: THEA 450, 623, or 624.

Communication/Theatre

For the Master of Art in Communication/Theatre, see Communication.

Lower-Division Courses

THEA 143. The Art of the Theatre (3). General education introductory course. An introduction to the theatre as an art form emphasizing critical appreciation from the viewpoint of the audience.

THEA 165. Stage Combat (1). Teaches the techniques of safe unarmed combat on the stage, including the safe execution of falls, rolls, punches, kicks, and the krap.

THEA 180. Theatre 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. May be repeated for credit.

THEA 180E. Musical Theatre Performance (1). Cross-listed as Dance 320 and MUS P 211U. 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.

THEA 200. Experience the Performing Arts (3). General education introductory course. Engages the student with vital experiences as audience members in the performing arts. Through live performance, talk-backs with artists, and critical evaluations, students gain firsthand knowledge of the various genres of performance. In addition to WSU's theatre, dance, and musical theatre productions, students gain historic perspectives through discussions and lectures from artists working in the field.

THEA 218. Stage Movement (3). Deals with basic warm-ups, strengthening and stamina exercises, and corrective/maintenance exercises to aid in the development of an expressive body for the actor.

THEA 221. Oral Interpretation (3). General education further study course. Cross-listed as COMM 221. The development of the mental, vocal, and analytical techniques essential to the oral interpretation of literature.

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. 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 241. Improvisation and Theatre Games (3). General education further study 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/her sense of stage presence, and ability to explore basic components of playtexts.

THEA 243. Acting I (3). General education further study course. Emphasizes the internal techniques of acting, characterization, and the actor's analysis of the play and the role.

THEA 244. Stagecraft (4). R: Lab art. Theory and practice of making, painting, and using scenery for the stage. Practical work on University Theatre Mainstage and Second Stage productions. Includes a two-hour lab.

TOUCHES ON ALL ASPECTS OF THE DESIGN PROCESS FROM CONCEPTION OF IDEAS TO FINAL PRODUCT ON STAGE. INCLUDES APPROACHES TO RENDERING THE COSTUME DESIGN, BASIC PATTERN-MAKING, FABRIC SELECTION, AND DYEING. PRACTICAL EXPERIENCE WITH UNIVERSITY THEATRE MAINSTAGE AND SECOND STAGE PRODUCTIONS. INCLUDES A TWO-HOUR LAB.

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 INTRODUCTORY COURSE. A SURVEY OF THE DEVELOPMENT OF MUSICAL THEATRE IN AMERICA FROM THE LATE 1880S TO THE PRESENT DAY. EXPLORES THE COLLABORATION OF COMPOSERS, DIRECTORS, CHOREOGRAPHERS, AND PERFORMERS THAT MARKS THIS UNIQUELY AMERICAN ART FORM.

THEA 272. STAGE AND THEATRE MANAGEMENT (3). ACQUISITIONS STUDENTS WITH THE FUNDAMENTALS OF STAGE AND THEATRE MANAGEMENT. STUDENTS STUDY ALL TECHNICAL ASPECTS OF PRODUCTION (BUDGETS, SCHEDULES, PROPERTIES, ETC.). IN ADDITION TO CLASSROOM PROJECTS, STUDENTS ARE REQUIRED TO WORK AS A STAGE MANAGER OR AN ASSISTANT STAGE MANAGER FOR A THEATRE PRODUCTION. PREREQUISITE: SOPHOMORE STANDING.

UPPER-DIVISION COURSES

THEA 300. DRAFTING FOR THE THEATRE (3). THE FUNDAMENTALS OF DRAFTING FOR THE THEATRE. INCLUDES DRAFTING EQUIPMENT, GEOMETRY, LETTERING, SYMBOLS, DRAWINGS (ORTHOGRAPHIC, ISOMETRIC, OBELIC, SECTIONAL) AND STANDARD DRAWINGS USED IN THEATRE FLOOR PLANS, SETS, ELEVATIONS, WORKING DRAWINGS, PERSPECTIVE. PREREQUISITE: THEA 244 AND ART F 145.

THEA 320. MUSICAL THEATRE ANALYSIS (2). ENABLES THE MUSICAL THEATRE MAJOR TO ANALYZE BOTH SCRIPT AND SCENE IN A VARIETY OF MUSICAL THEATRE STYLES TO ENHANCE PERFORMANCE SKILLS. DEALS WITH DRAMATIC STRUCTURE IN THE MUSICAL, DIFFERENT MUSICAL STYLES, AND PERFORMANCE PRACTICES AND HOW TO APPLY THIS AWARENESS INTO CHARACTERIZATION.


THEA 330. MUSICAL THEATRE LABORATORY (2). 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. JR. OR SR. MUSICAL THEATRE DANCE AND VOICE MAJORS ONLY; AND/OR PERMISSION OF THE INSTRUCTORS.

THEA 331. DIACriticalS 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: THEA/COMM 222.

THEA 342. ADVANCED ACTING (3). CONTINUED DEVELOPMENT OF TECHNIQUES UTILIZED IN THEA 243 WITH ADDITIONAL EMPHASIS ON CONTEMPORARY VOCAL AND MOVEMENT TECHNIQUES. PREREQUISITES: THEA 243 AND SOPHOMORE STANDING.

THEA 344. SCENE DESIGN (3). FUNDAMENTALS OF SCENE DESIGN. EMPHASIZES STRONG WORK IN PERSPECTIVE RENDERING, DRAFTING TECHNIQUES AND SCALE, AND PLAYSCRIPT AND SPATIAL ANALYSIS.

THEA 345. STAGE LIGHTING (4). LAB. ART. 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 MAINSTAGE AND SECOND STAGE PRODUCTIONS.

THEA 359. DIRECTING I (3). R; L ART. BASIC THEORIES AND PRINCIPLES OF STAGE DIRECTING AND PROBLEMS OF PRODUCING THE PLAY WITH PRACTICAL EXPERIENCE GAINED BY USE OF THE PROJECT METHODS. PREREQUISITE: THEA 243, 244, 272 OR DEPARTMENTAL CONSENT.

THEA 375. DIRECTED PROJECTS IN THEATRE (2-4). INDEPENDENT RESEARCH OR PRACTICAL AND CREATIVE PROJECTS IN THE VARIOUS AREAS OF THEATRE INCLUDING PRODUCTION, DESIGN, TECHNICAL THEATRE, MANAGEMENT, AND DRAMATIC LITERATURE. REPEATABLE FOR CREDIT TO A MAXIMUM OF 4 HOURS. PREREQUISITE: DEPARTMENTAL CONSENT.

THEA 380. THEATRE 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, PROPERTIES; THE DESIGN AND EXECUTION OF STAGE LIGHTING AND MAKEUP; THE ORGANIZATION AND PRACTICE OF THEATRE MANAGEMENT; AND PERFORMANCE. MAY BE REPEATED ONCE FOR CREDIT.

THEA 380E. MUSICAL THEATRE PERFORMANCE (1). CROSS-LISTED AS DANCE 320 AND MUS P 411. SEE THEA 180E.

THEA 385. THEATRE AS A MIRROR OF TODAY'S AMERICA (3). GENERAL EDUCATION ISSUES AND PERSPECTIVES COURSE. EXPLORES HOW CONTEMPORARY DRAMA REFLECTS THE ISSUES AND PERSPECTIVES OF DIFFERENT CULTURES AND GROUPS WITHIN AMERICA, INCLUDING AFRICAN AMERICANS, ASIAN AMERICANS, HISPANIC AMERICANS, FEMALES, 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 AND CONCERNS, AND SIMILARITIES. FOCUSES ON ISSUES ARISING BECAUSE OF DIVERSITY OF CULTURE, NATIONALITIES, RACE, GENDER, ETHNICITY, CLASS, AGE, RELIGION, AND POLITICS.

THEA 400. CONTEMPORARY THEATRE AND DRAMA: TOPICS (3). GENERAL EDUCATION FURTHER STUDY COURSE. INVESTIGATES THE MAJOR DEVELOPMENTS AND DIRECTIONS IN THE THEATRE AND DRAMA SINCE WW II. INCLUDES STUDIES IN DIRECTING, ACTING, THEATRE ARCHITECTURE, DESIGN, AND PRODUCTION METHODS, AS WELL AS DRAMATIC LITERATURE. PREREQUISITE: JUNIOR STANDING (60 HOURS) OR ABOVE.

THEA 451. PORTFOLIO REVIEW (1). SENIOR LEVEL. HELPS THE STUDENT TO PREPARE A COMPLETE PORTFOLIO OF WORK IN ONE OR A COMBINATION OF THE DESIGN AREAS, A RESUME, AND A PRESENTATION AS AN APPLICATION SUITABLE FOR A GRADUATE SCHOOL OR FUTURE EMPLOYMENT. PREREQUISITE: 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: SENIOR STANDING.

THEA 480. THEATRE INTERNSHIP (3-15). 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: JUNIOR STANDING OR DEPARTMENTAL CONSENT. GRADUATE STUDENTS MUST TAKE THEA 780. MAXIMUM OF 15 CREDITS OF INTERNSHIP ACTIVITY APPLICABLE TOWARD GRADUATION.

COURSES FOR GRADUATE/UNDERGRADUATE CREDIT

THEA 510. DESIGN PROJECT (1). ADVANCED WORK IN THE PROBLEMS OF STAGE LIGHTING, COSTUME DESIGN, OR SCENIC DESIGN. WITH THE PERMISSION AND SUPERVISION OF THE APPROPRIATE FACULTY MEMBER, THE STUDENT DESIGNS FOR SPECIFIC PRODUCTIONS FOR EITHER MAINSTAGE OR EXPERIMENTAL THEATRE. REPEATABLE ONCE FOR CREDIT IF TAKEN IN DIFFERENT DESIGN AREAS. PREREQUISITE: INSTRUCTOR'S CONSENT.

THEA 517. PLAYWRITING II AND III (3 & 3). GENERAL EDUCATION FURTHER STUDY COURSE. CROSS-LISTED AS ENGL 517 AND 518. THE WRITING OF SCRIPTS FOR PERFORMANCE. EMPHASIZES BOTH VERBAL AND VISUAL ASPECTS OF PLAYWRITING. IF POSSIBLE, THE SCRIPTS ARE GIVEN IN CLASS READINGS BY ACTORS. PREREQUISITE: 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 REFINE EXPERIENCE IN DIRECTING AND CHOREOGRAPHING UNDER FACULTY GUIDANCE AND SUPERVISION. JR. OR SR. MUSICAL THEATRE DANCE AND VOICE MAJORS ONLY; AND/OR PERMISSION OF THE INSTRUCTORS.

THEA 544. ADVANCED STAGECRAFT (3). R; L ART. EXPLORES ADVANCED CONSTRUCTION TECHNIQUES FOR THE FABRICATION OF STAGE SCENERY AND STAGE PROPERTIES. SUCH OPERATIONS MAY INCLUDE WELDING, VACUUM FORMING, CARPENTRY AND WORKING WITH A VARIETY OF NEW MATERIALS. STUDENTS COMPLETE A RESEARCH PROJECT AND PRESENTATION/DEMONSTRATION OF RESEARCH FINDINGS. INDEPENDENT PROJECTS RELATING TO MATERIALS AND TECHNIQUES STUDIED ARE PURSUED IN ARRANGED ISLO. PREREQUISITE: THEA 244.

THEA 555. Senior Project (1). Cross-listed as MUS P 555. An 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 talent in song, dance, acting, directing, and choreography. For majors only. Prerequisite: Instructor's consent.

THEA 559. Directing II (3). R; L art. Staging and rehearsal techniques emphasizing problems of the period and stylized play. Prerequisite: THEA 359 or departmental consent and junior standing.

THEA 590. Theatre: Special Topics (2-3). 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 richer preparation for their field of study. Topics include new technology, new materials, contemporary explorations in performance, and in-depth studies of production methods.

THEA 590E. Musical Theatre Performance (1). Cross-listed as DANCE 320 and MLS P 71H. See THEA 180E.

THEA 610. Directing the Musical (3). An interdisciplinary course utilizing interdepartmental expertise (theatre, dance, music) to teach the student how to produce a musical. Prerequisite: 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 research, 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. Development of the Theatre I (3). General education further study course. 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.

THEA 624. Development of the Theatre II (3). General education further study 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. Musical Theatre & Opera Audition (3). Cross-listed as MUS P 790E. A practicum course which develops techniques and audition repertory singers will 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: 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, Shakespearean, and Restoration styles. Prerequisites: THEA 243, 342, and 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 scenicographic techniques and exercises in model building. Student designs 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. Prerequisites: THEA 244 and 344.

THEA 649. Stage Lighting II and Theatre Sound (3). Continues the study and application of the theories and techniques of THEA 349, emphasizing advanced concepts of design, and provides an introduction to theatre sound production. Prerequisite: 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 characters in those scenes studied, integrating the elements of the actor's craft learned in the prerequisite courses. Prerequisites: THEA 463 and junior standing.

THEA 653. History of Costume (3). R; L art. 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: THEA 253 or departmental consent.

THEA 657. Costume Design I (3). Covers the techniques of costume design for the stage. Students strengthen and expand their knowledge of techniques in costume design for the stage, film, and television. Prerequisites: ART F 145, THEA 253.

THEA 675. Directed Study (2-4). Cross-listed as COMM 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

THEA 725. Dramatic Theory (3). Critical examination of selected aesthetic theories of the theatrical arts and the relationship of the theories to major dramatic works and theatrical periods. Prerequisites: THEA 623, 624 or departmental consent.

THEA 728. Playscript Analysis (3). Develops students' abilities to analyze playscripts from the point of view of those who face the task of staging them. Focuses on studying and testing practical methods of analysis developed by outstanding theatre directors, teachers, and critics. Collective analysis and individual projects are part of the course work. Prerequisite: THEA 623 or 624.

THEA 780. Theatre Internship (3-15). Advanced theatre production work as arranged by students in directing, acting, scenery, and lighting; costume design and construction; or theatre management with a professional theatre company. Work is evaluated by graduate faculty. Prerequisite: junior standing or departmental consent. Total of internship activity applicable toward graduation is 15 credits.

Courses for Graduate Students Only

THEA 820. Investigation and Conference (2-3). Cross-listed as COMM 820. Directed research and experimentation for graduate students in some phase of (a) public address, (b) theatre history and production, (c) radio-television, or (d) the teaching of speech. Repeatable for credit up to a total of 6 hours.

THEA 823. History of Dramatic Criticism (3). A survey and analysis of major critical theories from Aristotle to the present.

THEA 824. Development of Modern Theatre Styles (3). An examination of the major movements in the modern theatre since 1870. Emphasizes both literary and physical elements of styles.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L means 4 hours of lecture and 2 hours of lab.
The College of Health Professions was established in 1970. Programs of study are offered in dental hygiene, health services management and community development, medical technology, nursing, physical therapy, physician assistant, and public health. 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 emergency medical training (MEET is currently suspended), 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 science, and business. In addition to the on-campus academic experience, health professions students learn in clinical 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 within Wichita and surrounding areas.

Programs in the college are accredited through the following agencies: the Commission on Dental Accreditation of the American Dental Association, the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, National League for Nursing, Kansas State Board of Nursing, Council on Education for Public Health, Kansas Board of Emergency Medical Services, the Commission on Accreditation of Allied Health Education Programs, 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 one has been convicted of a felony, and in some cases a misdemeanor. Prospective applicants are encouraged to consult with one’s chosen professional governing or licensing organization for more detailed information before applying.

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: observation; communication; sensory and motor coordination and function; conceptualization, integration, and quantification; and 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.

Degrees Offered

Undergraduate

Of the programs offered at the undergraduate level, five lead to bachelor’s degrees—dental hygiene, health services management and community development, medical technology, nursing, and physician assistant.

In addition, the Associate of Science is awarded in dental hygiene. Students in the Emergency Medical Training (EMT) program receive a certificate of completion. The Associate of Applied Science for Mobile Intensive Care Technicians (MICT) or paramedics is currently suspended.

Graduate

Three programs lead to the master’s degree—public health, nursing, and physical therapy. Admission to the Master of Public Health (MPH) program requires a bachelor’s degree and the fulfillment of additional requirements.

The master of Public Health (MPH) Program prepares its graduates to undertake leadership positions across the health care system. This 36 credit hour degree program is appropriate for individuals interested in acquiring the multi-dimensional and interdisciplinary knowledge and skill base necessary to: 1) build and strengthen the organizations and agencies that deliver health care and public health services to our nation’s communities and 2) partner effectively with community residents and representatives to develop healthy communities and enhance well being at the population level. A graduate certificate in public health is available for individuals whose primary goal is public health training.

A Master of Science in Nursing (MSN) program, designed to meet the needs and professional goals of the student, is offered for part- or full-time study. Specializations offered are clinical nurse specialist in adult health and illness, and pediatrics; nurse practitioner in acute care, family, pediatrics, and psychiatric/mental health nursing; nurse midwife; and the MSN in nursing and health care systems administration or a dual degree, MSN and Master of Business Administration. Role development in education, informatics, and administration is available. Post-master’s (graduate) certificates are also offered.

An entry-level master’s program (MPT) is offered in physical therapy. The program prepares graduates to enter the clinical practice of physical therapy, where the focus is on clinical skills, education, research, and administration. Graduates are prepared to specifically evaluate and treat neuromuscular, musculoskeletal, cardiopulmonary, and sensori-motor functions.

More information on graduate programs is available in the WSU Graduate Bulletin.

Policies

Undergraduate Admission

Students who have declared a major in one of the programs in health professions will be admitted directly to the College of Health Professions upon admission to WSU.

Admission to the college does not guarantee acceptance into any of the undergraduate professional programs. To be admitted to a professional program, students must be accepted into Wichita State University and the College of Health Professions, apply for admission to a particular program, and be accepted by the admissions committee of that program. See the individual programs for application procedures.

Progression

To progress in courses offered in the professional programs, students must earn an S, C, or D in individual courses required for the major and any other courses so designated by the program. In courses which combine theory and clinical practice, students must earn an S, C, or D in both segments of the course in order to pass the course.

Students who fail to meet these requirements may be dismissed from the program. If the student’s overall grade point average remains at 2.000 or above, the student may petition the Committee on Admission and Progression in his/her program to remain in the program. Students should check the individual program sections of the Undergraduate Catalog for additional requirements.

Probation and Dismissal

Students are placed on probation for the next term in which they enroll if their cumulative or overall WSU grade point average falls below 2.000. Students remain on probation even though they earn a 2.000 grade point average in the term during which they are on probation if their cumulative and WSU grade point averages are not at least 2.000. Probation is removed when a student’s cumulative and WSU
grade point average meets the required academic level.

Students on probation may not enroll for more than 12 semester hours in the fall or spring semester, or 5 hours in the Summer Session, excluding 1 hour of physical education. Exception to this limitation may be made on the recommendation of a student’s advisor with the approval of the dean of the college.

Students on probation are subject to academic dismissal from the college if their grade point average for the semester during which they are on probation falls below 2.00. Dismissal will not occur until students fail to achieve a 2.00 grade point average for the last 12 hours attempted while on probation.

Students assigned to affiliating health facilities for clinical education will be subject to dismissal from the professional program for failure to comply with the rules, regulations, or professional standards governing that facility.

Exceptions
Students may petition the program, college, or University for exception to any requirement. Students are required to discuss all petitions with their college/program advisor prior to submission of the petition. Petitions may or may not be approved by the body to whom the petition is made.

Graduation Requirements
All health professions students who are pursuing bachelor’s degrees must meet general University requirements and fulfill the course requirements specified in the curriculum of the department offering the degree.

A minimum of 30 credit hours in course work in residence at WSU is required for all students seeking bachelor’s degrees at WSU. In addition, these students must also complete all University, college, and departmental requirements for the degree being sought including a minimum of 45 hours of upper division courses. Completion of University courses is counted toward fulfillment of the residency requirement. For specific requirements, consult the individual program sections of the Catalog.

Credit by Examination
Some of the programs in the College of Health Professions offer equivalency or competency examinations. By taking these exams, students may earn credit or receive advanced placement. To qualify for such exams, students must:

1. Be accepted into the program (major) in which the course is offered as part of the professional curriculum.
2. Meet any other eligibility requirements stated by the particular program. (See the appropriate program’s section in the Catalog.)

Exception to these requirements may be granted to non-majors by the chairperson/director of the program offering the course.

Students should check with their program advisors regarding eligibility and prerequisite requirements for this type of examination. Transcripts will identify the courses and credits received by students taking equivalency/competency examinations. Fees are assessed, in advance, for the administration of the examinations.

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 advisors 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 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 Affiliation
The college, because of its location in Wichita, has affiliation agreements with various excellent health facilities which assist in the clinical education of students. The clinical 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 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 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.

Special Certificate Programs
The College of Health Professions offers a certificate program in basic emergency care training. A graduate certificate in public health is also offered.

Degree Requirements and Course Listings

School of Health Sciences
The School of Health Sciences offers programs leading to the Bachelor of Science in Dental Hygiene, the Bachelor of Science in Health Services Management and Community Development, the Bachelor of Science-Medical Technology, and the Bachelor of Science-Physician Assistant.

In addition, the Associate of Science is awarded in dental hygiene. The school also offers a certificate in Basic Emergency Medical Training (BEMT) and the Associate of Applied Science for Mobile Intensive Care Technicians (AICLT) or paramedics (currently suspended).

The School of Health Sciences offers the Master of Public Health and Master of Physical Therapy degrees. For more information about the master’s degree programs, refer to the WSU Graduate Bulletin.

Specific requirements for each degree are described under the appropriate listing below.

Health Professions-General (HP)

Lower-Division Courses

HP 101. An Introduction to the University (3). Assists students in acquiring the academic and life skills essential to become a successful college student. Provides information, resources, and support to promote opportunities for success. Introduces and utilizes resources within the University and the community. Recommended for all degree-bound students entering WSU for the first time.

HP 150. Workshop in Health Professions (1-10). Intensive study of special topics related to health professions practice, education, and research.

HP 151. Career Networking Experience (1). Offers students the opportunity to participate in a mentoring relationship with a WSU health professions alumni. Students experience what it’s like working in a career they are considering, interact with professionals in their chosen career, and become part of the professional culture of the workplace. Seminars taught by WSU faculty/staff provide indepth information regarding stress management, corporate communication, job search skills, and networking. Graded Cr/Nc. Prerequisites: instructor’s consent, at least 12 credit hours completed, and 2.50 GPA.

HP 201. Exploring the Health Professions (2). Introduces the health care field with an overview of today’s health care system. Explores the attributes needed to be a health professional, the coping mechanisms needed, what it means to be a student in the professional programs, and health care challenges from both a patient’s and provider’s point of view. Introduces various health professions and allows students to explore a field of their choosing. Co-requisite: HP 151.
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.

Upper-Division Courses

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 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 to a maximum of 6 credit hours with program consent, upper-division status.

General education issues and perspectives 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. Prerequisite: BIOL 104, 106 or 223.

Courses for Graduate/Undergraduate Credit

HP 370. 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 to a maximum of 6 credit hours with program consent, upper-division status.

HP 570. Workshop in Health Professions (1-4). An opportunity for intensive study of special topics related to health profession practice, education, or research.

Basic Health Sciences (HS)

Upper-Division Courses

HS 301. Clinical Pharmacology (3). Surveys therapeutic terms, drug actions, dosage, toxicology, and application of drugs in the clinical setting. Prerequisites: BIOL 223 or equivalent and CHEM 103 or III 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. Prerequisites: BIOL 223 and enrollment in Dental Hygiene Program.

HS 331. Principles of Dietetics and Nutrition (3). A study of human dietary 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 the health professional 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.

Courses for Graduate/Undergraduate Credit

HP 400. Introduction to Pathophysiology (4).

HS 631. Normal and Clinical Nutrition. (4). Studies human nutritional needs in normal development and the life cycles. Covers composition, classification and function of foods and nutrients, food handling and public health safety and laws, and nutrition in special situations. Includes a study of principles of nutritional support and diet as therapy. Addresses the dietary concerns of a variety of clinical disorders, including gastrointestinal disorders, diabetes mellitus, cancer, burns, liver disease, obesity and weight loss, eating disorders, HIV infections, kidney and cardiovascular disease, parenteral and enteral nutrition, and surgical conditions. Studies nutritional assessment, data interpretation, care planning, record keeping, and client communications. Prerequisites: general chemistry, anatomy, and physiology.

HS 700. Gross Anatomy. (6). 3R; 9L. For students in the physical therapy program. Study of the structure of the human body emphasizing integration of anatomical information with human functional abilities. Prerequisites: four semesters of biological sciences or program consent.

HS 710. Applied Clinical Pharmacology. (3). Discusses clinical applications of selected drugs commonly prescribed in the primary care setting as well as the follow-up management of common chronic diseases. Discusses pharmacological management 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: PHS 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. Prerequisites: admission to graduate nursing program and department consent or completion of PHS 710 and admission to PA professional program.

HS 720. Neuroscience. (3). 3R; 2L. Integration of neuroanatomy and neurophysiology of the central and peripheral nervous systems with human functional abilities. Prerequisite: HS 700 or program consent.

Dental Hygiene (DH)

Associate of Science

The associate degree 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 all people. Upon completion of the five-semester program (including one summer), students are eligible to take the national, regional, and state examinations for licensure as dental hygienists. Wichita State's program is accredited by the American Dental Association's Commission on Dental Accreditation.

Professional Curriculum

Admission. In addition to fulfilling all requirements for admission to the University, students wishing to enroll in the dental hygiene program must apply for, and obtain approval of the Admissions Committee of the Dental Hygiene Department. Acceptance into the College of Health professions does not guarantee admission into the dental hygiene program. Persons interested in the dental hygiene program should direct their inquiries to the Chairperson, Dental Hygiene Department, Wichita State University, Wichita, Kansas 67260-0144.

To qualify for admission to the dental hygiene program, applicants must be high school graduates or have passed the General Education Development test.

Students must meet the following admission criteria. They must:

1. Have taken or be enrolled in BIOL 223, Human Anatomy and Physiology; CHEM 103, General Chemistry; ENGL 101, College English I; PSY 111, General Psychology; BIOL 220, Introduction to Microbiology; and HS 331, Principles of Dietetics and Nutrition

2. Maintain a minimum grade point average of 2.500 in all college work.
Students are required to purchase uniforms and instruments needed during clinical learning experiences. Students are also required to purchase professional liability insurance and personal health insurance on an annual basis. In addition, students are required to provide their own transportation to and from the health care agencies used for clinical experiences.

Information related to special requirements is available to students in the office of the Dental Hygiene Department, Wichita State University, Wichita, Kansas 67260-0144.

**Bachelor of Science**

The Bachelor of Science in Dental Hygiene degree is available to registered dental hygienists who seek to expand their role into such areas as community dental hygiene and education. Students interested in more information should contact the college dean’s office student advisor.

Registered dental hygienists must:
1. Submit verification of current license to practice as a dental hygienist.
2. Submit official transcripts of college courses and records verifying completion of an accredited dental hygiene program.

Transcript evaluation will determine the exact general education and dental hygiene associate degree requirements to be completed.

**Course**

**Hrs.**
- **Prerequisite courses for admission to the dental hygiene program:**
  - BIOL 223, Human Anatomy and Physiology .......................... 5
  - CHEM 103, General Chemistry ........................................... 5
  - ENGL 101, College English I ............................................. 3
  - PSY 111, General Psychology .............................................. 3
  - BIOL 220, Introduction to Microbiology ................................ 4
  - HIS 331, Principles of Dietetics and Nutrition ...................... 3

**Additional Basic Skills requirements:**
- ENGL 102, College English II .............................................. 3
- MATH 111, College Algebra .................................................. 3
- Electives from the following categories:
  - Introductory Fine Art (1) .................................................. 3
  - Introductory Humanities (2) ............................................. 6
  - Further Study or Issues and Perspectives in Fine Arts or Humanities (1) .................................................. 3
  - Further Study or Issues and Perspectives in Social or Behavioral Science (1) .................................................. 3
  - Introduction to Natural Science and Math (1) .......................... 3-5
  - Further Study or Issues and Perspectives in Natural Science and Math (1) .................................................. 3-5

**Professional Curriculum Core:**
- DH 420, Educational Methodology in Dental Hygiene .................. 3
- DH 452, Community Dental Health Management .......................... 3
- DH 468, Field Internship ...................................................... 3
- PHS 230, Overview of Health Services Delivery .......................... 3
- CESP 704, Introduction to Educational Statistics (or equivalent) .... 3

**Electives (6 hours):**
- DH 462, Community Dental Health Management .......................... 3
- DH 470, Issues in Dental Hygiene ............................................ 3
- DH 481, Cooperative Education .............................................. 3
- PHS 343, Program Planning/Development in Health Service Organizations .................................................. 3
- HIS 400, Introduction to Pathophysiology ................................ 3

**Lower-Division Courses**

**DH 101. Preclinical Dental Hygiene (5).** 3R; 7L. Fall semester only. Presents the basic philosophy of dentistry and dental hygiene. Students interested in more information should contact the college dean’s office student advisor.

Transcript evaluation will determine the exact general education and dental hygiene associate degree requirements to be completed.

**Course**

**Hrs.**
- **Additional Basic Skills requirements:**
  - ENGL 102, College English II .............................................. 3
  - MATH 111, College Algebra .................................................. 3

**Upper-Division Courses**

**DH 201. Dental Hygiene Concepts I (5).** Spring semester only. Prepares dental hygiene students to assess, plan, implement, and evaluate the clinical care of patients. Emphasizes oral health promotion, dental hygiene diagnosis, patient motivation, and procedures for controlling plaque. Provides the tools to enable students to analyze individual patient needs and design appropriate professional and home care regimens. Prerequisite: program consent.

**DH 202. Clinical Dental Hygiene I (3).** Spring semester only. Emphasizes providing patient care in a clinical setting and nutritional counseling. Stressing basic instrumentation techniques as well as the prevention of dental disease. Develops patient evaluation and treatment planning skills. Prerequisite: program consent.

**DH 203. Clinical Dental Hygiene II (3).** Spring semester only. Emphasizes providing patient care in a clinical setting and nutritional counseling. Stressing basic instrumentation techniques as well as the prevention of dental disease. Develops patient evaluation and treatment planning skills. Prerequisite: program consent.

**DH 281. Cooperative Education Field Study (1-8).** Provides the 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 and approved by appropriate faculty sponsors and cooperative education coordinators. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

**DH 290. Oral Anatomy (1).** 1R; 1L. Studies tooth morphology, arrangement, function, and characteristics. Emphasizes the role of tooth morphology as it influences the practice of dental hygiene. Prerequisite: program consent.

**DH 295. Oral Histology and Embryology (2).** Studies the developmental and microscopic anatomy of the oral cavity including hard and soft tissues. Prerequisite: program consent.

**DH 301. Dental Materials (2).** 1R; 1L. Fundamental instruction in practical laboratory phases of modern technique and the manipulation of materials and equipment used in dental practice and expanded auxiliary practice. Prerequisite: program consent.

**DH 302. Clinical Dental Hygiene II (2).** Continued development of proficiency of clinical techniques emphasizing advanced periodontal instrumentation techniques. Class meets during Summer Session. Prerequisite: program consent.
DH 303. Dental Hygiene Concepts II (2). Fall semester only. Seminar discussion of current and advanced clinical concepts as well as other topics related to the treatment of the medically compromised patient. Prerequisites: DH 201 and program consent.

DH 304. Dental Hygiene Concepts III (2). Spring semester only. Discussion of dental specialties and exploration of the rationale for treatment prescribed by the dentist. Prerequisite: program consent.

DH 307. Ethics and Jurisprudence (2). Spring semester only. Surveys laws governing the practice of dentistry and dental hygiene, types of professional work for which students may qualify; the economics and ethics of the profession. Prerequisite: program consent.

DH 310. Community Dental Hygiene (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 setting, 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 and give presentations in the community.

DH 314. Introduction to Periodontics (3). Spring semester only. 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 appropriaterome 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, occlusal evaluation, antibiotics, and antimicrobial agents, periodontal dressing, and suture removal. Emphasizes the evaluation of a periodontal case study resulting in the development of a periodontal treatment plan. Prerequisite: program consent.

DH 316. Pain Management (2), 1R; 2L. Fall semester only. Enhances the dental hygiene student's knowledge of the mechanisms of pain, the control of dental pain through the administration of topical anesthetics, infiltration, and block anesthesia; and use of nitrous oxide. Emphasizes a thorough understanding of the pharmacology of dental drugs and their interaction with the client's current conditions and medications. Prerequisite: HS 301.

DH 323. Clinical Dental Hygiene III (3). 12L. Fall semester only. Continuation of clinical proficiency and utilization of various scaling techniques and instruments. Prerequisite: program consent.

DH 324. Clinical Dental Hygiene IV (4). 16L. Spring semester only. Final semester of clinical dental hygiene. Students utilize information and skills acquired in previous courses and continue to demonstrate proficiency and increase their level of competency in all objectives from DH 202, 302, and 323. Prerequisite: 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. Graded CR/NC. Prerequisite: must be a graduate of an accredited dental hygiene program.

DH 350. Pain Management (2). Updates the practicing dental hygienist in the didactic and clinical administration of infiltration and block anesthesia and the use of nitrous oxide. Emphasizes the mechanics of pain, a thorough understanding of the pharmacology of dental drugs and their interactions with the client's current conditions and medications, and clinical experience in the administration of infiltration and block anesthesia. Prerequisites: must be licensed dental hygienist and graduate of an accredited dental hygiene program.

DH 350. Concepts and Principles of Dental Hygiene Administration (3). Examination and seminar discussion of the following topics: administrative theory; principles and concepts of organizations, history of management thought, planning and effecting innovations, business administration and finance, operations, motivation, leadership, conflict, and communication. Prerequisite: program consent.

DH 409. Introduction to Research for the Health Professions (1). An introduction to the scope, format, and use of research in the health professions. Develops the ability to be a critical consumer of professional literature and the initiator of research projects. Prerequisite: program consent.

DH 420. Educational Methodology in Dental Hygiene (3). Seminar dealing with the implementation of teaching and learning theory and its application in the formation of a course of instruction. Students gain experience in teaching undergraduate students in laboratory/clinical settings. Prerequisite: program consent.

DH 425. Advanced Periodontics (3). An in-depth study of advanced periodontal, diagnostic, and treatment modalities with application to the clinical setting utilizing evidence-based patient specific protocols. Expands student's ability in assessment, diagnostic, and treatment planning skills. Prerequisite: DH 314 or equivalent.

DH 430. Curriculum Development in Dental Hygiene Education (3). A continuation of DH 420. Focuses on the development of an educational curriculum for a dental hygiene program. Additional opportunities are available for instruction in the clinical/laboratory setting. Prerequisite: program consent.

DH 452. Community Dental Health Management (3). Focuses on the oral health care delivery system and the role of the dental hygienist in managing oral health care. Emphasizes community and dental public health settings and population groups underserved by the current private practice setting. Prerequisites: DH 310 or equivalent and HES 320.

DH 455. Personnel Management in Dental Hygiene (3). Analysis of personnel management and completion of a personnel simulation, including job analysis, recruitment, interview, testing, job evaluation, wage determination, training, employee evaluation, and career development. Prerequisite: program consent.

DH 462. Special Projects in Dental Hygiene (1-3). Individual study of selected topics, didactic and/or clinical, to enhance the student's knowledge base and competencies in clinical or community dental hygiene practice.

DH 465. Research in Dental Hygiene (3). A practical approach to the application and acquisition of basic research techniques as related to community dental public health or clinical dental hygiene. Includes the student and identification of research problems, review of related literature, development of research hypotheses, and research methodology. Prerequisite: DH 462.

DH 468. Field Internship (3). The research proposal or community dental health project developed in DH 465 is implemented. Student collects data concerning a special problem in community dental health or clinical dental hygiene, undertakes data analysis, and draws conclusions relative to the stated hypothesis. Prerequisite: DH 465.

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 dental health care delivery system.

DH 481. Cooperative Education (3). An independent study course for the registered (licensed) dental hygienist to obtain college credit for their work experience when accompanied by an academic advisor determined by the student in consultation with a faculty advisor. Prerequisites: Associate of Science in Dental Hygiene or equivalent; enrolled in Bachelor of Science in Dental Hygiene program.

**Medical Technology (MED T)**

The medical technologist's role in the health care team is to accurately and precisely perform laboratory procedures in order to aid in the prevention, diagnosis, and treatment of diseases. Most medical technologists are employed in medical laboratories in settings such as hospitals, clinics, reference labs, and physicians' offices. The medical technologist 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.
Bachelor of Science in Medical Technology

The Bachelor of Science program in medical technology, requiring a total of 131 hours, includes 72 hours of pre-medical technology curriculum in the basic sciences, social sciences, humanities, and communication. The University-based program includes structured lecture and laboratory experiences in the University's student clinical laboratory as well as in the program's affiliated laboratories: Wesley Medical Center, Via Christi-St. Francis Campus, Via Christi-St. Joseph Campus, the Wichita Clinic, and the Veterans Administration Medical Center, Wichita; Hutchinson Hospital Corporation, Hutchinson; Central Kansas Medical Center, Great Bend; Asbury-Salina Regional Medical Center, Salina; and St. Catherine Hospital, Garden City; Colmery-O'Neil Veterans Hospital and St. Francis Medical Center, Topeka, and Aspen Valley Hospital, Aspen, CO. Upon successful completion of the program, students are granted the Bachelor of Science in medical technology and are eligible to sit for the national certification examinations.

Preprofessional Curriculum

Course                                                                                     Hrs.
Basic Skills                                                                                   12
ENGL 101 and 102, College English 1 and II .......................................................... 6
COMM 111, Public Speaking .................................................................................. 3
MATH 111, College Algebra .................................................................................. 3
Fine Arts and Humanities                                                                       12
One Introductory course from a Fine Arts discipline ..................................................... 1
One Introductory course from each of two Humanities disciplines .................................... 6
A Further Study course from same discipline as Introductory course or an Issues and Perspectives course in Fine Arts or Humanities ..................................................... 3
Social and Behavioral Sciences                                                               9
PSY 111, General Psychology ............................................................................... 3
One Introductory course from a different Social and Behavioral Sciences discipline ............ 3
A Further Study course from same discipline as Introductory course or an Issues and Perspectives course in Social and Behavioral Sciences ..................................................... 3
Natural Sciences and Mathematics                                                             48
Biol 210, General Biology I .................................................................................. 4
Biol 211, General Biology II ............................................................................. 4
Biol 223, Introduction to Anatomy and Physiology ................................................. 5
Biol 330, General Microbiology .................................................................................. 5
Chem 111, General Chemistry* ................................................................................. 5
Chem 112, General and Inorganic Chemistry* .................................................................. 5
Course coverage in organic chemistry (CHEM 531, 5 hours; or CHEM 533 and 534, 5 hours) .. 5
CHEM 661, Introduction to Biochemistry, or HS 400, Introduction to Pathophysiology ....... 4
MED T 405, Medical Immunology ........................................................................... 3

Other Requirements

Students are required to provide their own transportation to the clinical sites. Students are required to purchase professional liability insurance in the amount of not less than $100,000/$300,000. Students must provide evidence of a completed physical examination, including a tuberculin skin test, rubella, rubeola titer, and hepatitis immunization prior to their clinical assignments in the affiliate laboratories.

Lower-Division Courses

MED T 160, Introduction to the Clinical Laboratory Sciences (2), 1R, 2L. A study of clinical laboratory disciplines, including hematology, immunohematology, chemistry, microbiology, cytology, and histology, through an examination of laboratory testing in each discipline concerning the role of the clinical laboratory in the health care system. Suitable for majors to explore career selection and non-majors who come in contact with clinical laboratories either as a health professional or as a consumer.

MED T 281. 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 and the cooperative education coordinator. Repeatable for credit. Prerequisites: basic requirements for admission include successful completion of the freshman year and satisfactory academic standing prior to the first job assignment.

Upper-Division Courses

MED T 310. Clinical Laboratory Services (1). An overview of the services and information provided by the clinical laboratory. Emphasizes basic procedures and interpretation of data. Prerequisite: Limited to Physician Assistant students in professional programs.

MED T 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: Program consent.

MED T 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: BIOL 223.

MED T 406. Foundations of Laboratory Practices (2). An introduction to clinical laboratory skills and instrumentation. Includes laboratory safety specimen collection and processing, medical terminology, and use and care of the microscope. Prerequisite: Program consent.

MED T 411. Special Topics (1-6). Supervised intensive study of special topics and problems related to health professions. Repeatable to a maximum of 6 hours. Prerequisite: Program director's consent.
MED T 411A. Special Topics in Clinical Chemistry (1). Review of current quality control procedures, biological variables, and interactions factors affecting test results. Prerequisite: BSMT or equivalent and MT/CLS certification.

MED T 411B. Special Topics in Hematology (1). Reviews RBC, WBC, platelet morphology, and cell differentiation, along with a summary of the laboratory features associated with various anemias and leukemias. Prerequisite: BSMT or equivalent and MT/CLS certification.

MED T 411C. Special Topics in Immunohematology (1). Generalist training in immunohematology. Through lecture, discussion, and demonstration, technologist explores transfusion products and diagnostic services in a modern blood bank. Prerequisite: BSMT or equivalent and MT/CLS certification.

MED T 411D. Special Topics in Microbiology I (1). Reviews gram stain and media reactions, the new classification of organisms, rapid identification methods, and issues of antimicrobial resistance. Gram positive cocci, gram negative cocci, gram positive bacilli, enterobacteriaceae, non-fermenters, anaerobes, mycobacteria, and miscellaneous organisms. Prerequisite: BSMT or equivalent and MT/CLS certification.

MED T 411E. Special Topics in Microbiology II (1). Reviews virology, mycology, parasitology, and morphological characteristics used in the identification of organisms. Focuses on laboratory methods and test interpretation used in the clinical laboratory. Prerequisite: BSMT or equivalent and MT/CLS certification.

MED T 411F. Special Topics in Urinalysis/Hemostasis (1). Urinalysis segment reviews current quality assurance requirements, urine sediment, and correlation of physical, chemical, microscopic tests with clinical significance. In hemostasis, review coagulation abnormalities using a case study approach. Emphasizes the laboratory tools used in diagnosing various coagulopathies. Prerequisite: BSMT or equivalent and MT/CLS certification.

MED T 411G. Special Topics in Forensic Science (2). An exploration of concepts and principles of forensic science related to investigation of injury and death. Special topics in forensic pathology and clinical practice such as medicolegal evidence, violence injury and environmental pathology are included.

MED T 411I. Special Topics in Consumer Understanding of Laboratory Values (1).

MED T 430. Bioterrorism: Facts and Fiction (3). The course is designed to provide a background for the discussion of the natural and human causes of the determinants/trends that influence the agents of bioterrorism including those of emerging and re-emerging diseases. Popular literature, both fiction and non-fiction; TV and printed news items, and websites will serve as sources of information. Topics will be generated by current events and issues generated by the guest lecturers.

MED T 450. Clinical Chemistry I (4). A study of the principles, concepts, and techniques of basic clinical laboratory instrumentation including absorbance, spectrophotometric, ultraviolet, emission, fluorometric and nephelometric techniques utilized in the clinical chemistry laboratory for the analysis of serum, plasma, and other body fluids.

MED T 451. Clinical Chemistry I Laboratory (1). 3L. Application of the theory of the procedures and techniques used for colorimetric, spectrophotometric, and ultraviolet analysis of serum plasma and other body fluids for clinically significant substances.

MED T 452. Analysis of Body Fluids (3). 2R; 3L. Includes the study of renal physiology, routine urinalysis, and renal function tests. Also encompasses the principles and techniques involved in the analysis of cerebrospinal fluid, feces, gastric fluid, sputum, amniotic fluid, ascitic fluid, duodenal fluid, salivary fluid, and seminal fluid.


MED T 457. Clinical Chemistry II Laboratory (1). 3L. A laboratory course encompassing the application of the principles of technique appropriate to the evaluation of methodology, acid-base balance, advanced enzyme quantification, endocrinology, and toxicology. Prerequisite: MED T 456, concurrent enrollment, or program approval.

MED T 459. Applied Clinical Chemistry (3). Application of clinical chemistry principles to clinical analysis of body fluids in a clinical laboratory setting. Prerequisites: MED T 450, 456 and program consent. Offered CN/C only.

MED T 460. Hematology I (3). Emphasizes the theory underlying basic procedures performed in the hematology laboratory and the relationship between these procedures and the diagnosis of disease. Prerequisites: BIOL 222 and program consent.

MED T 461. Hematology I Laboratory (1). 3L. Emphasizes the principles of the basic procedures used in the hematology laboratory, including complete blood counts, normal and abnormal differentials, and miscellaneous hematology tests. Prerequisites: MED T 460 or concurrent enrollment and/or program consent.

MED T 466. Hematology II (3). Emphasizes the clinical significance of laboratory data and its correlation with pathologic conditions. Includes in-depth discussions of anemias and leukemias. Prerequisites: MED T 460, 461, and program consent.

MED T 467. Hematology II Laboratory (1). 3L. Emphasizes special testing procedures used in the hematology laboratory for diagnosis of anemias and various white blood disorders such as leukemia. Prerequisites: MED T 466 or concurrent enrollment and program consent.

MED T 469. Applied Hematology (3). Application of the theory and technical skills of hematology in a clinical laboratory. Prerequisites: MED T 467 and program consent. Offered CN/C only.

MED T 470. Immunohematology I (3). An introduction to blood banking theory pertinent to quality transfusion practices in a donor service, including selection, collection, processing, and component therapy and to a transfusion service, including application of immunology and genetics to blood group systems, compatibility testing, and clinical correlations related to transfusion reactions and to the prediction, diagnosis, and prevention of hemolytic disease of the newborn. Prerequisite: MED T 405 or equivalent or instructor's consent.

MED T 471. Immunohematology II Laboratory (1). 3L. A laboratory course in techniques relevant to performance of a blood banking technologist in a donor or transfusion service. Methodology includes blood typing, antibody screening, single antibody identification, compatibility testing, prenatal testing, neonatal testing, Rh immune globulin, and quality assurance of immunohematology laboratory procedures. Prerequisite: MED T 405 or equivalent and MED T 470 or concurrent enrollment or instructor's consent.

MED T 476. Immunohematology II Laboratory (1). 3L. A laboratory course in techniques relevant to resolution of medical-legal cases, antibody identification, and problems encountered in blood typing, compatibility testing, hemolytic disease of the newborn, Rh immune globulin, and hemolytic anemia workups. Prerequisite: MED T 470 or instructor's consent.

MED T 477. Immunohematology II Laboratory (1). 3L. A laboratory course in techniques relevant to resolution of medical-legal cases, antibody identification, and problems encountered in blood typing, compatibility testing, hemolytic disease of the newborn, Rh immune globulin, and hemolytic anemia workups. Prerequisite: MED T 470 or concurrent enrollment or instructor's consent.

MED T 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. Offered CN/C only. Prerequisites: MED T 467 or concurrent enrollment or instructor's consent.

MED T 480. Clinical Immunology/Serology I (1). Prerequisite: MED T 405 Q and admission into the Medical Technology program.

MED T 489. Applied Clinical Techniques (2). Application of theory and techniques of clinical immunology, sero-
ogy: body fluids, and specimen collection in the clinical laboratory. Offered Cr/Nr only. Prerequisites: MED T 496, 491, 497, and program consent.

MED T 490. Clinical Microbiology I (3). Basic theory covering (a) procedures for specimen processing in the clinical laboratory; (b) normal flora; (c) morphological, cultural, and serologic characteristics of common pathogenic bacteria; and (d) basic theory in antimicrobial susceptibility testing techniques. Prerequisite: BIOL 330. Co-requisite: MED T 491.

MED T 491. Clinical Microbiology I Laboratory (1). 4L Basic procedures for the set up and examination of clinical specimens. Isolation and identification procedures for the more common pathogenic organisms. Use and interpretation of common antimicrobial susceptibility testing procedures. Runs concurrently with MED T 490. Prerequisites: BIOL 330, previous or concurrent enrollment in MED T 490, and program consent.

MED T 493. Molecular Diagnostics in the Clinical Laboratory (1). 1R. An introduction to molecular diagnostics in the clinical laboratory including a basic concepts of molecular diagnostics, current types of diagnostic applications in the areas of infectious disease, hematological malignancies, solid tumors, genetic diseases, and forensic pathology and identity testing.

MED T 494. Special Topics in Clinical Microbiology (1). 2R; 3L. The study of the medically important fungi and parasites emphasizing their identification in the clinical laboratory. Discusses life cycles and their relation to the infection/disease process and the epidemiology of these organisms. Prerequisites: BIOL 330 and program consent.

MED T 496. Clinical Microbiology II (3). Advanced theory, procedures, and rationale for the isolation and identification of the non-fermenters, the anaerobic, and unusual aerobic organisms. Discusses disease processes and identification of the acid-fast bacteria. Introduces advanced antimicrobial susceptibility testing techniques. Prerequisites: MED T 490, 491, 497, or concurrent enrollment.

MED T 497. Clinical Microbiology II Laboratory (1). 4L. Advanced laboratory techniques in the isolation and identification of non-fermenters, the anaerobic, and unusual aerobic organisms. Techniques for cultures and identification of acid-fast bacteria. Advanced antimicrobial susceptibility testing techniques. Prerequisites: MED T 490 and 491. Co-requisite: MED T 496.

MED T 498. Applied Clinical Microbiology (3). Application of theoretical and practical aspects of clinical microbiology in a commercial laboratory and operating hospital laboratory. Offered Cr/Nr only. Prerequisites: MED T 496 and 497.

Course for Graduate Students Only

MED T 800. Seminar in Laboratory Sciences (1-3). Discusses recent issues and advances in the field of clinical laboratory science, including the areas of microbiology, chemistry, hematology, immunology, and immunohematology. Students are responsible for assigned topics, using current journal articles as a resource material. Prerequisite: departmental consent.

Physical Therapy (PT)
Because physical therapy is an entry point into the health care system for many individuals, the physical therapy program at Wichita State University develops practitioners who can meet this responsibility and provide leadership inside and outside the profession. The Master of Physical Therapy degree allows the student to achieve a foundation in liberal arts and sciences as well as gain an education in the profession of physical therapy. Graduates have the skills and knowledge base necessary to assist them in influencing the quality of physical therapy care, the profession of physical therapy, and health care in the local community and beyond.

Master of Physical Therapy
The program prepares individuals to enter beginning practice as a physical therapist. Graduates are prepared to examine, and evaluate clients/patients for neuromuscular, musculoskeletal, sensorimotor, and related functions to determine the degree of muscle strength, motor development, motion, respiratory ventilation, or peripheral circulatory efficiency of individuals. The physical therapist plans and implements appropriate interventions for their clients. Graduates are prepared to work in preventive health care as well as rehabilitative care. The program requires full-time study for a period of 26 consecutive months. Students enter the program in the summer semester only.

Admission Requirements
Admission to the program requires that the student:
1. Have a bachelor's degree from an accredited four-year institution acceptable to the Graduate School.
2. Have a cumulative grade point average of 3.00 in the last 60 hours of graded course work, in prerequisite courses, and in all math and science courses.
3. Show evidence of completing the following:
   - Biology—one semester of introductory biology with a laboratory
   - Anatomy and Physiology—minimum of 5 semester hours with laboratory
   - College Chemistry—two semesters with laboratory
   - College Physics—two semesters with laboratory
   - English Composition—two semesters
   - Exercise Physiology—one semester
   - Speech—one semester
   - Mathematics—college trigonometry or equivalent
   - Statistics—one semester
   - Social Sciences—psychology, one introductory and one advanced course
   - Computer proficiency
   - Medical Terminology—one semester hour
4. Show evidence of 20 hours of observation or work in one or more physical therapy settings and of computer literacy.

To be reviewed for admission, applicants should do the following:
1. Seek an application packet from the Department of Physical Therapy and the Graduate School.
2. Submit the designated Application for Admission and supporting transcripts to the Graduate School.
3. Submit the designated Physical Therapy Application, along with two references by the published deadlines.

Complete applications are reviewed when received by the department in a timely manner. Applicants are notified of their admission status by the Graduate School.

Once an applicant has been admitted, he or she is asked to submit a $100 nonrefundable tuition deposit to reserve a space for the summer admission. Once the student enrolls, this money is counted toward payment of tuition.

Students are advised to contact the department for any changes in the program course requirements or in prerequisite requirements. Information is also available on the department's Web site: www.wichita.edu/pt

Degree Requirements
The student must maintain a 3.00 grade point average and a C or better in each of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT 715, Professional Issues and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PT 705, Clinical Medicine I (general</td>
<td>2</td>
</tr>
<tr>
<td>medical conditions)</td>
<td></td>
</tr>
<tr>
<td>PT 707, Introduction to Patient Management</td>
<td>2</td>
</tr>
<tr>
<td>Skills</td>
<td></td>
</tr>
<tr>
<td>PT 709, Foundations of Therapeutic Exercise</td>
<td>3</td>
</tr>
<tr>
<td>Electives, not required</td>
<td>1</td>
</tr>
</tbody>
</table>

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT 701, Research Methods and Statistics</td>
<td>2</td>
</tr>
<tr>
<td>HS 700, Gross Human Anatomy</td>
<td>6</td>
</tr>
<tr>
<td>PT 711, Clinical Biomechanics</td>
<td>3</td>
</tr>
<tr>
<td>PT 726, Clinical Medicine II (orthopedic</td>
<td>2</td>
</tr>
<tr>
<td>conditions)</td>
<td></td>
</tr>
<tr>
<td>PT 735, Physical Agents in Physical Therapy</td>
<td>4</td>
</tr>
<tr>
<td>Electives, not required</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>10-11</td>
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</tbody>
</table>

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT 841, Directed Research I</td>
<td>2</td>
</tr>
<tr>
<td>HS 720, Neuroscience</td>
<td>3</td>
</tr>
<tr>
<td>PT 710, Foundations for Evaluation and</td>
<td>3</td>
</tr>
<tr>
<td>Treatment of Musculoskeletal Conditions</td>
<td>3</td>
</tr>
<tr>
<td>PT 745, Clinical Medicine III (neurological</td>
<td>2</td>
</tr>
<tr>
<td>/cardiovascular conditions)</td>
<td></td>
</tr>
</tbody>
</table>
Lower-Division Course

PT 281. Co-op Education (1-3). A field placement which integrates course work with a professional experience designed to complement and enhance the student academic program. Programs must be formulated in consultation with and approved by faculty sponsors and cooperative education coordinators. Students follow one of two patterns: parallel, enrolling concurrently in a minimum of 6 hours of course work, 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 other courses. Prerequisite: successful completion of freshmen year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

Upper-Division Course

PT 481. Co-op Education (1-3). See PT 281.

Courses for Graduate Students Only

PT 701. Research Methods and Statistics (2). Discussion and application of statistics, critiquing scientific literature, and the development of a research proposal and major literature review. Prerequisite: departmental consent.

PT 705. Clinical Medicine I (2). Presents the causes, diagnoses, effects, treatment, and prognosis for general medical conditions seen by physical therapists. Coordinated by the department faculty and organized around the medical model. Prerequisite: departmental consent.

PT 707. Introduction to Patient Management Skills (2). Introduces the student to basic patient care and medical terminology. Through clinical observation sessions, students become familiar with various types of physical therapy settings. Prerequisite: departmental consent.

PT 709. Foundations of Therapeutic Exercise (3). Introduces the scientific principles of therapeutic exercise foundations and techniques for physical therapists. Follows the standards of the physical therapist practice. Laboratory sessions include skill development for safe, effective use of basic therapeutic exercise equipment. Prerequisite: departmental consent.

PT 710. Foundations for Evaluation and Treatment of Musculoskeletal Conditions (3). Introduces the basic scientific foundation and clinical rationales used during evaluation and treatment of musculoskeletal conditions. In-depth studies of the art of palpating surface anatomy, performance of manual muscle testing (MMT), and goniometric measurements. Emphasizes review of clinical and scientific literature pertaining to evaluation and treatment of musculoskeletal conditions. Prerequisite: departmental consent.

PT 711. Clinical Biomechanics (3). Presents a kinesthetic foundation of all joints so students have the ability to differentiate causes of musculoskeletal problems. Prerequisite: departmental consent.

PT 715. Professional Issues and Ethics (3). Introduces the profession of physical therapy. Addresses the profession, settings for delivery of services, professional ethics, regulation of the profession, levels of personnel, and other issues directly related to the practice of the profession. Introduces specific issues and challenges the profession is addressing as the larger system for health and medical services changes. Prerequisite: departmental consent.

PT 726. Clinical Medicine II (2). Presents the causes, diagnoses, effects, treatment, and prognosis for orthopedic conditions seen by physical therapists. Coordinated by department faculty and organized around the medical model. Prerequisite: departmental consent.

PT 730. Neurological Approaches to Patient Care (2). Gives basic skills for assisting movement in patients with neurological impairments. Prerequisite: departmental consent.

PT 735. Physical Agents in Physical Therapy (4). Presents utilization of physical modalities related to sound, light, electricity, water, paraffin, traction, and massage to achieve physiological and mechanical results. Incorporates evaluation and treatment methods for the above modalities along with analysis of relevant scientific literature. Prerequisite: departmental consent.

PT 745. Clinical Medicine III (2). Presents the causes, diagnoses, effects, treatment, and prognosis for neurological, pulmonary, and cardiac conditions seen by physical therapists. Coordinated by department faculty and organized around the medical model. Prerequisite: departmental consent.

PT 747. Assessment and Intervention in Acute Conditions (4). Addresses the management of acute physical conditions, including industrial medicine intervention, lower extremity amputation management, and upper extremity orthotic devices. Also includes the management of intensive care patients in the hospital and at home. Prerequisite: departmental consent.

PT 790. Selected Topics in Physical Therapy (1-4). Intensive study of current issues, technology, research, and application of selected topic. Repeatable up to 6 credits. Prerequisite: departmental consent.

PT 799. Experimental Courses (1-4). One-time course offerings. Prerequisite: departmental consent.

PT 800. Clinical Education I (6). Introduction to physical therapy care in varied settings requiring communication and interpersonal relations skills: application of basic physical therapy procedures; beginning professional socialization; beginning development of a generalist in physical therapy. Prerequisite: departmental consent.

PT 802. Cardiopulmonary Assessment and Intervention (2). Continuation of PT 745. Adds concepts and material to allow students to assess and treat patients with cardiopulmonary conditions. Prerequisite: departmental consent.
PT 809. Orthopedic Assessment and Intervention I (3). Introduces the basic scientific foundation and clinical rationale used during evaluation, assessment, and treatment of musculoskeletal conditions. Builds on first-year PT courses. In-depth study of different injuries and lesions, specific evaluation techniques, and treatments of those injuries and pathologies. Deals mainly with the upper quarter and includes the entire upper extremity, cervical, and thoracic spine. Emphasizes organizing and synthesizing information from PT curriculum to allow integration and problem-solving skills to enable students to become competent practicing physical therapists. Prerequisite: departmental consent.

PT 811. Orthopedic Assessment and Intervention II (3). Continuation of PT 809. Deals mainly with the lower quarter and includes the entire lower extremity, lumbar spine, sacroiliac joint, and pelvis. Emphasizes organizing and synthesizing information from PT curriculum to allow integration and problem-solving skills to enable students to become competent practicing physical therapists. Prerequisite: departmental consent.

PT 816. Physical Therapy Administration I (2). Studies management systems including assessment, planning, organization, staffing, leadership and motivation, control, and evaluation methods. Includes environmental assessment and strategic planning, organizational design, human resource management, fiscal considerations, and leadership and management styles. Prerequisite: departmental consent.

PT 818. Physical Therapy Administration II (2). Studies payment systems, legal aspects of physical therapy, risk management, assurance of quality physical therapy care. Includes peer review, audit, documentation, legal and ethical aspects, fiscal consideration, and community resources. Prerequisite: departmental consent.

PT 824. Educational Methods in Physical Therapy (1). Discusses teaching and learning theories as they apply to physical therapy education of patients, students, health professionals, and the community. Includes methods of developing and evaluating content, instructional strategies, and learning outcomes. Prerequisite: departmental consent.

PT 832. Neurological Assessment and Intervention (3). Continuation of PT 745. Adds concepts and material to allow students to assess and treat patients with neurological conditions. Prerequisite: departmental consent.

PT 836. Physical Therapy in Pediatrics (2). Provides supplemental skills for the entry-level physical therapist in the area of pediatrics. Didactic work and clinical exposure is incorporated in the class. Offered as an elective in the physical therapy program. Prerequisite: PT 730.

PT 837. Special Populations (3). Expands upon basic evaluation and treatment skills of geriatrics, women's health, and industrial medicine regarding physical therapy practice. Also includes psychosocial elements, medical complications, health promotion, and prevention information as it pertains to the three special populations listed. Prerequisite: PT 725.

PT 840. 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. Prerequisite: departmental consent.

PT 841. Directed Research I (2). First in series of three courses following PT 701 in which students work with an assigned advisor to plan either a research project or a research paper. Prerequisite: PT 701.

PT 842. Directed Research II (2). Second in series of three courses following PT 701 in which students work with an assigned advisor to collect data and complete statistical analyses (as appropriate) for either a research project or a research paper. Prerequisites: PT 701, 841.

PT 843. Directed Research III (2). Third in series of three courses following PT 701 in which students complete either a research project or a research paper. Prerequisites: PT 701, 841, 842.

PT 850. Clinical Education II (4). First in series of three six-week courses offering continued development of clinical management of patients in varied clinical settings. Includes organizational aspects of care, teaching, and some management for clinical research. Prerequisite: program consent.

PT 860. Clinical Education III (4). Continuation of PT 850. Prerequisite program consent.

PT 865. Life Span Assessment, Intervention, and Prevention (2). Incorporates specific areas of physical therapy as they are applied to individuals through their lifetime. Includes development and evaluation of content, instructional strategies, and learning outcomes. Prerequisite: PT 745. Adjet(s) from the life span program are eligible for either a research project or a research paper. Prerequisite: PT 745.

PT 870. Clinical Education IV (4). Continuation of PT 860. Prerequisite: program consent.

PT 890. Thesis (1-6) Repeatable to a maximum of 6 hours. Prerequisites: enrollment in graduate studies and consent of thesis advisor.

In the series of three clinical courses, students experience very different settings including general and rehabilitation practices and a selected area of specialization not limited to pediatrics, geriatrics, and orthopedics. The order of the settings is flexible. There is an increase in the level of expectation of performance with each clinical course which is guided by the evaluation process.

Physician Assistant (PA)

Physician assistants (PAs) are professional members of the health care team who, working with physicians, provide diagnostic and therapeutic patient care in virtually all medical specialties and settings. PAs take medical histories, perform physical examinations, and order laboratory tests. After diagnosing a problem, the PA develops and implements a treatment plan. When appropriate, the PA consults with the supervising physician and other health professionals.

Students successfully completing the 24-month physician assistant professional curriculum who meet all University and college requirements receive the Bachelor of Science—Physician Assistant degree. Graduates of the program are eligible to take the examination given by the National Commission on Certification of Physician Assistants. Passage of this examination is required by most states (including Kansas) for physician assistant practice. The WSU Physician Assistant Program is fully accredited by the Accreditation Review Commission on Education for the Physician Assistant.

Preprofessional Curriculum

The physician assistant program maintains the philosophy that persons with varied backgrounds can be successful physician assistant students. Prior health care experience is not required, but is preferred. Interested parties should contact the physician assistant program for detailed application information, including time frame for applying, references, and selection criteria. Admission to the program is highly competitive. Requirements must be completed with in complete and accurate detail. The physician assistant program curriculum builds on a foundation of liberal arts and sciences.

Course work taken longer than 10 years ago will be subject to program review. Students may be required to repeat certain prerequisite courses.

1. Applicants with any academic degree should consult a member of the program’s faculty to determine if the preprofessional requirements for admission to the program and for the Bachelor of Science degree have been met.

2. For any person holding a bachelor’s degree the following are required:
   a. BIOL 210 (4 hours), BIOL 220 (4 hours), BIOL 223 (5 hours)
   b. CHEM 111 (5 hours), CHEM 112 (5 hours)
   c. MATH 111, College Algebra or equivalent (3 hours)

3. All others complete the following:
   a. The GEC requirements
   b. BIOL 210 (5 hours), BIOL 220 (4 hours), BIOL 223 (5 hours)
   c. CHEM 111 (5 hours), CHEM 112 (5 hours)

Additional academic requirements:
1. An overall college grade point average of 3.000/4.000
2. A grade point average of 3.000/4.000 for prerequisite course work
3. A grade of C or better in all courses
### General Information for Admission to Professional Curriculum

Students entering the physician assistant professional course of study are required to purchase malpractice insurance in an amount set by the State of Kansas. Students are also required to purchase all the diagnostic equipment needed for use during the two-year course of study as well as the required articles of dress.

Applications for the physician assistant program are submitted online to a centralized application service. Contact the program for specific details. Applicants should be aware that admission to the University is not admission to the physician assistant program.

### Selection for Admission to the Physician Assistant Professional Curriculum

Selection for admission to the physician assistant professional curriculum is based on many factors. Each applicant is evaluated in terms of academic performance, health care experience, references, communication skills, and so forth.

### Course Hrs.

<table>
<thead>
<tr>
<th>Basic Skills</th>
<th>ENGL 101 and 102, College English I and II</th>
<th>COMM 111, Public Speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fine Arts and Humanities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>One Introductory course from Fine Arts discipline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Introductory course from each of two Humanities disciplines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Further Study course from same discipline as Introductory course or an Issues and Perspectives course in Fine Arts or Humanities</td>
<td></td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
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<table>
<thead>
<tr>
<th>Social and Behavioral Sciences</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>One Introductory course from each of two different Social and Behavioral Sciences disciplines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Further Study course from same discipline as Introductory course or an Issues and Perspectives course in Social and Behavioral Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Natural Sciences and Mathematics</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductory courses</td>
<td>CHEM 111, General Chemistry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIOL 210, General Biology I</td>
<td></td>
</tr>
<tr>
<td>Further Study course</td>
<td>CHEM 112, General and Inorganic Chemistry</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 220, Introduction to Microbiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 223, Human Anatomy and Physiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 111, College Algebra</td>
<td></td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Professional Curriculum

The physician assistant program curriculum consists of both classroom and clinical courses. Courses are taught by physicians, physician assistants, and other health care professionals in locations throughout the state.

Once admitted, students must take the following courses to meet the physician assistant professional requirements. Professional courses are available only to students in the program.

### Professional Curriculum (all courses are required)

#### Junior Year—Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA 388, Clinical Anatomy I</td>
<td>3</td>
</tr>
<tr>
<td>PA 390, Clinical Physiology</td>
<td>3</td>
</tr>
<tr>
<td>PA 300, Medical History and Physical Examination</td>
<td>4</td>
</tr>
<tr>
<td>PA 302, Patient Counseling</td>
<td>2</td>
</tr>
<tr>
<td>PA 315, PA Professional Issues</td>
<td>1</td>
</tr>
<tr>
<td>PA 320, Assessment and Management of the EENT Systems</td>
<td>4</td>
</tr>
<tr>
<td>PA 325, Preventive Medicine and Community Health</td>
<td>3</td>
</tr>
<tr>
<td>HS 710, Applied Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>MED T 310, Clinical Laboratory Services</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

#### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA 389, Clinical Anatomy II</td>
<td>2</td>
</tr>
<tr>
<td>HS 711, Pharmacologic Management of Acute and Chronic Diseases</td>
<td>3</td>
</tr>
<tr>
<td>PA 316, Assessment and Management of the Integument</td>
<td>1</td>
</tr>
<tr>
<td>PA 317, Assessment and Management of the Endocrine System</td>
<td>1</td>
</tr>
<tr>
<td>PA 323, Assessment and Management of the Cardiopulmonary Systems</td>
<td>2</td>
</tr>
<tr>
<td>PA 330, Assessment and Management of Gastrointestinal System</td>
<td>3</td>
</tr>
<tr>
<td>PA 333, Assessment and Management of Obstetrics and Gynecology</td>
<td>3</td>
</tr>
<tr>
<td>PA 335, Assessment and Management of the Renal and Genito-Urinary Systems</td>
<td>3</td>
</tr>
<tr>
<td>PA 336, Applied Clinical Practice</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

#### Summer

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA 337, Assessment and Management of the Neuro-Musculo-Skeletal Systems</td>
<td>3</td>
</tr>
<tr>
<td>PA 375, Clinical Skills I</td>
<td>3</td>
</tr>
<tr>
<td>PA 430, Clinical Conference I</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>

#### Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA 410, Clinical Rotation I</td>
<td>3</td>
</tr>
<tr>
<td>PA 412, Clinical Rotation II</td>
<td>3</td>
</tr>
<tr>
<td>PA 414, Clinical Rotation III</td>
<td>3</td>
</tr>
<tr>
<td>PA 418, Clinical Rotation IV</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

#### Graduation Requirements

Students who meet the course requirements specified in the physician assistant curriculum receive a Bachelor of Science degree with a physician assistant major.

### Other Requirements

Students must purchase laboratory jackets, identification patches, and name tags, and are required to provide their own transportation to the clinical site.

Students must provide evidence of a complete physical examination including a tuberculin skin test, MMR immunization, Hepatitis B or titer, and health insurance prior to enrollment.

### Lower-Division Courses

PA 281. Cooperative Education Field Study (1-5). A field placement which integrates course work 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 work in addition to their Co-op assignment, 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. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

### Upper-Division Courses

PA 300. Medical History and Physical Examination (4). 3R; 2L. Provides the theoretical and practical knowledge that can be utilized to obtain an appropriate medical history and/or conduct a proper physical examination (complete/pertinent). Also focuses on the identification of normal and abnormal physical findings. Practice of methods and techniques learned take place in a faculty-proctored laboratory setting. Prerequisite: admission to PA professional program.
PA 302. Patient Counseling (2). Considers the theories and techniques of patient counseling; emphasizes effective communication, basic counseling techniques, and basic strategies for therapeutic intervention. Deals with the philosophies of counseling for a wide range of cognitive and behavioral problems common to the primary care setting. Prerequisite: admission to PA professional program.

PA 315. PA Professional Issues (1). Introduces the junior PA students to a wide variety of issues, such as legal, ethical, and professional issues regarding PA practice. Prerequisite: admission to PA professional program.

PA 316. Assessment and Management of the Integument (1). Deals with the skin as a major organ. Includes wound healing, burn management, tissue reactivity, cutaneous manifestations of systemic disease, specific diagnostic techniques with regard to assessment of dermatologic disorders and introduction to dermatologic disorders through case presentations. Prerequisite: admission to PA professional program.

PA 317. Assessment and Management of the Endocrine System (1). Deals with the endocrine system. Includes diseases of the pituitary gland and hypopituitarism; diseases of the thyroid, parathyroid, and adrenal glands; diabetes mellitus diagnostic procedures; special diets; endocrine emergencies and the treatment of endocrine diseases. Prerequisite: admission to PA professional program.

PA 320. Assessment and Management of Ophthalmic and Otorhinolaryngological Problems (3). Deals with the pathophysiology of the eye, ear, nose, and throat. Emphasizes etiology, diagnosis, and treatment of ophthalmic and otorhinolaryngological (ENT) problems. Includes tumors of the ear, nose, throat, and eye; audiometry and ophthalmic manifestations of systemic diseases. Prerequisite: admission to PA professional program.

PA 323. Assessment and Management of the Cardiopulmonary Systems (4). Deals with the cardiopulmonary systems. Includes the assessment and management of acute and chronic cardiopulmonary diseases, peripheral vascular disease, and emergencies. Appropriate evaluation of roentgenology studies, EKGs, laboratory studies; includes pulmonary functions and blood gases as applicable to the primary care setting. Prerequisite: admission to PA professional program.

PA 325. Preventive Medicine and Community Health (2). Addresses topics in preventive medicine and community health including risk factors for the major causes of death and disability, behavioral techniques used in making health behavior change, health-risk appraisal instruments, health screening, and disease and accident prevention. Introduces community agencies with roles in disease prevention, health education, and health promotion. Prerequisite: admission to PA professional program.


PA 328. Introduction to Alternative and Complementary Medicine (3). Provides 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.

PA 330. Assessment and Management of the Gastrointestinal System (3). A theory, laboratory, and clinical course; deals with the gastro-intestinal (GI) system. Includes assessment of diseases of organs in the GI tract, special problems of the newborn, relationships of the autonomic nervous system to GI symptomatology, rectology of the GI tract, GI manifestations of psychic disturbances, and demonstration of special diagnostic instruments. Prerequisite: admission to PA professional program.

PA 333. Assessment and Management of Obstetrics and Gynecology (3). Deals with obstetrics and gynecology. Includes the menstrual cycle, pregnancy, gynecologic diseases, techniques of normal delivery, obstetrical emergencies, family planning, and infertility. Prerequisite: admission to PA professional program.

PA 335. Assessment and Management of the Renal and Genito-Urinary Systems (3). Deals with the kidneys, ureters, bladder, and prostate. Includes electrolyte and fluid balances, hypertension, tumors of the genito-urinary (GU) system, infectious diseases, trauma, calculi, and special diagnostic procedures. Examines common vesicoureteral diseases emphasizing management, treatment, and epidemiology. Prerequisite: admission to PA professional program.

PA 336. Applied Clinical Practice (2). Further prepares students for the senior clinical learning experience and practice beyond. Emphasizes patient management, clinical problem-solving, and critical-thinking skills in both inpatient and outpatient settings. Includes small group discussion, computer-assisted instruction, problem-oriented patient cases, patient interaction, and individual patient presentations. Prerequisite: admission to PA professional program.

PA 337. Assessment and Management of the Neuro-Musculo-Skeletal Systems (3). Emphasizes the recognition, evaluation, and management of neuro-musculo-skeletal diseases and injuries in primary care, emergency, and inpatient settings. Prerequisite: admission to PA professional program.

PA 366. Applied Clinical Practice (2). Further prepares students for the senior clinical learning experience and practice beyond. Emphasizes patient management, clinical problem-solving, and critical-thinking skills in both inpatient and outpatient settings. Includes small group discussion, computer-assisted instruction, problem-oriented patient cases, patient interaction, and individual patient presentations. Prerequisite: admission to PA professional program.

PA 375. Clinical Skills I (3). 1R; 4L. Graded S/U. A combined theory, laboratory, and clinical experience students apply their knowledge to the care of patients. Includes the physical examination, emphasizing, applied anatomy and physiology; basic to understanding the examination with examples of normalcy and abnormalities; medical terminology; evaluation of patients; patient rapport and professional conduct. Employes lecture, simulation, and clinical application. Prerequisite: admission to PA professional program.

PA 388. Clinical Anatomy (3). Fall semester. Further understanding of the health professional in a comprehensive and/or specific area of human anatomy. Emphasizes human anatomy of the back, upper extremity, lower extremity, head, and neck. Prerequisites: BIOL 223 or equivalent and enrollment in the PA professional program, or instructor's consent.

PA 399. Clinical Anatomy (2). Spring semester. A continuation of PA 388 emphasizing human anatomy of the thorax, gastrointestinal, and genitourinary systems. Prerequisites: PA 388 and enrollment in the PA professional program, or instructor's consent.

PA 400. Clinical Physiology (3). Further understanding of the health professional in a comprehensive and/or specific area of human physiology and the clinical application of this knowledge in patient management. Departments select the number of credit hours needed for their program and offer them under this course number with a designated subsection. Prerequisites: instructor's consent and enrollment in one of the professional programs.

PA 410. Clinical Rotation I (3). A six-week clinical experience; students participate in the care of patients in a variety of medical settings and specialties. Emphasizes orientation to medical practice-setting and obtaining and recording a complete and/or problem-oriented medical history. Students obtain and record complete and/or problem-oriented physical examination data, become familiar with common diagnostic procedures and are involved in the selection of therapeutic regiments. Students are, at the discretion of the preceptor, included in all aspects of health care services offered at the site. Graded S/U. Prerequisites: admission to PA professional program and faculty approval.

PA 412. Clinical Rotation II (3). See PA 410. Emphasizes obtaining and recording complete and/or problem-oriented physical examination data. Graded S/U.


PA 418. Clinical Rotation IV (3). See PA 410. Emphasizes the selection of appropriate therapeutic regiments and their indications, availability, reliability, and limitations. Graded S/U.

PA 419. Clinical Rotation V (3). See PA 410. Emphasizes the art of medicine and gaining the confidence of the patient and family. Graded S/U.
Lower-Division Courses

EMT 110. EMT Basic (3). EMT-Basic (EMT 110) is intended for individuals interested in providing care to patients in the pre-hospital setting. EMT 110 must be taken concurrently with EMT-Basic Skills (EMT 112) to prepare the student for application to challenge the state certification exam. The course will provide the participant with opportunities to achieve the cognitive and affective objectives of the US Department of Transportation EMTB National Standard Curriculum.

A. Recognize the nature and seriousness of the patient’s condition or extent of injuries to assess requirements for emergency medical care;
B. File a standardized “Patient Report” form of occurrences for use of the receiving hospital as well as a permanent record for local use;
C. Transmit necessary information from the ambulance to the receiving hospital and dispatcher in an orderly manner using mobile radio equipment;
D. Demonstrate the attitudes, values, and cognition necessary to effectively and compassionately function as an EMT-Basic.

EMT 112. EMT Basic Skills (7). EMT-Basic Skills (EMT 112) provides the instruction, practice, and evaluation necessary to prepare participants for skills practice as an EMT-Basic. The course will provide opportunity for the participant to accomplish the psychomotor and affective objectives of the curriculum in accordance with the Department of Transportation EMT-Basic National Standard Curriculum 1994 as adopted and amended by the Kansas Board of EMS. Participant success assumes concurrent mastery of the cognitive objectives (see EMT 110, EMT-Basic course) as well as significant practice to ensure acquisition of the course objectives below.

A. Administer appropriate emergency medical care based on assessment findings of the patient’s condition;
B. Lift, move, position and otherwise handle the patient to minimize discomfort and prevent further injury;
C. Perform safely and effectively the expectations of the job description;
D. Demonstrate the attitudes, values, and cognition necessary to effectively and compassionately function as an EMT-Basic.

Mobile Intensive Care Technicians (MICT) (Currently suspended)

A program for the training of mobile intensive care technicians (MICT) or paramedics is offered at Wichita State University in Allberg Hall. The basic program consists of 52 credit hours in 18 months. Completion of MICT prerequisites and the MICT program qualify the student for the Associate of Applied Science, Mobile Intensive Care Technician. Successful completion of this program does not guarantee certification but does allow one to challenge the certification examination given by the State of Kansas. In addition, students who have completed the MICT training and taken the required general education courses to receive the AAS degree may apply to the bachelor’s degree program in health sciences.

Lower-Division Courses

MICT 205. Introduction to Advanced Pre-Hospital Care (4). An overview of the role of pre-hospital personnel, medical ethics, medical legal issues, EMS systems, communication procedures, medical terminology, patient assessment, history taking, body systems review, and fluid and electrolytes. Prerequisites: instructor and department approval.

MICT 207. Electrophysiology (3). Presents the techniques of assessment and management of the cardiac patient and associated disease processes common with the cardiac patient. Covers recognition of cardiac rhythms and management of different cardiac arrhythmias from the standpoint of emergency care. Prerequisites: instructor and department approval.

MICT 210. Pre-Hospital Pharmacotherapeutics (3). Presents the information needed for administering the medications used in pre-hospital situations, the methods of administration, conversion of various measures and information on drug regulating agencies. Prerequisites: instructor and department approval.

MICT 215. Adult and Pediatric Medical Emergencies (8). Presents the pathophysiology and management of disorders of the respiratory system, endocrine system, central nervous system, and gastrointestinal system. Includes information on communicable diseases, exposure emergencies, geriatric emergencies, pediatric emergencies, obstetric emergencies, and psychiatric emergencies. Prerequisites: instructor and department approval.

MICT 217. Traumatology (7). Discusses the kinematics of injury and management of the adult and pediatric trauma patient, including airway and fluid management, pre-hospital treatment of various injury states including blunt and penetrating trauma, burns, and tangle. Prerequisites: instructor and department approval.

Upper-Division Courses

MICT 320. Clinical Internship (6). Receive in-hospital training with physicians, nurses, and technicians in their area of expertise including ER, OR, IV Team, LDR, ICU, or other areas where skills learned can be applied to pre-hospital care. Prerequisites: instructor and department approval.
achtomotor and affective objectives of the curriculum in accordance with the Department of Transportation EMT-Basic National Standard Curriculum 1994 as adopted and amended by the Kansas Board of EMS. Participant success assumes concurrent mastery of the

**MICT 322. Clinical Correlation (1).** Review and discussion of experiences gained during the clinical/field internship and the application of this information to the pre-hospital setting. Prerequisites: instructor and department approval.

**MICT 324. Field Internship (11).** Pre-hospital training with local emergency medical services which are supervised by certified MICDs. Prerequisites: instructor and department approval.

**Public Health Sciences (PHS)**

Bachelor of Science in Health Services Management and Community Development

The Department of Public Health Sciences develops leadership capacity for a healthy society through both its undergraduate and graduate degree programs. At the undergraduate level, the department offers the Bachelor of Science degree in Health Services Management and Community Development as described below. This curriculum establishes a 45 credit hour professional degree program to prepare graduates for entry-level positions in the management, planning and assessment of health services delivery across the spectrum of health care, such as acute care medicine, public and community health, and long term care.

The department also offers the Master of Public Health (MPH) degree which is fully accredited by the Council on Education for Public Health. For more information on the MPH, see the Graduate School catalog.

**Program Mission**

Educating future health care leaders in the fundamental administrative, analytic, behavioral, and social competencies necessary to:

1) Effectively manage today’s complex and dynamic health care organizations, and

2) Engage in community development initiatives essential to enhancing the health and well being of human populations.

The Bachelor of Science in Health Services Management and Community Development prepares its graduates for entry-level positions in the management, planning, and assessment of health service delivery in both the public and private sectors. This 45 credit hour professional degree program is appropriate for individuals interested in applying the social and business sciences to a career in the health care sector. Students enrolled in this curriculum must complete a 21 credit hour core that provides the knowledge and skills sets that are basic to health services delivery and population health assessment.

Program majors complete 21 credit hours, beyond the core, in one of the program’s two focused areas of emphasis, either Health Services Management or Community Development.

In addition to the program core and a selected emphasis area, all program majors must take a 3 credit hour capstone seminar at or near the end of their program of study.

**Health Services Management Focus**

The Health Services Management Focus provides students with the analytic, administrative, and leadership skills necessary for entry level managerial positions in acute care medicine (medical group practices, health insurance corporations, medical product companies, hospital and ambulatory care clinics, and EMS systems management), long term care (nursing homes, home health care agencies, continuing care facilities, and hospice), and public and community health (state health agencies, local health departments, and community-based health and wellness agencies).

In addition to didactic course work, students electing the Health Services Management Focus must complete a 3 credit hour practicum placement (educational work experience) in a local health care organization.

Students who select this emphasis area will graduate with a major in Health Services Management and Community Development: Health Services Management Focus. Students who are interested in the Health Services Management Focus are strongly encouraged to minor in Business Administration as an appropriate complement to this career choice. Additional information on this minor can be found under information on this minor can be found under information in the catalog.

**Community Development Focus**

The Community Development Focus addresses the needs of students who are interested in gaining entry-level competencies in designing and implementing culturally sensitive health care services, planning and assessing health programs, developing strategies for health promotion, and building advocacy relationships with those who make health policy.

Students who select this option will gain first hand experience with local community initiatives and will have significant learning opportunities in community settings.

In addition to specified course work, students electing the Community Development focus must complete a 3 credit hour community-based project (application and problem-solving experience) involving a current community health issue. Students who select this emphasis area will graduate with a major in Health Services Management and Community Development: Community Development focus.

Students who are interested in the Community Development focus are strongly encouraged to consider general education course work that emphasizes:

a) communication skills, b) cultural factors in society, and c) the public sector. A list of general education courses suggested, as being especially compatible with this focus is available through program advisors.

Students who are interested in the Community Development focus are encouraged to work with faculty advisors to determine the most appropriate social science minor for their career path; examples of appropriate minors include, but are not limited to, psychology, sociology, anthropology, communications, and political science.

**Undergraduate Minor**

A minor in Health Services Management and Community Development is available to any student outside the program major. The minor consists of the 21 credit hour program core. It does not include selections from either of the program foci areas.

**Admission Requirements**

All students with a declared interest in Health Services Management and Community Development are encouraged to seek pre-professional advising through the College of Health Profession’s Advising and Student Services office.

In order to be admitted to the Health Services Management and Community Development Program, students must fulfill the following requirements:

1. Completion of at least 42 semester credit hours of college-level course work with a cumulative GPA of 2.5 or higher.

2. Have completed English 101 and 102, Communication 111 and Math 111, each with a grade of C or better.

3. Complete the designated application process to the program and be formally admitted. The application packet is available through the Department of Public Health Sciences and the College of Health Professions Advising and Student Services Office. To be considered for admission to the program, an applicant must ensure receipt of the following:

   a. Official transcripts from all institutions of higher learning attended by the applicant.

   b. A properly completed Application for Admission to the Health Services Management and Community Development program, including a personal statement.

   c. WSU Application (if transfer student).

4. Have completed program prerequisites of one course in basic statistics, one course in oral communications beyond Communication 111, and one course in basic computer applications, with a grade of C or better. Students who have not completed one course in each of these three areas may be considered for admission with deficiencies.

Students admitted with deficiencies must complete outstanding prerequisite courses within the first semester of admission to the program. The defi-
dency designation will be removed upon successful completion of the stipulated course work. Failure to complete deficiencies within the prescribed time frame will constitute grounds for dismissal from the program. Students admitted with a deficiency will not be allowed to take focus specific course work until the program prerequisites have been satisfied.

Courses recommended to fulfill the basic statistics prerequisite - select one:
1. Econ 231/232 - Introductory Business Statistics and concurrent software applications lab - highly recommended for students considering Health Services Management focus
2. Stat 370 - Elementary Statistics

Courses recommended to fulfill the oral communication prerequisite - select one:
1. Comm 202 - Interpersonal Communication
2. Comm 311 - Persuasion
3. Comm 313 - Argumentation and Advocacy
4. Comm 328 - Teamwork, Leadership and Group Communication

Courses recommended to fulfill the basic computer applications prerequisite
1. Accounting 260 - Introduction to Information Processing Systems for Business or the cross-listed equivalency
2. CS 105 - Introduction to Computers and their Applications

Progression
Program majors must complete PHS 320, "Overview of Health Services Delivery" and at least six additional credit hours of core course work before taking any course in either of the two program focus areas. Students must have senior standing to take either PHS 460 "Health Services Management Practicum" or PHS 461 "Community Development Special Project." PHS 470, "Capstone Seminar" must be elected as close as possible to the student's final semester of study.

Students in the Health Services Management and Community Development program are required to maintain a cumulative grade point average of 2.25, with no individual course grade, in the major, lower than a C. Students failing to meet this requirement will have one semester to correct their GPA deficiency. Failure to do so will result in dismissal from the program.

General
Students do not need to declare a focused area of interest prior to beginning the program. However, a student must declare a focus area prior to electing focused course work.

Upon declaration of their focus, either Health Services Management or Community Development, a student will be assigned a faculty advisor with primary expertise in the area of interest. A student may not elect focus specific course work without input from their faculty advisor. Course work from one focus area will not transfer to the other focus area.

Students must complete all course work in their selected focus to be awarded the degree.

For students in the Health Services Management focus, who are also pursuing the recommended minor in Business Administration, B LAW 431 may be counted as fulfilling the law course requirement in both the program major and the business minor. Please note, although B LAW 431 may count toward both the major and the minor, it still counts as only 3 credit hours toward the 124 credit hours required to graduate. Non-majors without instructor permission may not elect 400 level program courses.

Professional Curriculum

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<thead>
<tr>
<th>Required Core Courses</th>
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<td>PHS 320, Overview of Health Services Delivery</td>
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<td>PHS 325, Introduction to Epidemiology</td>
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<td>PHS 333, Organizational Behavior and Leadership in Health Service Organizations</td>
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<td>PHS 342, Financing Health Care Services</td>
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<td>PHS 344, The Role of Culture in Health and Health Care</td>
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<td>PHS 352, Strategic Management in Health Service Organizations</td>
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<td>PHS 354, Health Politics</td>
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Required Capstone
PHS 470, Capstone Seminar in Health Services Management and Community Development | 3 |

Required Courses in Health Services Management Focus
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<tr>
<td>PHS 428, Health Care Organization</td>
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<td>B Law 431, Legal Environment of Business</td>
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<td>PHS 448, Concepts of Quality</td>
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<td>PHS 460, Health Services Management Practicum</td>
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<td>PHS 466, Quantitative Methods in Health Care</td>
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Required Courses in the Community Development Focus
PHS 403, Sol to Soul: Health Promotion in Action | 3 |
| PHS 423, Program Planning and Development in Health Services Organizations | 3 |
| PHS 443, Social Marketing | 3 |
| PHS 461, Healthy Options for Communities: A Community-Based Practicum in Neighborhood Development | 3 |
| PHS 643, Geographic Information Systems in Community Epidemiology | 3 |
| PHS 663, Community Action Research | 3 |

Required Selective in Community Development Focus
Students must select one of the following courses to fulfill the focus requirements in Community Development.

| PHS 448, Concepts of Quality | 3 |
| or |
| PHS 478, Health Economics | 3 |

Total Hours Required for Major:
21 hrs required core + 21 hrs required for selected focus + 3 hr capstone seminar = 45

Graduate Credit for Seniors (Senior Rule)
Seniors who are in the undergraduate program, and who intend to pursue either the graduate certificate in Public Health or the Master of Public Health degree, may take course work for graduate credit under the Senior Rule if they: 1) have an overall grade point average of 3.00 or above in their major field and in upper-division courses and 2) are within 10 hours of completing the Bachelor of Science degree in Health Services Management and Community Development. Policies and procedures for exercising this option may be found in the General Information section of this catalog.

Administrator-in-Training (AIT) Practicum Placement Program
The AIT is designed to place qualified applicants in a 9 credit hour, 400 hour practicum placement with a qualified nursing home administrator, as part of the preparation necessary for becoming a licensed nursing home administrator in the state of Kansas.

The AIT practicum placement program is available to individuals with a bachelor's degree, who have had course work in gerontology or long-term care management concepts, and finance or accounting. The required courses are available through the Department of Public Health Sciences, for those interested applicants who have not taken such course work prior to considering a career as a nursing home administrator. The Health Services Management Focus, in the Bachelor of Science degree in Health Services Management and Community Development, provides program majors with the course work required for AIT placement. Interested program majors may pursue the AIT requirements while completing their degree program. Additional information on the AIT is available through the Department of Public Health Sciences.

Upper Division Courses

PHS 308. Leadership in Self and Society (3). General Education Issues and Perspectives course. Examine factors influencing the effectiveness of individuals leading change, including values, conflict and power. Studies the human side of organizational change focusing on understanding how and why people react to change, and identifying opportunities for enhancing the effective implementation of change. Students reflect on their own leadership development and work in teams to recommend PH strategies for change in a project, community setting, or organization.
PHS 310. Understanding the U.S. Health Care System (3).
General education issues and perspectives course. The U.S. health care system has been described as a non-system. The social systems of any country are shaped by the prevailing social values of the country. The three major components of the U.S. health care system - public health, acute care, and continuing care - have evolved separately due to prevailing social values and the related political decisions unique to this country. Course provides an overview of the social, economical and political and their roles in shaping the form, function, and finance of each of the three major sectors, emphasizing the problems inherent in such a fragmented system.

PHS 320. Overview of Health Services Delivery (3).
For those who plan a career in the health care field, it is important that they have an understanding of the environment in which they will work. This course is designed to provide the student with an understanding of the context in which health care is delivered, as resources are allocated to, and within the system and how health care organizations function within the system.

PHS 325. Introduction to Epidemiology (3).
This course introduces the student to the science and methodology of disease and risk surveillance in public health. It prevents the foundations and structure used to solve medical and environmental health problems in the community with a primary focus on the health status of individual populations and special populations as they relate to health promotion and disease prevention.

PHS 333. Organizational Behavior and Leadership in Health Organizations (3).
This course is designed to familiarize students with the classic themes and perspectives from the field of organizational behavior. The course 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 342. Financing Health Care Services (3).
Examines the principles of financial analysis and management used in health care institutions, which are most useful to non-financial personnel. Emphasizes understanding and application of general financial concepts to health setting; considers financial organization, sources of operating revenues, budgeting and cost allocation methods. Uses examples for various types of health service organizations.

PHS 344. The Role of Culture in Health and Health Care (3).
This course uses a case study approach to examine the importance of culture in the way people define, react to, and treat illness, injury and health risks. Cultural beliefs and expectations influence the things we do to stay healthy, the way we feel about our bodies, the way we experience pain, the way we behave when we are sick, the ways we take to get help, and the providers from whom we seek care. Health-related customs may vary by such attributes as age, ethnicity, education, religion, income, dwelling place, and family traditions. When major cultural differences exist between patients and service providers, they can result in a host of adverse outcomes.

PHS 352. Strategic Management on Health Services Organizations (3).
To be an effective strategic manager in the health care arena, it is important to understand the scientific process of strategic planning and its role in decision-making. In this course, the five-stage scientific method of planning, Formulation, Conceptualization, Detailing, Implementation and Evaluation are critically examined by considering the various methodologies associated with each stage.

PHS 354. Health Politics (3).
Examines how government policies affecting public health and medicine are created within legislatures, regulatory agencies, and courts through the actions of individuals and groups with vested interests. Uses critical case analysis and political profiling to deconstruct selected policy examples. Students learn skills and strategies for influencing policy development and implementation.

PHS 355. Health Services Management and Community Development majors must complete PHS 320, “Overview of Health Services Delivery” and at least six additional credit hours of core course work before taking any course at the 400 level.

PHS 403. Sole to Soul: Health Promotion in Action (3).
This is a course designed to provide contemporary information regarding public and personal health challenges. These challenges include issues of violence, new threats from emerging infectious diseases, insights into chronic disease, and concerns over global health and the degradation of the environment. With these challenges comes the opportunity to assist students to become future "change" agents for health - in both personal health behaviors, and the larger realm of policy changes that can assist the global population as well.

A key feature of this course is the Impact Health Activity, an activity that provides students the opportunity to actively engage in personal and community health programs and projects to promote positive individual and community health improvements. This course emphasizes understanding the role interpersonal communication, cultural values and psychosocial, socioeconomic, and political factors have in promoting or hindering optimal health for individuals, communities and the environment.

PHS 423. Program Planning/Development in Health Services Organizations (3).
Program Planning & Development introduces students to planning, development and evaluation of health programs through the use of lecture, group projects and individual presentations. Students will familiarize themselves with a variety of approaches available in the field of program planning. The course will emphasize the application of this material to the development of the program plan.

PHS 428. Health Care Organization (3).
Covers 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, interactions with environments, and evaluation and planning.

Business Law 431. Legal Environment of Business (3). See Barton School of Business for course description.

PHS 443. Social Marketing (3).
This course is an introduction to the field of social marketing as it is used to improve the health of the public. Students will examine the concept of social marketing and learn how to apply social marketing principles and techniques to health behavior change and improvement of public health practice. The course will include essential aspects of the social marketing process: the use of a consumer orientation to develop and market intervention techniques, audience analysis and segmentation strategies, the use of formative research in program design and pre-testing of intervention materials, channel analysis for devising distribution systems and promotional campaigns, the employment of the "marketing mix" concept in the intervention planning and implementation, and evaluation techniques for social marketing campaigns. Students will also be introduced to the limitations, challenges and successes of social marketing.

PHS 448. Concepts of Quality (3).
This course addresses the issues of quality assurance in health care institutions and for-profit organizations. An overview of the history and current status of quality programs is presented. The role of quality in organizational strategic management is also covered. Students will study the role of quality from theory to application in a broad base of organizational settings.

PHS 458. Long Term Care Systems (3).
The class analyzes long term care in the U.S., addresses system and organizational aspects that
affect organizational outcomes and quality of long-term care services, and 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 illnesses and disability.

PHS 460. Health Services Management Practicum (3).
Provides an opportunity for an administrative field experience in the health care system. The student is introduced to the role requirements and responsibilities of a practicing health manager. Students may select, with the consent of the practicum coordinator, an internship in an appropriate health service organization. Practicum requires participation in a broad fieldwork component and completion project component and a written report of the experience.

PHS 461. Healthy Options for Communities: A Community-Based Practicum in Neighborhood Development (3).
This course provides an intensive, structured and supervised community-based group practicum during which students will learn to apply community development theories and tools previously introduced in the HSMCD curriculum, while bringing real value to the local "client" agency or group. The Community Outreach and Service Learning Center located in WSU's Southside Center will serve as the home base of the project's activity. The focus of the project will change with each offering, but will, in general, focus on one of the following: helping a community group identify its needs and assets; developing a plan and mobilizing community resources to respond to an identified problem; creating and launching an awareness campaign; collecting and analyzing data to document a specific community problem; facilitating a strategic planning process; establishing performance-based record keeping; or introducing culturally appropriate service alternatives. Each student will have the opportunity to sharpen his/her practice skills in a supportive yet challenging professional environment.

PHS 468. Quantitative Methods in Health Care (3).
This class covers quantitative methods of analysis in health care. It includes concerns for employing such methods but focuses more on the interpretation of methods used by others. The class will include an introduction to certain statistical methods.

PHS 470. Capstone Seminar in Health Services Management and Community Development (3).
This seminar is designed to provide students at or near the end of their program of study, with the opportunity to apply information, from across the curriculum, to a series of multi-faceted issues and problem solving situations germane to professional practice in health services management and community development. Students from both program foci will assess and evaluate issues and concerns, which draw on the common core curriculum and on common ethical decision making situations. Students, whose course of study has emphasized health services management, will additionally evaluate issues and concerns, which integrate the program core with the knowledge and skills specific to a career in health services management. Students, whose course of study has emphasized community development, will additionally evaluate issues and concerns, which integrate the program core with the knowledge and skills specific to a career in health-related community development.

PHS 478. Health Economics (3).
Being multidisciplinary in nature, the health care system may legitimately be described, explained, and evaluated by any one of a number of disciplines. Economics is a science that deals with the consequences of resource scarcity and is further specified as descriptive, explanatory, and evaluative economics. In this course, the problems of the health care system are examined through the lens of this economics perspective by exploring the application of economics theories, principles and concepts to the U.S. medical care system.

Courses for Graduate/Undergraduate

PHS 643. Geographic Information Systems in Community Epidemiology (3).
This skills-based course introduces a group of software tools used in health care, public health and many other professions to analyze and model spatial data. The powerful epidemiological tools provide mechanisms to track and map health and disease indicators, to explore clusters of risk factors and their relationships, and to better manage health care and social service resources. Properly applied, they illuminate community needs and promote efficient and effective program responses. Those who need to synthesize multiple information streams in their decision-making increasingly value GIS's outstanding integrative capabilities. Furthermore, the resulting visual displays, with their ability to improve communications between researchers, administrators, government officials, and the public, are increasingly found in policy debates and educational forum.

PHS 660. Admin-in-Training (AIT) Long-Term Care Practicum (3).
Needs for health services will increase dramatically in the future because of the rising increase in the elderly population. A board range of services, including long-term care, is required to address the health care needs of the older population. The Admin-in-Training (AIT) Practicum is an academic long-term care administrator-training program. The purpose of the AIT is the development of a professional competency and personal code of ethics for the field of long-term care administration. The course prepares students for the state nursing home administrator licensure examination. The 480 clock hour practicum is completed in a licensed long-term care facility under the guidance of an approved preceptor.

PHS 663. Community Action Research (3).
This course is one of a series of community epidemiology courses that focus on community assessment and development. Community action research is an applied, interdisciplinary field in which hands-on learning occurs while inviting participation of the target population to be studied. Although there are a number of types of action research, each includes three basic requirements: 1) the subject matter of the project are social practices that are potentially mutable (able to be improved) 2) the project spirals through cycles of planning, acting (initiating an intervention), observing (collecting and analyzing data) and reflecting; and 3) the project maintains collaborative activity between the researchers, those who engage in the social practice(s) of interest and those who are affected by it. The class will participate in face-to-face interviews of community residents as part of the initial planning process to identify social activities that our subjects define as being in need of improvement.

Courses for Graduate Students Only

PHS 804. Principles of Statistics in the Health Services (3).
This course is intended as an introductory to statistics for graduate students in the social and health sciences with little or no background in statistics. Its purpose is to provide first year (or equivalent) MPH students with a basic understanding of certain statistical techniques, the appropriate application of these techniques, and use of the software package, SPSS.

PHS 808. Principles of Epidemiology (3).
An introductory graduate level course concerning epidemiological principles and how these form the scientific basis for public health.

PHS 812. Health Care Policy and Administration (3).
An in-depth look at policy and management issues in the health system from a public health perspective. Topics include health policy, trends in the health care system, and administrative issues. Topics are critiqued with regard to public health goals, the interests of consumers and providers, and ethics.

PHS 814. Social and Behavioral Aspects of Public Health (3).
Examines the characteristics, beliefs and behaviors of individuals and groups involved in the process of health care. Draws on concepts and principles of the social, behavioral, and clinical sciences, especially dynamics that define the interactions of providers and consumers of health care. Explores why people react to perceived symptoms the way they do, the reasons providers respond as they do to patients in different social settings, the factors which predispose individ-
PHS 816. Environmental Health (3).
A survey course in environmental health designed to provide an understanding of the fundamental theory and methods for the control of disease. Includes environmental law, disease systems, water supplies, plumbing, waste water treatment, food sanitation, vector control, recreation sanitation, solid waste disposal, housing sanitation, and air pollution.

PHS 818. Fundamental Research Methods in Public Health (3).
Stresses mastery of basic concepts and techniques of research methodology used in the health professions. Focuses on acquisition of the generic tools of research design and their application to the real-world problems confronting those who deliver health care, those who facilitate and/or manage the delivery of care, those who conduct clinical and health services studies, and those who make policy affecting the delivery arrangements. Prerequisites: PHS 804 and 808.

PHS 821. Community Assessment & Development (3).
This community epidemiology course introduces public health theories and methods used to conduct community assessments and to apply the results to positive social change. We first examine the meaning of the key terms "community", "community-building" and "community development" within historical and contemporary perspectives. We learn the importance of starting with such questions as "whose community?", "whose health?", "whose assessment?" and "for whose benefit?" We review strategies for community mapping, issue selection, community organizing, and coalition building. We then study several approaches for identifying community needs, including the organizing, and coalition building. We then study several approaches for identifying community needs, including the use of secondary data sources, interview methods, focus groups and surveys. Finally, we apply our work to the design (or revision) of a study of the assets and needs of a local target community in regard to a health-related issue.

PHS 824. Cultural Competency in Health Care (3).
This course uses a community epidemiology approach to examine the changing demographics in 21st century United States, and to analyze the effects of those changes on our health care system. We explore differences in the distribution of disease among various cultural groups, taking into account the social, biological and political causes behind those differences. We look at gaps between ethnic groups in service availability and access, in therapy options, and in treatment outcomes. Then, we show how culture affects lifestyle choices, attitudes toward health and illness, help-seeking behaviors, and service utilization.

PHS 826. Politics of Health Policy Making (3).
This course covers the basic principles of public policy making in health care and public health. It then offers the opportunity to students to apply that knowledge in a community-based approach to impact a positive public health policy development. It is a skills-based course that demonstrates why things happen as they do in policy-making arenas and what can be done to ensure desired policy outcomes.

PHS 831. Essentials of Health Insurance and Managed Care (3).
Health insurance is one of the most powerful ingredients in the U.S. health care system and yet the majority of the general public misunderstands it. It is important for those that currently work, and those who are planning to work, in the health care field to understand the underlying dynamics of the insurance process. In this course the student is introduced to the concept of risk and the role of insurance in handling risk. It also examines health care expenditures as an insurable event; health insurance and managed care as a form of risk handling.

PHS 833. Health Economics (3).
An application of classical economic theories, principles and concepts to the traditional U.S. medical care. Both the traditional and unique determinants of demand and supply are considered with emphasis on the role of need for care, provider-induced demand, and health insurance. The legitimate role of government in health care is also considered.

PHS 834. Financing Health Care Services (3).
Provides an examination of the principles of financial analysis and management used in health care institutions, which are most useful to non-financial personnel. It emphasizes understanding and application of general financial concepts to health setting and includes consideration of financial organization, sources of operating revenues, budgeting and cost allocation.

PHS 835. Organization, Financing and Delivery of Health Care (3).
Students are introduced to the organization, financing and delivery modalities of the U.S. Medical Care System. The development and application of hospital reimbursement methodology (DRG-Based PPC) and physician reimbursement methodology (RBRU.S) are examined. The principles of health insurance are introduced and the role of private and public (Medicare/Medicaid) health insurance in health care utilization are examined. Health status outcomes and quality of life measures are also explored.

PHS 838. Applied Data Analysis (3).
This course will teach: 1) the practical skills necessary to analyze and manage data using the SPSS software; 2) the application of statistical tools introduced in the MPH Program's introductory courses in biostatistics; and 3) an introduction to regression analysis.

PHS 840. Practicum (1-6).
Academic studies are linked with actual practice through observation and participation in the administrative and educational processes of public, voluntary, and private health organizations, under the direction of a preceptor from the host agency.

PHS 841. Leadership and Change Agency in Public Health (3).
Explores the essential leadership competencies and characteristics necessary to effectively promote innovation and facilitate adaptation in today's complex and rapidly evolving health care system. Combines classic theory and cutting edge concepts to ground students in the principles which underpin the current emphasis on leaders as change agents. Explores and applies strategies for effective change in the thinking and behavior of people, the design and vision of organization, and the health and well being of communities. Emphasizes the generalizability of leadership principles across the various sectors of public health.

PHS 842. Public Health Applications to the World Wide Web (2).
This course documents the creation and evolution of the Internet and World Wide Web and applications that allow these tools to be of relevance to public health and preventive medicine in the community setting. There are no official prerequisites other than an understanding bio statistics and familiarity with computer systems.

PHS 843. Health Program Planning (3).
Development and practice of planning and evaluation skills through the development of a health program in a community of interest.

PHS 845. Coalitions in Health Care (3).
This course is designed to familiarize students with the factors influencing successful collaboration in public health. The course emphasizes the application of this material to the development of community-based alliances/committees/partnerships. Course format will include lecture, group and individual examination of the literature, analysis of case studies, and fieldwork.

PHS 848. Concepts of Quality (3).
Quality of health care is a much discussed concept that is currently receiving a great deal of attention. Unfortunately, with all of the attention from a variety of providers, third-party payers, employers and other clients organizations, considerable confusion regarding the definition and measurement of quality has arisen. Not only is there a tendency to use the word "quality" as an adjective rather than a noun, each of the constituent players adopt their own definition for their own purpose. This course is designed to provide the student with the conceptual underpinnings provided by the scholarly approach to the definition and assessment of quality of health care,
which will permit the various quality assessment and improvement methodologies to be placed in context.

PHS 858. Long Term Care Systems (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 addressing the needs of persons of all ages. Addresses system and organizational concerns affecting costs, outcomes and quality. Explicitly applies a trajectory model of chronic illness and disability, conceptualizing long-term care systems in their response to chronically ill and disabled individuals. Students are encouraged to have taken PHS 812 or to take it concurrently.

PHS 875. Special Topics (3).
New or special topics presented based on sufficient demand. Prerequisite: Instructor’s consent.

PHS 876. Directed Study (1-3).
Individual study of the various aspects and problems within public health. Repeatable for credit with departmental consent. Instructor must be obtained before enrollment.

PHS 885. Thesis (1-3).
Repeatable to a maximum of six hours. Prerequisite: Consent of thesis advisor.

School of Nursing (NURS)
The School of Nursing offers the Bachelor of Science in Nursing and the Master of Science in Nursing. For more information about the master’s degree, refer to the WSU Graduate Bulletin.

Bachelor of Science 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 58 hours of course work. Persons interested in the Bachelor of Science in Nursing may direct inquiries to: Nursing Counselor, School of Nursing, Wichita State University, Wichita, Kansas 67260-0041.

Preprofessional Curriculum
Students applying for admission to the School of Nursing must have completed the following courses. Students should consider taking 16 hours per semester or attending Summer Session.

Course: Basic Skills
MATH 111, 112 or 211
ENGL 101, College English I
ENGL 102, College English II

PHYS 101/111, Introduction to Microbiology (applies as an introductory General Education course for the BSN degree only)
CHEM 103/111, General Chemistry

Other Prerequisites
BIOL 220, Introduction to Microbiology
PSY 334, Developmental Psychology
SOC 111, Introduction to Sociology

Natural Sciences and Mathematics
PHS 220, Introduction to Microbiology

Admission to School of Nursing
Students should request an application form from the School of Nursing prior to enrolling in their last semester of prerequisite courses. Application forms 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, Wichita State University;
2. Have completed, or have plans to complete, the prerequisite requirements;
3. Have an overall grade point average of at least 2.500 in all courses completed and no grade lower than a C in any of the specified required courses;
4. Submit an application including expected semester of enrollment;
5. Complete a standardized entrance test with a minimum percentage score.

Professional Curriculum
The following courses in the School of Nursing are required for the Bachelor of Science in Nursing. A total of 124 hours of University credit is required for graduation.

Course: Hrs.
Semester 1
NURS 300, Care Manager I: .3
NURS 310, Primary Health Care: .4
NURS 320, Health Alterations I: .3
NURS 345, Health Assessment: .4
HS 301, Clinical Pharmacology: .3

Semester 2
NURS 325, Research in Nursing: .2
NURS 360, Secondary Care (8 weeks): .3
NURS 370, Health Alterations II: .5
NURS 380, Maternal-Newborn Nursing (8 weeks): .4

Semester 3
NURS 402, Care Manager II: .2
NURS 410, Tertiary Care: .5
NURS 420, Mental Health Nursing (8 weeks): .4
NURS 430, Nursing of Children (8 weeks): .4

Semester 4
NURS 450, Care Manager III (11 weeks): .3
NURS 470, Critical Care (11 weeks): .6
NURS 490, Clinical Capstone (5 weeks): .4

Electives
Upper-division philosophy/ethics: .3
Issues and Perspectives General Education course: .3

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 10 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, 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.

RN to BSN Progression Plan
The RN to BSN plan offers advanced placement to registered nurses seeking a Bachelor of Science in Nursing degree. Twenty-five hours of retroactive credit or credit by exam in nursing courses can be applied to the degree. The RN to BSN curriculum follows the Kansas Nursing Articulation Plan.

Registered nurses must:
1. Submit verification of current license to practice as a registered nurse in Kansas
2. Submit official transcripts of college courses and records verifying completion of a nursing program.

Registered nurses who have met admission requirements may obtain information from the School of Nursing regarding enrollment in the transition course, NURS 334, RN Bridge Course, and Advanced Placement by which they may validate 25 hours of nursing credits at the upper-division level.

Course: Hrs.
Prerequisite and General Elective Courses
Basic Skills
MATH 111, 112 or 211
ENGL 101, College English I
ENGL 102, College English II
ENGL 111, Public Speaking

Semester 1
NURS 300, Care Manager I
NURS 310, Primary Health Care
NURS 320, Health Alterations I
NURS 345, Health Assessment
HS 301, Clinical Pharmacology
Semester 2
NURS 325, Research in Nursing
NURS 360, Secondary Care (8 weeks)
NURS 370, Health Alterations II
NURS 380, Maternal-Newborn Nursing (8 weeks)
Semester 3
NURS 402, Care Manager II
NURS 410, Tertiary Care
NURS 420, Mental Health Nursing (8 weeks)
NURS 430, Nursing of Children (8 weeks)
Semester 4
NURS 450, Care Manager III (11 weeks)
NURS 470, Critical Care (11 weeks)
NURS 490, Clinical Capstone (5 weeks)
Electives
Upper-division philosophy/ethics
Issues and Perspectives General Education course
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Humanities and Fine Arts
Fine Arts Appreciation ........................................... 3
PHIL 100, The Meaning of Philosophy ...................... 3
Course in humanities other than philosophy ............... 3
Social and Behavioral Sciences
PSY 111, General Psychology .................................. 3
PSY 334, Developmental Psychology ........................ 3
SOC 111, Introduction to Sociology ........................... 3
Natural Sciences and Mathematics
BIOI 220, Introduction to Microbiology (applied as an Introductory General Education course for the BSN degree only) ............ 4
CHEM 103/111, General Chemistry ........................... 5
Other Prerequisites
BIOI 223, Human Anatomy and Physiology ............... 5
Statistics with approval .......................................... 3
General electives* ................................................. 13
Total ............................................................... 60

Upper-Division Requirements
Philosophy/Ethics .................................................. 3
Electives* ............................................................ 6
Total ............................................................... 9

* Three hours of general or upper-division electives must be an issue and Perspectives course to meet General Education requirements.

Professional Curriculum
HS 301, Clinical Pharmacology ................................ 3
NURS 325, Research (fall only) ............................... 2
NURS 334, RN Bridge Course* ................................. 4
NURS 345, Health Assessment* (spring only) .............. 4
NURS 456, Primary Prevention* (spring only) .......... 2
NURS 461, Care Manager/RN* (fall only) ................. 4
NURS 495, Clinical Capstone-RN ............................ 2
NURS 531, Nursing and Computer Technology .......... 3
Career enhancement electives ................................. 6
Total ............................................................... 30

* Interact course
Upper-division nursing credits awarded retroactively on the basis of associate degree in nursing or credit by exam. ...... 25
Total ............................................................... 124

Other Requirements
Uniforms are required for all clinical laboratory experiences. Students are required to provide their own transportation to and from health care agencies used for these experiences. Students are required to purchase professional liability insurance in the amount of $1 million per single claim/$5 million aggregate per year. The insurance must be renewed annually. 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 certificati

NURS 350, Workshops in Nursing (1-4). Intensive study of special topics related to nursing practice, education, or research. Open to non-majors.

NURS 360, Secondary Care (4) 18P; 4L (8 weeks). Clinical course emphasizes care for patients with acute illness and/or acute complications of chronic illness in secondary care settings. Focuses on the application of therapeutic interventions to maximize potential in individuals from the young adult to the frail elderly. Prerequisites: Semester 1 courses. Co-requisites: Semester 2 courses.

NURS 370, Health Alterations I (5). Emphasizes health alterations and chronic conditions of adults. Studies interventions which enhance the quality of life for adults with illness and chronic health alterations. Prerequisites: Semester 1 courses. Co-requisites: Semester 2 courses.


NURS 402, Care Manager II (2). Explores leading and managing as essential components of professional nursing practice. Examines the implications of ethical, legal, and economic issues as they impact nursing practice. Prerequisites: Semester 1 courses. Co-requisites: Semester 2 courses.

NURS 404, Survival Skills for Health Care Professionals (2). Focuses on specific skills and issues related to professionals surviving and thriving in today's health care climate. Examines and identifies sources of stress, conflict, and professional dissatisfaction. Addresses conflict resolution; personal health promotion; how to cope with organizational changes; ways to adapt to economic, ethical, and political issues; assertive communication; stress-reducing strategies; and ways to find professional satisfaction in less than satisfactory circumstances. Emphasizes adopting and promoting lifestyle changes conducive to optimal health. Health care background recommended.

NURS 410, Tertiary Care (5). 15P. Clinical course emphasizes patient care management of young adult to frail elderly individuals with complex health problems. Focuses on therapeutic interventions used to attain, maintain, or regain health within clients' existing capabilities in a tertiary care setting. Prerequisites: Semester 2 courses. Co-requisites: Semester 3 courses.

NURS 420, Mental Health Nursing (4) 4T; 12P. (8 weeks). Studies mental health nursing with clinical applications in community and hospital settings. Focuses on nursing care of clients across the lifespan who have mental illness. Prerequisites: Semester 1 and 2 courses. Co-requisites: Semester 3 courses.
NURS 425-427. Special Projects in Nursing (1-6). Elective. Individual study of selected topics, didactic and/or clinical designed to enhance the student's knowledge base and competencies in nursing practice. Repeatable. Prerequisite: School consent.


NURS 434. Perioperative Clinical Management: Work-study (5). 2T: 9P. Elective. Lecture/clinical course; examines the nursing needs of individuals in small groups that have various health problems requiring surgery. Focuses on the expansion of the nursing student's power to perform deliberate actions for the benefit and well-being of others in all phases of the surgical process (before, during, and after). Emphasizes the nursing student's acquisition of clinical management skills in all phases of the surgical process. Prerequisites: NURS 310, 320, 345, 360, 370, 380, or completion of 30 hours of a professional nursing program.

NURS 450. Care Manager III (3). 2.5T: 5.5P. Explores the role of the professional nurse in a population-based setting. Major component is completion of an intervention plan based on a community assessment. Integral components are public health, nursing core functions and care coordination principles for clients along the continuum of care. Examines issues related to professional nursing.

NURS 456. Primary Prevention (A). A Web-based course. For RN students. Focuses on health promotion concepts to enhance wellness of individuals, families, and communities. Emphasizes public health concepts. Prerequisite: Admission to School of Nursing.

NURS 461. Care Manager/RN (4). 2T: 7P. 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: Admission to School of Nursing.


NURS 481. Cooperative Education Field Study (1-6). A field placement which integrates course work 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 course work in addition to their Co-op assignment, 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. Prerequisites: Successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

NURS 495. Clinical Capstone-RN (2). 96P. Explores the registered nurse's skills in the community and other settings. Provides opportunities to perform therapeutic nursing interventions in settings selected by the student. Prerequisites: All required RN-BSN courses.

NURS 499. Clinical Capstone (4). 36P. (5 weeks). An intensive clinical experience practicing full time with a preceptor in a primary, secondary, or tertiary care setting to enhance professional growth. Prerequisite: Admission to School of Nursing.

Courses for Graduate/Undergraduate Credit


NURS 506. Transcultural Nursing (3). Transcultural nursing is the provision of nursing care sensitive to the needs of individuals, families, and groups. Since health and illness are strongly influenced by an individual's cultural background, an awareness of the cultural aspects of lifestyle, health beliefs, and health practices enhance nursing assessment and care. Course examines the cultural influences on health and illness in a variety of groups, emphasizing the development of more sensitive and effective nursing care. Prerequisite: Admission to School of Nursing or instructor's consent.


NURS 531. Nursing and Computer Technology (3). Focuses on basic terminology and use of computer software for nursing education, practice, and administration. Opportunity for hands-on experience with microcomputers. Prerequisite: Admission to the nursing program or instructor's consent. Previous knowledge of computers or computer technology is not required.

NURS 543. Women and Health Care (3). Cross-listed as WOM S 543. Examines the historical development of the women's health movement, focuses on current issues relevant to women and health care, and explores the roles of women in the health care system and as consumers of health care. Examines self-care practices of women and studies ways to promote positive health practices. Open to non-nursing majors.

NURS 566. Perspectives on Self-Help Groups (3). Cross-listed as PSY 566 and SC 566. Provides an interdisciplinary framework that provides a means for understanding the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and research, explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experiences with self-help groups on such topics as addiction, cancer, and other illnesses, eating disorders, bereavement, mental illness, and parenting.

NURS 700. Assessment of Pediatric and Adolescent Clients (3). A theoretical and clinical laboratory experience; students focus on the assessment of pediatric and adolescent clients. Open admission to RN and graduate students.

NURS 701. Advanced Health Assessment Laboratory (1). Companion course for NURS 701. Apply history-taking and assessment skills within a laboratory setting. Emphasizes interpretation and documentation of normal and abnormal findings. Includes lecture, discussion, and demonstration of history-taking and an integrated physical assessment. Prerequisite: Admission to graduate nursing program. May be taken concurrently with or prior to NURS 702.

NURS 702. Advanced Health Assessment Laboratory (1). Companion course for NURS 702. Apply history-taking and assessment skills within a laboratory setting. Emphasizes interpretation, documentation, and interpretation of normal and abnormal findings. Requires a complete history and physical examination of a client. Prerequisite: Admission to graduate nursing program. May be taken concurrently with or within one year of completion of NURS 701.

NURS 703. Scientific Inquiry I (3). Emphasizes the role of theory in scientific inquiry in nursing. Traces the evolution of nursing theory and explores the history of the field. Address relationships among theory, research, and practice. Analyzes selected models/frameworks relevant for nursing. Prerequisite: Admission to graduate nursing program.

NURS 704. Health Maintenance of the School-Age Child (3). Examines and applies major theoretical concepts, research problems, and research strategies related to school health nursing. Open to RN and graduate students.

NURS 705. Scientific Inquiry II (3). Builds on NURS 703. Discusses the content of the research process in relationship to concepts, frameworks/theories. Explores various methodological approaches to research. Consider current issues in nursing research. Demonstrates the research process in a
preliminary proposal related to student’s practice area. Prerequisite: NURS 703 or departmental consent and admission to graduate nursing program.

NURS 706. Organization and Management of the School-Health Program (3). Examines and applies concepts of organization and management to the school-health delivery system. Explores political, economic, and social factors which influence the school-health delivery system. Open to RN and graduate students.

NURS 707. Alternative and Complementary Health Care (3). Analyzes the theoretical and empirical basis for various alternative and complementary modalities. Includes an exploration of issues involved with the use of specific modalities within today’s health care environment. Research-based discussion follows on how to best prepare the health care professional to provide guidance to a client and the family to best achieve a physiological, mental, emotional, and spiritual state most responsive to therapeutic interventions. Emphasizes total evaluation and support of health influences on lifestyle, environment, culture, and other cognitive, safety, and affective factors. Open to non-nursing majors.

NURS 708. School Nurse Practicum (2). An intensive clinical experience; students analyze, design, implement, and evaluate nursing systems to promote the health of individuals in the school-health delivery system and the broader community system. Open to RN and graduate students.

NURS 713. Advanced Health Assessment of the Neonate (4). A developmental and systematic approach to the advanced assessment of physiological, psychological, sociocultural, and developmental aspects of the fetus, mother in the prenatal period, and the neonate is discussed. Builds on basic assessment skills and emphasizes perinatal, genetic, and embryologic factors impacting neonatal development. Explores ways to assess the pregnant woman for problems, the use of special diagnostic tests, and the assessment of the neonate. Requires 40 laboratory/clinical hours, providing opportunities to implement various assessment and diagnostic procedures, complete health histories, perform complete physical examinations, and complete a perinatal history. Prerequisite: admission to NNP track or department consent.

NURS 715. Advanced Nursing Practice: Roles and Issues (3). Designed for students preparing for advanced practice. Discusses historical development of advanced practice role; the ethical, legal, political, and economic issues of such a role; and current trends and future directions. Focuses on issues ranging from concerns within the local practice setting to national policy issues related to advanced nursing practice. Prerequisite: admission to graduate nursing program.

NURS 718. Advanced Technologies (2). Focuses on application of clinical skills and interpretation of technologies utilized in a variety of clinical settings. Nurse practitioners and students practice these skills in the laboratory and/or clinical settings. Prerequisite: admission to one of the NP options and departmental consent. Enrollment is limited.

NURS 720. Human Lactation (2-3). 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: admission to graduate program.

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; student identifies the condition. Resource links are available for in-depth study of each condition. For clinical use, patient education links are provided. Cases give the diagnostic information needed to make clinical decisions. Prerequisite: 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: senior rule or admission to the Graduate School or instructor’s consent.

NURS 731. Psychopharmacology (3). Basic brain biology, brain disorders and psychopharmacology are reviewed as a basis for assessment and administration of psychopharmacologic medications and education of clients. Prerequisite: Admission to Graduate Program.

NURS 733. Diabetes Mellitus Nursing (3). Exploration of clinical theories; identifies and studies appropriate nursing systems for clients with diabetes mellitus. Emphasizes attainment 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 734. Diabetes Mellitus Nursing Practicum (3). An intensive clinical experience; the student studies, designs, and implements nursing systems for individuals or groups in the area of diabetes mellitus nursing management. A weekly one hour seminar accompanies the practicum. 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 non-nursing majors.

NURS 757. Clinical Teaching Strategies (3). Explores alternative teaching strategies for the clinical educator to accommodate the changing health care scene. Discusses clinical teaching methods. A clinical rotation plan with accompanying clinical evaluation tool is constructed after the student, subject, and setting are delineated. Investigates roles of the educator in teaching clinically.

NURS 775. Health Care Information Systems (3). Examines information systems as they relate to health care. Analyzes information systems in clinical management, administration, education, and research. Emphasizes issues surrounding information systems and hands-on experience with selected health care information management exercises.

NURS 776. Health Care Information Systems Practicum (3). Provides an individualized opportunity to apply the concepts/theories of information systems to a health care setting. Includes analyzing existing information programs, identifying applications for automation, and undertaking small-scale development efforts. Prerequisite or co-requisite: NURS 775.

NURS 777. Physiology/Pathophysiology of the Neonate (3). Uses concepts of embryology, neonatal physiology, and pathophysiology to provide an in-depth study of normal functioning and alteration of normal physiological functioning in cells, tissues, organs, and organ systems. Addresses the basis for understanding a variety of pathophysiological conditions and the manifestations and impact of abnormal physiological functioning on neonates. Addresses both generalized processes and major system dysfunctions. Prerequisite: admission to NNP track or department consent.

NURS 781. Pathophysiology for Acute and Critical Care (3). Examines pathophysiologic concepts relevant to acute and critical care nursing practice. Explores the scientific knowledge base for selected clinical problems in acute care. Emphasizes pathophysiological mechanisms of disease and the relevance to clinical decision making. Prerequisite: admission to graduate program.

NURS 783. Assessment in Psychiatric Mental Health Nursing (3). For the student preparing for advanced practice in psychiatric mental health nursing. Explores current diagnostic issues in psychiatric nursing practice. Emphasizes application of current biological, psychological, social, and other relevant theories and knowledge within the nursing and related fields to the assessment and planning of interventions for psychiatric clients. Prerequisite: Admission to Graduate Program.

NURS 786. Advanced Health Assessment Practicum (2). A concentrated assessment practicum focusing on application of knowledge from advanced health assessment courses. Students apply history-taking and assessment skills in a specified setting. Emphasizes differentiation, interpretation, and documentation of normal and abnormal findings. Gradated SU. Prerequisites: NURS 701, 702, and departmental consent and admission to one of the NP options.

NURS 789. Pharmacology for the Neonate (3). Discusses pharmacological agents used in the management of
neonates. Reviews pharmacologic principles and applies them to the use of drugs in the level II or III NICU. Explores the clinical use of drugs in the management of specific illnesses of the neonate. Stresses legal considerations for the Advanced Practice Nurse. Prerequisites: admission to NNP option or departmental consent.

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. Open to graduate or undergraduate students. Prerequisite: departmental consent.

NURS 793. Advanced Pathophysiology (3). Explores in-depth scientific knowledge base relevant to selected pathophysiologic states confronted in primary care. This provides the basis for the foundation of clinical decisions related to diagnostic tests and the initiation of therapeutic regimes. Age specific and developmental alterations are correlated with clinical diagnosis and management. Application is made through age appropriate examples. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 795. Applied Drug Therapy (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 nurses' 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's role and responsibility related to data collection, problem identification, and consultation with the physician. Application is made through age appropriate case studies. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 796. Nursing Practicum in Special Setting (1-6). Opportunity for directed practice in various settings including clinical specialties, nursing administration, nursing education, and consultation. Prerequisite: 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. Prerequisites: departmental consent.

Courses for Graduate Students Only

NURS 803. Primary Care I: Management of Common Health Problems through the Life Span (3). Focuses on common health problems seen in individuals and families throughout the life span. Stresses applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage common problems in urban and rural patients, interventions to restore individual and family levels of pre-illness health, and positive behaviors. Prerequisites: all core courses, NURS 718, 786, and admission to the FNP option. Prerequisites or co-requisites: NURS 715, 793, and 795. Co-requisite: NURS 804.

NURS 804. Primary Care I: Practicum (4). Concentrated clinical practicum in a primary care setting that addresses individuals and families throughout the life span within the context of the community. Theory and research used in clinical settings. Emphasizes health promotion, maintenance, and prevention interventions. Prerequisite: admission to the FNP option and NURS 803. Co-requisite: NURS 800.

NURS 805. Health Promotion through the Life Span (3). Focuses on the wellness of individuals and families through the life span seeking to maintain or improve health and prevent illness. Interventions reflect a preventative framework, enhanced by theory and research that provide an understanding of health and lifestyle behaviors. Prerequisites: NURS 703 and 785 (705 can be concurrent).

NURS 808. Advanced Role Practicum (3-6). Prepares the student for advanced nursing practice. An intensive practicum experience; the student works with an advanced nurse practitioner in a selected clinical setting. Emphasizes role development, case management, and analysis of interventions to improve nursing practice. Prerequisites: all core courses, NURS 795 or HS 711, pathophysiology (NURS 781, 783, or 793) and at least 6 hours of a clinical concentration.

NURS 809. Primary Care II: Management of Complex Health Problems through the Life Span (3). Focuses on complex problems seen in individuals and families through the life span. Stresses applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage complex patient problems in urban and rural patients, interventions to restore individual and family levels of pre-illness health, including secondary and tertiary prevention. Prerequisites: NURS 803, 804, and admission to the FNP option. Co-requisite: NURS 810.

NURS 810. Primary Care II: Practicum (4). Emphasizes assessment and management of common health problems across the life span, based upon knowledge of theory and research. Primary care clients with common conditions affecting major body systems assessed and managed. Weekly seminars focus upon evaluation and analysis of clinical situations and case studies. Prerequisite: admission to the FNP option. Co-requisite: NURS 809.

NURS 811. Foundations of Nursing and Health Care Systems Administration (3). Assists the student in acquiring theoretical knowledge of organizations. Considers current issues and research in nursing and health care systems and its impact on nursing practice. Prerequisites: NURS 703 and 705. Prerequisite or co-requisite: NURS 715.

NURS 812. Nursing and Health Care Systems Administration Practicum (1-6). Practicum in a health care setting; student, under professional guidance, becomes directly involved in existing leadership, administrative, and management systems. A seminar accompanies the field experience. Types of experience may include roles in nursing education or service, mid-level nursing administration, staff development, or community health. Repeatable with instructor's consent up to a maximum of 6 hours. Prerequisite or co-requisite: NURS 811 or 827.

NURS 813. Foundations of Nursing Education (3). Assists the student explore theoretical and practical aspects to curriculum development and teaching of nursing in higher education and continuing education. Prerequisite NURS 703 and 705. Prerequisite or co-requisite: NURS 715.

NURS 814. Nursing Education Practicum (3 or 6). Student, under professional guidance, becomes directly involved in clinical and classroom teaching, curriculum development, and participation in other faculty functions in higher education and continuing education. A seminar accompanies the field experience. Prerequisites: departmental consent and NURS 813.

NURS 815. Neonatal Nursing I (4). First of two courses that integrate the physiologic, pharmacologic, and assessment skills and principles in determining appropriate care of the ill neonate. Uses current research and evidence-based practices as the course framework. Emphasizes the effects of critical conditions on the growth and development of the neonate, including subsequent chronic health problems and the short and long-term consequences to the child's family. Discusses disorders of the central nervous, pulmonary, and cardiovascular systems. Demonstrates and applies the use of specific interventions and diagnostic procedures in laboratory/clinical settings during 40 hours of required clinical activities. Prerequisites: core courses. NURS 713, 777, and 789.

NURS 819. Foundations of Psychiatric Mental Health Nursing (3). Evaluates major theories, clinical concepts and current research in psychiatric/mental health in relation to formulating a conceptual model for nursing practice. Prerequisites: NURS 701, 702, 703, and 705. Prerequisite or co-requisite: NURS 715.

NURS 821. Thesis (1-6). Graded SU only. Student, in conjunction with the academic advisor and a three-member thesis committee, designs and conducts a formal research project. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 822. Psychiatric/Mental Health Nursing Practicum I (3). Intensive clinical experience; student plans, implements, and evaluates nurse-therapist strategies with individual clients/patients. A seminar accompanies the practicum. Prerequisite or co-requisite: NURS 819.

NURS 823. Graduate Project: Alternative to Thesis (1-3). Graded SU only. An opportunity to develop and pursue a scholarly project other than a thesis. This may take the
form of a position paper, a historical study, a philosophical paper, or other type project developed in conjunction with the student’s faculty advisor. Prerequisites: admission to graduate nursing program, departmental consent, and 12 hours of graduate course work, including NURS 703 and 705. Repeatable up to 6 credit hours.

NURS 857. Pediatric Primary Care II: Management of Common Health Issues (3). Focuses on health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs. Emphasizes comprehensive assessment, diagnosis, and management of health, developmental, and chronic health problems within the family and developmental framework. Emphasizes the collaborative and interdisciplinary nature of a child’s care in school and other settings. Addresses the unique needs of children in underserved communities. Includes applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage common problems in urban and rural populations. Interventions to improve child health and family health. Prerequisites: NURS 805, 834, 835, 852, admission to the ACNP option, and departmental consent.

NURS 858. Pediatric Primary Care II: Management of Common Health Issues (3). A concentrated clinical practicum that emphasizes assessment and management of health promotion, health maintenance, and risk reduction for children and adolescents with special...
health care needs. Emphasizes comprehensive assessment, diagnosis, and management of health, developmental, and chronic health problems within a family and developmental framework. Includes children with developmental and learning disabilities and children with select complex and chronic health problems. Seminars focus on analysis and evaluation of clinical situations and cases. Prerequisite or co-requisite: NURS 857.

NURS 859. Pediatric Primary Care III: Advanced Health Care for School Nurse Practitioners (3). This multidisciplinary course builds upon the dimensions of assessment and health care for children and adolescents in a family and community framework and provides a foundation for advanced practice in school health from the perspectives of educators and health care providers. Focuses on major contemporary issues that affect the health and education of children and adolescents in the school community. Considers theories, models, and concepts from education, public health, and nursing as they relate to schools. Focuses on the link between health and education. Examines political, sociological, economic, and environmental factors, as well as major causes of morbidity and mortality. Special emphasis on cultural diversity and vulnerable and underserved populations-at-risk and strategies that enhance learning and health promotion. Prerequisites: previous courses in the PNP specialization or departmental consent.

NURS 860. Pediatric Primary Care III Practicum: School Health Practicum (3). A clinical course to prepare the student for advanced practice as a Pediatric/School Nurse Practitioner. Focuses on the health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs, and the assessment and management of health and developmental problems within a family and developmental framework. Considers children with developmental and learning disabilities and children with select complex and chronic health problems. Emphasizes the collaborative and interdisciplinary nature of a child's care in a school setting. Addresses the unique needs of children in underserved communities. Prerequisite or co-requisite: NURS 859.

NURS 861. Neonatal Nursing II (4). Second of two courses that integrate the physiologic, pharmacologic, and assessment skills and principles in determining appropriate care of the ill neonate. Uses current research and evidence-based practices as course framework. Emphasizes the effects of critical conditions on the growth and development of the neonate, including subsequent chronic health problems as well as the short- and long-term consequences to the child's family. Discusses disorders of the gastrointestinal, renal, endocrine, hematologic, musculoskeletal, ophthalmologic, dermatologic, and immune systems. The use of specific interventions and diagnostic procedures are demonstrated and applied in laboratory/clinical settings during 40 hours of required clinical activities. Prerequisites: core courses, NURS 713, 777, and 789.

NURS 862. Neonatal Nurse Practitioner Preceptorship I (6). First of two preceptorship experiences which can be taken concurrently or in consecutive semesters; there will be a minimum of 300 clinical hours. Provides opportunities to apply knowledge and skills from advanced nursing role, theory, research, and neonatal clinical courses to the advanced therapeutic management of high-risk neonates. Emphasizes therapeutic measures within a conceptual framework or model and applies findings from research relevant to comprehensive care of neonates. The client system is the neonate and family. Prerequisites: NURS 815 and 861.

NURS 863. Nursing and Health Care Systems Administration: Capstone Seminar (3). Assists the student to integrate knowledge from nursing and administration courses to develop the individual's own management/administration practice. Utilizes a seminar approach with case studies, student presentations, and presentations by executives and other experts from the community. Prerequisites: NURS 703, 705, 715, 775, 811, 812 (3 hours), 827, PHS 834 or 442, and PHS 486. Pre or co-requisites: NURS 812 (3 hours) and 851.

NURS 864. Neonatal Nurse Practitioner Preceptorship II (6). Second of two preceptorship experiences which can be taken concurrently or in consecutive semesters. There will be a minimum of 300 clinical hours. Provides opportunities to build upon knowledge and skills gained during NURS 862 regarding the advanced therapeutic management of high-risk neonates. Emphasizes therapeutic measures within a conceptual framework or model and applying findings from research relevant to comprehensive care of neonates. The client system is the neonate and family. Prerequisites: NURS 815 and 861. Prerequisite or co-requisite: NURS 862.

The following abbreviations are used in the course descriptions: T stands for theory and L for laboratory. For example, 4T 2L means 4 hours of theory and 2 hours of lab. P stands for practicum/clinical hours; 40P means 40 hours of practicum per week.
Fairmount College of Liberal Arts and Sciences

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The mission of Fairmount College of Liberal Arts and Sciences is to cultivate intellectual curiosity and foster a lifetime of learning and growth. The College offers undergraduate majors in natural sciences, social sciences, humanities, and programs of professional training. An education in these disciplines helps students develop 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.

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Bachelor of Arts degrees are offered in anthropology, biological sciences, chemistry, communication, communicative disorders and sciences, computer science, economics, English, ethnic studies, geography, history, mathematics, modern and classical languages, and literatures (French, Latin, and Spanish), philosophy, physics, political science, psychology, social work, sociology, and women's studies. The Bachelor of Science is available in biological sciences, computer science, criminal justice, education, mathematics, and physics. The Bachelor of General Studies requires breadth in distribution of course work 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, gerontology, history, psychology, social work, sociology, and Spanish. The Master of Science (MS) may be obtained in biological sciences, chemistry, computer science, environmental science, and physics (suspended).

The Master of Computer Science (MCS) is awarded in computer science; 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 (MPA) in public administration and the Master of Social Work in social work.

The Doctor of Philosophy (PhD) degree is offered in chemistry, applied mathematics, and psychology.

For more information, consult the Wichita State University Graduate Bulletin.

Policies

Admission

Students are admitted to Fairmount College of Liberal Arts and Sciences upon meeting the general admissions 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.
3. Non-degree-bound. These students enroll in classes or programs for purposes other than achieving a degree.

Probation and Dismissal Standards

1. Students are placed on probation whenever their cumulative and WSU grade point averages fall below 2.00.
2. Probation is removed when the cumulative and overall WSU grade point averages reach the required 2.00 level.
3. Students continue on probation when they earn a 2.00 or better semester average but their cumulative and overall WSU grade point averages remain below 2.00.
4. Students on probation will not be academically dismissed unless they have attempted at least 12 hours after being placed on probation, failed to earn at least a 2.00 semester average, and if their cumulative and overall WSU grade point averages remain below 2.00.
5. At that point, probationary students will be dismissed.
6. When dismissed, students may re-enroll only with the permission of the University's Committee on Admissions and Exceptions.

Students who have been dismissed for academic reasons may seek readmission to the University by filing a petition—in writing—with Fairmount College's Admissions and Exceptions Committee. Fairmount College requires petitioners to meet with an academic advisor to prepare a written petition. The petition is considered by the Fairmount College committee and forwarded to the University's committee for final action.

Because counseling and advanced planning require careful attention and much time, students must complete the petition at least ten days before the first day of enrollment in a semester.

Enrollment Limits

Students in good academic standing may enroll for a maximum of 19 hours during full and spring semesters and a maximum of 12 hours during the summer session. Students wishing to enroll beyond these limits must request approval from an academic advisor in the LAS Advising Center.

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 LAS Advising Center for students who are degree bound, exploratory or non-degree bound.
Degree-Bound Students in Fairmont College Programs

Degree-bound students who have declared interest in any of Fairmont College's programs receive advising from the department. 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 Fairmont College experience and support their achievement and persistence. 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, to the enjoyment of intellectual pursuits, and to the realization of career fulfillment.

Degree-Bound Exploratory Students

LAS Advising Center (LASAC) advisors help degree-bound exploratory students remain flexible 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, remove academic deficiencies, develop effective college-level study skills and habits, choose an academic major, develop personalized academic and career life plans, and complete part of the general education requirements. Each degree-bound student is assigned an academic advisor. When a student declares a major field of study, an immediate transfer occurs to the college that sponsors that program, and an advisor from the selected discipline is assigned. Exploratory students must declare a major or a degree preference within the first 48 hours of enrollment. Those students transferring 48 hours or more must declare a major or degree preference during the first semester of enrollment.

Non-degree-Bound Students

LASAC advisors provide non-degree-bound students the services designed to be responsive to their unique needs and interests, responsibilities, and learning styles. These may involve self-enrichment, job advancement, career change, skills updating, or professional certification. The non-degree-bound category includes college and high school guest students and high school concurrent enrollment students. The LASAC will connect a non-degree-bound student with an appropriate academic advisor upon request. These students considering the possibility of transferring to degree programs at a later date should connect with specific college advising services as early as possible to assure the development of the best possible educational foundation.

The LASAC staff offers students assistance in becoming acquainted with departmental requirements, programs, and faculty, and assists with special advising needs and degree-completion procedures. In summary, they are a primary information resource for the University.

Application for Graduation

To insure a close identification of each student with his or her department, the faculty of the department of a student's major or primary area of concentration provide academic advising. In addition to advising for pre-enrollment and registration, the declared students' departmental undergraduate advisors will fill out a graduation plan with each student who has completed 90 credit hours. Completion of this senior form provides guidance to the student in meeting graduation requirements.

Students planning to receive the Bachelor of General Studies degree will declare their intention at least 30 hours before the degree is granted. A plan of study including the area of concentration should be initiated as soon as possible—but no later than 30 hours before the degree is granted—with the Bachelor of General Studies advisor in the primary department of interest (see Area of Concentration in Section XII on page 148). This plan will be submitted along with other graduation application materials to the LAS Advising Center. Applications for graduation and degree cards may be obtained from the LAS Advising Center.

Assessment of Academic Programs

Fairmont College participates in a University-wide program to assess the effectiveness of all curricula and instruction within the University. Individual departments within Fairmont College have established assessment strategies which are shared with their majors. In most cases, assessment activities involving students occur in the final semester of enrollment before the degree is granted.

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 advisor—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

Fairmont College offers credit for life experience when a student's learning from life experiences duplicates the content of a course offered in the Catalog. The student meets with the faculty member authorized to teach that course to document the learning from that life experience. The faculty member certifies that the documentation supports the award of credit.

While some other universities fit college credit to the student's experience, Fairmont College (the only college at Wichita State to award such credit) requires that the learning from life experience fit the approved curriculum of the college. We are conservative in protecting the autonomy of the faculty and the goals of the curriculum. In keeping with these objectives, the faculty assist students in demonstrating their mastery of the content of a class with means appropriate to the particular class.

Students who are authorized by faculty to develop a portfolio or other documentation to seek life experience credit must submit an application to the Office of the Registrar. Students are advised to enroll the program the faculty member sends a memo authorizing the (ungraded) credit to the Fairmont College office. Credit is awarded and noted on the student's transcript.

Cooperative Education

Fairmont 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 hours of cooperative education credit may be applied to baccalaureate degree requirements.

Further information is available in the Cooperative Education office, 223 Grace Wilkie Hall, or the academic information section of the Catalog.

Certificate Programs

Certificate programs in Fairmont College are available to members of the community, to students who have already earned degrees, and to students pursuing degrees in Fairmont 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 departmental sections that follow:

Applied Communication (graduate and undergraduate)—Elliott School of Communication
Information Technology—Computer Science
Corrections; Cross-Cultural Communication; Forensic Criminology; Law Enforcement—School of Community Affairs
Film Studies—English
Great Plains Studies (graduate and undergraduate)—Interdisciplinary Liberal Arts and Sciences
Public Finance (graduate); Hugo Wall School of Urban and Public Affairs
Substance Abuse Counselor Certification—Psychology
Women's Studies—Women's Studies
Academic Honesty and Code of Conduct
The faculty of Fairmont College strongly endorses the statement on academic honesty appearing in the general information section of this Catalog and the Code of Conduct and appeals procedure outlined in the Student Handbook.

Requirements for Graduation
Bachelor of Arts, Bachelor of Science, and Bachelor of General Studies
The following Fairmont 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 Fairmont College. Courses taken to fulfill these requirements also satisfy the University's general education distribution requirements. The requirements for the BA, BS, and BGS fulfill all University graduation requirements except the following:

I. Basic Skills—The following courses must be completed in the first 48 Fairmont College hours with a grade of C or above.
ENGL 100 or 101 and 102, English Composition
COMM 111, Public Speaking
MATH 111, College Algebra, or MATH 131, Contemporary Math or higher-level math class

II. Upper-Division—at least 45 semester hours of credit in courses numbered 300 or above.

III. Residence—at least 30 semester hours of course credit at Wichita State. At least 24 of the last 30 semester hours or 50 of the last 60 semester hours must be completed at Wichita State.

IV. Four-year institution—a minimum of 60 credit hours must be completed in a four-year degree-granting college or university.

V. Grades—no students are allowed credit toward graduation for D grade work in excess of one-quarter of the total hours needed for the degree.

The Schedule of Courses produced each semester before enrollment outlines specific courses approved in each of the following categories:

1. Fine Arts and Humanities*. Candidates for the BA, BS, and BGS degrees must take 12 hours of courses with the following distribution: 1) one introductory course from the fine arts discipline listed below; 2) one introductory course from two different humanities disciplines listed below; plus 3) a further study course from the same discipline as one of the introductory courses or an Issues and Perspectives course in fine arts or humanities. BA and BGS candidates may take an additional 3 hours to complete the total of 27 required in humanities/fine arts and social sciences. This extra course may be from the major department.

Fine Arts: art history, dance (history), musicology, composition, theater, other approved discipline for an Issues and Perspectives class.

Humanities: communication (non-basic skills), English (non-basic skills), history, linguistics, modern and classical languages and literature, philosophy, religion, women's studies, other approved discipline for an Issues and Perspectives class.

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 132 (humanities) or POL S 121 (social science) or by passing an examination offered each semester by the history and political science departments. 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 to 15 hours in three different departments with the following distribution: 1) one introductory course from two different social and behavioral science disciplines listed below; plus 2) a further study course from the same discipline as one of the introductory courses or an Issues and Perspectives course in the social and Behavioral sciences; 3) one or two additional courses may come from the student's major or from any other elective courses within social science departments of the college.

Candidates for the BS degree must take a minimum of three courses (9 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, other approved discipline for an Issues and Perspectives class.

Other Social and Behavioral Sciences for elective use: gerontology.

* A total of 27 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 hours of courses with the following distribution: 1) one introductory course from two different natural science disciplines listed below (one of which must be a biological science and the other a physical science); plus 2) a further study course from the same discipline as one of the introductory courses or an Issues and Perspectives 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 hours following the minimum distribution given above. Should a fourth course be necessary to complete the 12 hours, this class may come from any of the elective disciplines indicated below.

Natural Sciences and Mathematics
biology, chemistry, geology, physics, other approved discipline for an Issues and Perspectives class.

Other Natural Sciences and Mathematics for elective use: ANTH 101 and 106 (counts as biology); GEOG 201 and 235 (count as physical science).

VI. Students must complete at least one and not more than two Issues and Perspectives courses to fulfill University general education program requirements. In addition, courses within the student's major discipline do not count toward University general education program 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 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 five additional 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-hour intermediate-level class in the same language.

4. 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 towards humanities requirements in the University general education program, will not fulfill a humanities course requirement for Fairmont 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 Fairmont 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.

VIII. BA, BS: Major. All specific departmental major courses and requirements are listed in the Catalog by departments. While the department controls its own requirements for the major, the following expectations apply to all majors:

1. A 2.000 grade point average is required in the major.
2. No more than 6 hours from the major may be used to satisfy Fairmount College distribution requirements.
3. Courses with a "G" suffix may not be used as hours in the major or in the primary department of a BGS area of concentration unless approved by the department.
4. Of the 45 hours of upper-division credit required for each degree, a minimum of 12 upper-division hours are required in the major or area of concentration.
5. No more than 45 hours in the major may be used for graduation with a BA degree, and no more than 50 hours in the major may be used for graduation with a BS degree.
6. The same hours cannot be used to satisfy requirements for two or more majors or minors or combination thereof.

IX. Combined Major. A BA degree with a combined major, consisting of 24 hours from one field of study and 12 hours from an allied field of study, may be designed with the assistance of the primary department's academic advisor. A minimum of 12 upper-division hours must be included in the combined major.

X. 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. Normally 36 hours are required for the field major, with 18 hours in the major department and at least 9 in each of the two allied departments. Twelve of the 36 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 predesignated 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.

Biochemistry. Biochemistry is a rapidly growing science in which many important advances have been made in the last two decades. It requires both an understanding of biological processes and a knowledge of sophisticated techniques of chemistry and physics. The field major in biochemistry is designed to prepare students for employment or further study in this area.

Students choosing this field major should seek the advice of an advisor in the Department of Biological Sciences or the Department of Chemistry as early as possible. Both the biological sciences and chemistry sections of the Catalog provide complete descriptions of this major.

Chemistry/Business. See the chemistry section of the Catalog for complete description.

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 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.

International Studies. The program for the international studies field major is flexible and is designed to meet the need for specialists in foreign areas, international government or international economics, government, business, and international organizations. Students are prepared for careers in international organizations in the U.S. government and in business firms with international activities.

Two options are available: Option A is in area studies; Option B is a combination of area studies and international business. No minor is required for either option. Students interested in these options should contact the international studies advisor in the history department.

XI. Minor. Minors are offered all fields of study in which a major may be earned as well as in ethnic studies, geography, German, gerontology, linguistics and religion. The number of 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.

XII. BGS: Area of Concentration. The Bachelor of General Studies degree allows students to design their own programs of study crossing departmental or even college lines. The BGS degree allows the student to become a generalist and may allow preprofessional or nontraditional career students greater flexibility in planning for their unique future.

With the assistance of the BGS advisor in the department of primary interest, each student pursuing a BGS degree will develop a plan of study which outlines an area of concentration incorporating a minimum of 33 hours. No fewer than 15 and no more than 21 of these hours will be taken in a "focal" or primary department.

The remaining 12 to 18 hours must be divided between at least two other departments. Concentrations may cross departmental or college lines in that they may be thematically or occupationally related, but the first two departments of the area of concentration must be LAS. No general studies courses (courses with a "G" suffix) will count toward the "primary" portion of the concentration but will be allowed in the additional portions.

A minimum of 12 upper-division hours must be included in the concentration.

BGS students are given an opportunity to summarize their academic and intellectual goals in an assessment essay.

Distribution requirements limit course work to no more than 30 hours from one department, to no more than 60 hours in one division, and to no more than 30 out-of-college hours.

XIII. Non-liberal Arts and Sciences Courses. Students may count only 24 hours of non-liberal arts and sciences courses toward either the BA or BS degree. Thirty 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 hours required for the degree.

Communicative Disorders and Sciences

Students desiring an emphasis in applied language study should see requirements and curriculum for a major in communicative disorders and sciences through Fairmount College listed in the College of Education section of the Catalog.

Special Preprofessional Programs

Advisors in the various preprofessional fields and closely related departments provide specific information regarding courses and requirements.

Pre-law

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, and college advisors offer pre-law students assistance in contacting departments for academic advising.
Premedical Professions—Medicine, Dentistry, Optometry, Pharmacy, Veterinary Medicine, Podiatry, Chiropractic

Medical programs encourage students to obtain a broad education in addition to the prerequisite studies in the sciences. Preparation for a professional program should include courses that develop disciplined thinking, intelligent appreciation of values, and sympathetic understanding of society and human interaction. Students may choose to major in any field of interest in preparation for medical studies. The primary core of prerequisite courses necessary for admission to most professional schools includes one year each of English composition, math, biology, inorganic chemistry, organic chemistry, and physics.

Completion of a bachelor's degree is a general admissions requirement for the majority of medical schools. Some professional programs grant admission on the basis of a three-year preparatory program. Wichita State students on the three-year program may be granted the bachelor's degree if they have taken 74 credit hours (the last 30 must be at WSU) within the required fields of study and have completed general education requirements for the degree; earned 188 credit points with no more than 20 hours of D grade work; passed the first year of a professional medical program and qualified for admission to the second year. Candidates must apply for the degree through the LAS Advising Center.

Academic advising for premedical professions students is coordinated through the LAS Advising Center.

Preparation for Secondary Education

Students planning to teach in high school may pursue a Fairmount College degree program while preparing to meet State Board of Education requirements for secondary education licensure. Programs for secondary education are outlined in the College of Education section of the Catalog. Liberal arts and sciences majors form the base for many certified teaching fields, while the College of Education provides all professional education course work required for licensure. For further details and information, contact a major department advisor in Fairmount College or a teaching field advisor in the College of Education.

Anthropology (ANTHR)

Anthropology offers perspectives on issues of the origins, history, and diversity of the dynamics of culture and behavior, people, and places, personal and communal 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 course work 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 ability to interact cross-culturally.

The program offers a Bachelor of Arts (BA) degree major, an interdisciplinary field major, and a minor in anthropology. A 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 student's 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.

Major. A major in anthropology consists of at least 30 semester hours, 9 semester hours of which must include ANTHR 101, Biological Anthropology; ANTHR 102, Cultural Anthropology; and ANTHR 103, Introduction to Archaeology. Students must also take an additional three courses (9 semester hours) including one upper-level biological anthropology course (from chosen from ANTHR 356, 555, 557, 597R, and 600), one upper-level cultural anthropology course (chosen from ANTHR 303, 307, 312, 318, 327, 344, 361, 388, 505, 511, 515, 516, 522, 526, 529, 540, and 542), and one upper-level archaeology course (chosen from ANTHR 305, 313, 335, 508, 556, 611, 612, and 613). All majors must take a course in method and theory (ANTHR 647). An additional 9 semester hours of electives can be distributed across catalog listings for anthropology to match the student's interest in a particular sub-discipline(s).

A minimum of 6 semester hours of certain course work in related departments can be counted toward an anthropology major if they meet discipline-specific requirements and if approved by a committee of the anthropology department faculty.

Minor. A minor in anthropology consists of 15 semester hours in anthropology (including at least 6 hours of upper-division work) chosen in consultation with the student's anthropology advisor. Students minoring in anthropology are encouraged to take ANTHR 101, 102, and 103.

Field Major. 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 ANTHR 101, 102, 103, and at least 9 semester hours of upper-division course work. To complete the field major, students must take 9 semester hours of related coursework in two departments other than anthropology. All anthropology and non-anthropology courses must be chosen in consultation with the student's anthropology advisor.

Lower-Division Courses

> ANTHR 100. Anthropology of American Culture (3).
General education introductory course. Introduces the concept of culture and its role in shaping and patterned human behavior. Students learn to apply tools and methods of anthropology in studying the culture of the United States.

> ANTHR 101. Biological Anthropology (3).
General education introductory 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 non-human 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).

> ANTHR 102. Cultural Anthropology (3).
General education introductory course. The meaning of culture, its significance for human beings, and its diverse forms among peoples of the world, past and present.

> ANTHR 103. Introduction to Archaeology (3).
General education introductory course. Introduces the philosophy, theory, tools, and techniques of the practicing archaeologist. Illustrates the role or archaeology in understanding cultural change through time, and explains how archaeological method draws on natural science and humanities to demonstrate how we learn about past cultures from the material they left behind.

> ANTHR 106. Biological Anthropology Laboratory (1).
Students collect and analyze data while learning to apply current techniques to the study of human and/or non-human primate skeletal, dental, and biological specimens. Prerequisite or corequisite: ANTHR 101.

> ANTHR 107. Cultural Anthropology Laboratory (1).
Students participate in organizing, collecting, and analyzing data derived from cultural anthropological investigations. Prerequisite or corequisite: ANTHR 102.

> ANTHR 150. Workshop in Anthropology (1-3).
Provides specialized instruction using a variable format in an anthropologically relevant subject. Repeatable for credit.

> ANTHR 165. The Blues: Art and Culture (3).
Cross-listed as MUS C 165. The blues is a uniquely American musical form that has made an immense contribution to world popular culture. The history of the blues is also the history of Black America from the late 19th century to the present day. Focuses on major blues artists, both rural and urban, to trace the history
and development of the blues as a folk art form that expresses both the joy and the despair of the people who created it.

>ANTHR 200. Intercultural Relations (3). General education further study 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.

Upper-Division Courses

>ANTHR 303. World Cultures (3). General education further study course. Comparative case studies of the cultures of existing societies of varying types, including non-literate peoples, Third World nations, and modern industrialized countries.

>ANTHR 305. World Archaeology (3). General education further study 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.

>ANTHR 307. Peoples of Africa (3). General education further study course. Describes and analyzes the culture areas of Africa south of the Sahara Desert from ethnohistoric and ethnographic sources.

>ANTHR 312. Asia Pacific Cultures (3). General education further study course. Studies the cultures and nations in eastern Asia bordering the Pacific Ocean, focusing on historical background, cultural beliefs and practices, and the distinctive patterns of each.

>ANTHR 313. Archaeology of East Asia (3). General education further study course. A broad survey of archaeology throughout eastern Asia from the early hominid fossils at Peking and Java to the development of Chinese and Southeast Asian civilizations. Emphasizes China (through the Han Dynasty), southeast Asia, and Australia/New Guinea. Includes recent archaeological finds of the Peoples Republic of China.

>ANTHR 318. Psychological Anthropology (3). General education further study course. The relationship of individual psychology (personality, emotion, cognition), both normal and abnormal, to group membership and cultural context.

>ANTHR 327. Magic, Witchcraft, and Religion (3). General education further study course. Cross-listed as REL 327. An examination of 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.

>ANTHR 335. Archaeology of North America (3). General education further study course. A survey of the prehistoric cultures of North America north of Mexico from the earliest peopling of the continent to the time of European colonization.

>ANTHR 344. Ecological Anthropology (3). General education further study 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.

>ANTHR 347. History of Anthropology (3). An overview of the history of anthropology from the enlightenment through the middle of the 20th century. Emphasizes seminal events, theory, and contributions that shape the modern discipline of anthropology. Prerequisite: ANTHR 100, 101, or 102.

>ANTHR 350. Workshop in Anthropology (3). Focuses on anthropological topics. Repeatable for credit.

>ANTHR 351. Linguistics and Foreign Languages (3). Cross-listed as MCLL 351 and LING 351. Introduces general linguistic principles as they apply specifically to the study, acquisition, and analysis of foreign languages offered as major concentrations at WSL (French, German, Latin, and Spanish). Introduces acoustic phonetics (narrow transcriptions of foreign languages) and principles of phonology; morphemics and principles of morphology; and syntax and semantics. Prerequisite: LING 151.

>ANTHR 356. Human Variability and Adaptation (3). General education further study course. A critical examination of the biological aspects of contemporary human variation, stressing human adaptations. Prerequisite: ANTHR 101 or BIOL 210 or equivalent.

>ANTHR 361. Law, Politics, and Society (3). General education further study course. Studies legal and political systems in non-Western societies. Includes the origin of the state, pre-colonial law and politics, the impact of colonialism, and problems in state building.

>ANTHR 388. Cognitive Anthropology (3). General education further study course. Concentrates on the transcultural comparison of the cognitive constructions of life-space, social reality, and world view in foraging, agricultural, and industrial societies focusing on the socioculturally conditioned aspects of intellectual functioning and perceptually based behavior.

>ANTHR 397. Topics in Anthropology (3). Studies current issues in anthropology. Content varies with instructor. Consult current Schedule of Courses for topics.

>ANTHR 398. Travel Seminar (1-4). An 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. Utilizes the archaeological, biological, linguistic, and sociocultural perspectives to better understand overseas cultures. Prerequisite: departmental consent.

>ANTHR 481. Cooperative Education in Anthropology (1-4). See ANTHR 281.

>ANTHR 498. Readings in Anthropology (2-3). Repeatable up to 6 hours. Special problems in anthropology. Prerequisite: 12 hours of anthropology.

Courses for Graduate/Undergraduate Credit

>ANTHR 502. Introduction to Archaeological Laboratory Techniques (1-3). Maximum of 3 hours. An introduction to the laboratory processing of archaeological materials. Direct experience in all phases of preparing excavated materials for analysis, including cleaning, restoring, preserving, numbering, and cataloging of ceramic and lithic artifacts and other remains. Prerequisite: ANTHR 305.

>ANTHR 506. Peoples of the Pacific (3). General education further study course. A survey of the races, languages, and cultures of non-literate peoples of Polynesia, Micronesia, and Indonesia.

>ANTHR 508. Ancient Civilizations of the Americas (3). General education further study course. A cultural survey of the Aztec, Maya, and Incas. Prerequisite: instructor's consent.

>ANTHR 511. The Indians of North America (3). General education further study course. A survey of tribal societies and native confederations north of Mexico from the protohistoric through the historic period. Prerequisite: ANTHR 102.

>ANTHR 514. Anthropology of Aging (3). General education further study course. Cross-listed as GERON 514. An anthropological analysis of the latter stages of the life cycle with historical and cross-cultural perspectives.

>ANTHR 515. China (3). General education further study course. An introduction to the people of China and aspects of their culture: economy, government, society, religion, and the arts. Historical attention on the many adjustments the Chinese made during the 20th century following political revolutions, industrialization, and expanding trade relations.

>ANTHR 516. Japan: People and Culture (3). General education further study course. An introduction to the culture of Japan including its history and prehistory, aspects of traditional culture and 20th century Japan, its economy, politics and social organization.

>ANTHR 519. Applying Anthropology (3). General education further study course. The application of anthropological knowledge in the solution of social problems in industry, public health, and public administration. Prerequisite: ANTHR 102.

>ANTHR 522. Art and Culture (3). General education further study course. A survey of the visual and performing arts of non-Western peoples with special attention to their relationships in the cultural setting. Prerequisite: ANTHR 102.

ANTHR 528. Medical Anthropology (3). General education further study 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 corrective 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: 6 hours of anthropology.

ANTHR 536. Early Man in the New World (3). A critical examination of facts and theories concerning early man in the New World from the peopling of the continent to the beginning of the Agricultural Revolution, and of the role of cultural contacts between eastern Asia and North America. Prerequisite: ANTHR 305.

ANTHR 540. The Indians of the United States: Conflict and Survival (3). An anthropological inquiry into four centuries of cultural contact, conflict, resistance, and reassessment. Prerequisite: ANTHR 101 or instructor's consent.

ANTHR 542. Women in Other Cultures (3). General education further study course. Cross-listed as WOM 552. 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.

ANTHR 555. Paleanthropology and Human Paleontology (3). A detailed examination of human evolutionary history as evidenced by fossil remains and a survey of various interpretive explanations of the fossil record. Prerequisite: ANTHR 101 or BIOL 203 or equivalent.

ANTHR 557. Human Osteology (3). Deals with human skeletal and dental materials with applications to both physical anthropology and archaeology. Lectures and extensive laboratory sessions include bone and tooth identifications, measurement and analysis, and skeletal preservation and reconstruction. Individual projects undertaken. Prerequisite: ANTHR 101 or equivalent.

ANTHR 559. Topics in Anthropology (3). Detailed study of topics in anthropology. Content varies with interest of instructor. Consult Schedule of Courses for current topic.

ANTHR 600. Forensic Anthropology (3). Cross-listed as CJ 600. Encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition, and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification, and identification emphasizing anthropological interpretation. Prerequisite: ANTHR 101 or equivalent.

ANTHR 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. Prerequisites: ANTHR 502 and instructor's consent.

ANTHR 606. Museum Methods (3). An introduction to museum techniques relating to the acquisition of collections and related procedures, such as accessioning, cataloging, documentation, presentation, and storage. Emphasizes current trends in museological philosophy concerning purpose, function, and relevance of museums, as well as career opportunities. Prerequisite: instructor's consent.

ANTHR 607. Museum Exhibition (3). Contemporary philosophy of exhibition design and the application of recent concepts to the planning and installation of an exhibit. Prerequisite: ANTHR 606 or instructor's consent.

ANTHR 609. Biological Anthropology Laboratory Analysis (1-3). Analyzes biological anthropological materials including human and non-human 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. Prerequisites: Anthropology 101, 106, 356, or 557.

ANTHR 611. Southwestern Archaeology (3). General education further study course. A comprehensive survey of the prehistoric, historic, and living cultures of the American Southwest particularly emphasizing the cultural continuities and changes covering 11,000 years. Prerequisite: one introductory course in anthropology or departmental consent.

ANTHR 612. Indians of the Great Plains (3). An investigation of the cultural dynamics of the Great Plains area from the protohistoric period to the present. Prerequisites: 6 hours of anthropology and departmental consent.

ANTHR 613. Archaeology of the Great Plains (3). General education further study course. The archaeology of the Great Plains area from earliest evidence to the historic period. Prerequisite: one introductory course in anthropology or departmental consent.

ANTHR 647. Theories of Culture (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: 6 hours of anthropology.

ANTHR 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 determination; types of language context; the linguistic repertoire and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite: 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

ANTHR 667. English Syntax (3). Cross-listed as ENGL 667 and LING 667. Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisite: ENGL 315 or LING 577 or ANTHR 577 or instructor's consent.

ANTHR 690. Field Methods in Anthropology (3-6). A maximum of 6 hours can be counted as anthropology hours toward either degree. 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. Prerequisite: instructor's consent.

ANTHR 756. Advanced Studies in Archaeology and Ethnography (3). Special area and theory problems in a historical approach to culture. Prerequisite: graduate standing and 6 hours of anthropology.

ANTHR 746. Advanced Studies in Cultural Anthropology (3). Emphasizes an 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. Prerequisites: graduate standing and 6 hours of anthropology.

ANTHR 750. Workshop (1-4). Short-term courses focusing on anthropological problems. Prerequisite: instructor's consent.

ANTHR 756. Advanced Studies in Biological Anthropology (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. Prerequisites: graduate standing and 9 hours of anthropology (must include ANTHR 101 or instructor's consent).

ANTHR 770. Advanced Readings (2-3). Provides opportunities for additional student research and reading on concepts and topics covered in the core graduate courses, Anthr. 736 (Advanced Studies in Archaeology and Ethnography), Anthr. 746 (Advanced Studies in Cultural Anthropology), and Anthr. 756 (Advanced Studies in Biological Anthropology). Repeatable up to 6 hours. Prerequisites: Full graduate standing, completion of one core course (Anthr. 736, Anthr. 746, or Anthr. 756), and department consent.

ANTHR 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. Offered Cr/NC only. Prerequisite: graduate status.

ANTHR 798. Introduction to Research (3). Research methodology in Anthropology, including bibliography, research design, and the philosophy of research. Prerequisites: Full graduate standing and completion of at least one of the following core courses: ANTHR 736, ANTHR 746, or ANTHR 756.
Courses for Graduate Students Only

ANTHR 301. Seminar in Archaeology (3). Comprehensive analysis of archaeological data emphasizing theoretical problems of interpretation and reconstruction. Repeatable up to 6 hours. Prerequisite: ANTHR 301 or departmental consent.

ANTHR 302. Methods in Anthropology (2-3). Develops abilities in the conception and investigation of anthropological problems and interview and observation techniques, as well as more specialized methods such as photography, mapping, and tape recording. Repeatable up to 6 hours. Prerequisite: departmental consent.

ANTHR 303. Seminar in Cultural Anthropology (3). Intensive study of advanced theoretical questions in cultural anthropology. Repeatable up to 6 hours. Prerequisite: 5 hours of anthropology.

ANTHR 304. Colloquium in Anthropology (1-2). SU grade only. Repeatable for a maximum of 3 hours. Seminar-style experience in recent research in all of the subfields of anthropology. Allows those students preparing their first papers for presentation at professional conferences to present them before a critical but friendly audience. Students presenting colloquium papers receive 2 credits. Prerequisite: graduate standing in anthropology.

ANTHR 305. Recent Developments in Anthropology (3). A review of the latest discoveries and interpretations in the science of human beings. Repeatable up to 6 hours. Prerequisite: 5 hours of anthropology.

ANTHR 306. Independent Reading (2-3). Repeatable up to 6 hours. Prerequisite: departmental consent.

ANTHR 307-308. Internship in Anthropology (2-3). Students following applied or multidisciplinary tracks, such as museology, international business education, or health professions receive professional work experience in their field through an internship at a designated work place approved by departmental committee. Course need not require a tangible end product (e.g., paper). May be repeated, but limited to a total of 4 credit hours. Prerequisite: committee consent.

ANTHR 309-310. Advanced Project in Anthropology (2-3). In consultation with their major advisor and committee, students design a project (e.g., a museum exhibit, a written plan for an international business venture, a lesson plan for an anthropology unit in schools) that applies anthropological method and theory to the specific needs of an institution, group, or population. Requires a tangible end product (e.g., paper, thesaurus, or visual production or exhibit). May be repeated, but limited to a total of 4 credit hours. Prerequisite: committee consent.

ANTHR 311-312. Thesis (2-2).

Biological Sciences (BIOL)

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 Fairmont 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 careers 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 courses taught in the department assessment program. All candidates must maintain a grade point average of 2.00 in all biological sciences course work.

Major in Biological Sciences with Biological/Biomedical Emphasis. A major in biological sciences leading to the BA with a biological/biomedical emphasis requires a minimum of 30 semester hours of biological sciences course work; up to 40 semester hours may be taken for credit. A major in biological sciences leading to the BS with a biological/biomedical emphasis requires a minimum of 40 semester hours of biological sciences course work; up to 50 semester hours may be taken for credit. Candidates for either degree must complete BIOL 210, 211, 418, 419, 420; either BIOL 497 or 499; and one course chosen from the following: BIOL 502, 503, 523, 524, or 532. Candidates for either degree must also complete CHEM 111, 112, 531, and 532. Candidates for the BS degree must also complete PHYS 213 and 214.

Major in Biological Sciences with Ecological Environmental/Organisal Emphasis. A major in biological sciences leading to the BA with an ecological/environmental/organisal emphasis requires 35 semester hours of biological sciences course work. A major in biological sciences leading to the BS with an ecological/environmental/organisal emphasis requires 30 semester hours of biological sciences course work. Candidates for either degree must complete BIOL 210, 211, 418, 419, 420; either BIOL 497 or 499; and one course chosen from the following: BIOL 502, 503, 523, 524, or 532. Candidates for the BS degree must also complete a minimum of 5 additional hours of courses chosen from among those approved for the ecological/environmental/organisal emphasis (see academic advisor or departmental offices for approved courses); CHEM 111, 112, and 531. Candidates for the BS degree must also complete 15 additional elective hours from biological sciences chosen in consultation with a departmental advisor; CHEM 111, 112, and 531; and PHYS 213.

Minor in Biological Sciences. Candidates for a minor in biological sciences must complete BIOL 210, 211, and any two of the following: BIOL 418, 419, or 420, or one course chosen from the following: BIOL 502, 503, 523, 524, or 532.

Biochemistry Field Major. The departments of biological sciences and chemistry participate jointly in this program. Required courses are BIOL 210, 211, 419, and 420; CHEM 111, 112, 531, 532, 662, 663, and 664; PHYS 213 and 214; and MATH 112 (or 111 and 123). Also required are BIOL (CHEM) 666 and 669 (two enrollments) and 21 elective hours chosen in consultation with a biochemistry academic advisor.

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 and general science—grades 7-12. Students selecting this option should work closely with the teacher education advisor. The BA in Secondary Education requires the completion of BIOL 210, 211, 330, 418, 419, 420, 524; one 4-hour course in botany; and one of the following: BIOL 503, 560, 579, or 578. Also required are CHEM 111, 112, 531, and 532; PHYS 213; BIOL 302; MATH 123; either C1772 or 7805; and the professional education requirements for majors in science as outlined by the College of Education. For the BS in Biological Sciences in Secondary Education, students must complete additional hours to total a minimum of 40 semester hours of course work in biological sciences (a maximum of 50 hours may be taken for credit) and PHYS 214.

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 Fairmont College requirements for these degrees.

Non-major Courses. The Department of Biological Sciences offers courses designed primarily to meet the needs of students in other departments. These are listed below as "Non-major Courses." These courses, or their equivalents at other institutions, cannot be used to satisfy the biological sciences course work requirements for the major or the minor.

Non-major Courses
(May not be used to satisfy the requirements for the major)

Lower-Division Courses

>BIOL 103. Microbes and You (3). General education introductory course. Survey of information about microbial physiology, biochemistry, and ecology. Discuss 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 introductory course. Introduces the non-science 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 science 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, 105G, 106 and/ or 107. Students wishing to repeat BIOL 105G (no longer offered) should enroll in BIOL 106 and 107.

>BIOL 107. The Human Organism Laboratory (1). 2L. General education introductory course. For the non-science major. Supplements and reinforces the material covered in BIOL 106 with a laboratory experience. Uses a hands-on approach and covers topics relevant to the students and their role in the biosphere. Includes cell structure, human organ systems, the role of microorganisms in our environment, nutrition, metabolism, genetics, and ecology. 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, 105G, 106 and/ or 107. Students wishing to repeat BIOL 105G (no longer offered) should enroll in BIOL 106 and 107.

BIOL 140. Topics in Biological Science (2-4). Selected offerings in the biological sciences for the non-science major. Consult Schedule of Courses for current offering. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences.

BIOL 220. Introduction to Microbiology (4). 3R; 2L. For students in allied health fields. Introduces eucaryotic and prokaryotic microorganisms and viruses and develops an understanding of microbial growth, including the use of antimicrobials, disinfectants, and antibiotics. DNA as the genetic material, including DNA replication, protein synthesis, gene regulation, mutation, and gene exchange in bacteria and viruses. Basic molecular techniques including water and sewage treatment and food microbiology; resistance to infection, basic mechanisms of host-pathogen interactions, 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 120Q (no longer offered) and BIOL 220. Students wishing to repeat BIOL 120Q may enroll in this course. Prerequisite: CHEM 101 or 103 or 111.

BIOL 223. Human Anatomy and Physiology (5). 4R; 2L. 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. Prerequisite: CHEM 101 or 103 or 111.

Upper-Division Courses

>BIOL 310. Human Reproduction: Issues and Perspectives (3). General education issues and perspectives course. Presents a 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. Prerequisite: any of the following: BIOL 104, 105G (no longer offered), 106, 203, or 223.

>BIOL 370. Introductory Environmental Science (3). General education issues and perspectives course. Examines the relationship of the earth’s human populations to resource use, degradation, and to the impact of human activities on the environment. Introduces and uses basic concepts relating to energy, ecosystems, and human society as a basis for understanding environmental problems on the local, regional, national, and international levels.

Courses for Graduate/Undergraduate Credit

>BIOL 509. Foundations of Human Heredity (3). General education further study course. Introduction to the mechanisms and societal significance of developmental, transmission, and population genetics of humans. Attention to inborn errors of metabolism and developmental and the roles of genetic counseling and genetic engineering in their management. Students majoring outside of the natural sciences. Does not carry credit toward a biological sciences major or minor. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: junior standing.

BIOL 518. Biology of Aging (3). Cross-listed as GERON 518. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence emphasizing humans. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: a basic course in biological sciences that satisfies general education requirements.

Major Courses

(Upon satisfied the requirements for the major)

Lower-Division Courses

>BIOL 210. General Biology I (4). 3R; 2L. General education introductory course. Introduces fundamental concepts in cellular and molecular biology. Includes basic biological chemistry; cell and membrane structure and function; aerobics 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 210 may enroll in this course, subject to the credit limitations indicated above. Co-requisite: CHEM 111 recommended.

BIOL 211. General Biology II (3). 3R; 2L. 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; and nutrient procurement, circulation, and hormonal regulation, reproduction, immune responses and behavior in animals. Principles of ecosystem preservation 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 protists, fungi, plants, and animals and emphasizes evolutionary trends in the plant and animal kingdoms. Students may not receive credit for both BIOL 204Q (no longer offered) and BIOL 211. Students wishing to repeat BIOL 203 may enroll in this course, subject to the credit limitations indicated above. Prerequisite: BIOL 210. Concurrent enrollment in CHEM 112 is recommended.

Upper-Division Courses

BIOL 305. Introductory Plant Physiology (5). Introduces the physiological mechanisms which control higher plant functions. Includes a review of basic physiological principles: gas exchange; water absorption, transport and loss; organic nutrition and the process of photosynthesis and respiration, including plant mechanisms in plants adapted for particular environments; transport of organic nutrients; mineral assimilation and nutrition, and factors affecting the growth of higher plants. Emphasizes structure as it relates to function and the physical/chemical mechanisms involved in maintenance physiology. The laboratory emphasizes experimental techniques and approaches to investigations of plant physiological phenomena discussed in the lecture and the development of scientific writing skills. Prerequisites: BIOL 204 or 211 and CHEM 112.

BIOL 330. General Microbiology (3). 3R; 6L. Introduces the structure, function, systematics, ecology, and population dynamics of microorganisms emphasizing prokaryotes. Prerequisites: BIOL 204 or 211 and CHEM 112.

BIOL 340. Special Topics in Biology (2-4). Selected offerings for undergraduate majors in the biological sciences. Consult Schedule of Courses for current offering(s). Prerequisites: BIOL 204 or 211 and CHEM 112.

BIOL 418. General Ecology (4). 3R; 3L. Principles underlying the interrelationships of living organisms and their environment from the biosphere to the population level of organization. Some laboratory exercises and class projects conducted at local field sites. Prerequisites: BIOL 204 or 211 and CHEM 112.
Biol 419. Genetics (4). 3R; 3L. The mechanisms of heredity and variation in animals, plants, and prokaryotes with a critical review of gene structure and function. Prerequisite: BIOL 204 or 211 and CHEM 112.

Biol 420. Molecular Cell Biology (4). 3R; 2L. Concerned primarily with the molecular biology of eukaryotic cells. Covers individual cellular components (organelles) and processes includes the plasma membrane, mitochondrion and energy conversion, intracellular sorting, the cytoskeleton and genetic mechanisms, control of gene expression, cell signalling, cell growth and division, cancer, and cellular mechanisms of development. Reviews and demonstrates current techniques and experimental approaches for studying cells. Prerequisites: BIOL 204 or 211 and CHEM 112.

Biol 471. Wildlife Management (4). 3R; 3L. Presents both theoretical and practical principles of wildlife management. Includes wildlife legislation, ecological rules applicable to wildlife populations, procedures for habitat analysis and inventory, and wildlife restoration. Conduct laboratory exercises and class projects at local field sites. Emphasizes habitat analysis and restoration during the field portion. Prerequisite: BIOL 418.

Biol 481. Cooperative Education (2-4). Course complements and enhances the student's academic program by providing an opportunity to apply knowledge gained through course work 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: applicant and cooperative education position approved by the departmental affairs committee. Offered C/NCR only.

Biol 497. Biology Colloquium (1). SUU grade only. 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. Prerequisites: two of the following—BIOL 418, 419, 420.

Biol 498. Undergraduate Independent Reading (2). SUU grade only. 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. Prerequisites: at least 20 hours of biology course work that satisfies the major requirements, instructor's consent, a Directed Independent Study Abstract form, and departmental consent.

Biol 499. Undergraduate Research (2-4). SUU grade only. Students perform laboratory or field research 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. Prerequisites: at least 20 hours of biology course work that satisfies the major requirements, instructor's consent, a Directed Independent Study Abstract form, and departmental consent.

Courses for Graduate/Undergraduate Credit

Biol 502. Vascular Plants (4). 2R; 4L. An introduction to the structure, reproduction, and evolution of the major groups of flowering vascular plants. Includes an introduction to flowering plant systemsatics. 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: BIOL 204 or 211 and CHEM 112.

Biol 503. Taxonomy and Geography of Flowering Plants (4). An introduction to the principles and methods of plant taxonomy and to the study of the patterns of plant distribution and the origin of these patterns. Class time is divided among lectures, laboratories, and field work. Field trips throughout Sedgwick County and to the Flint and Chaumette Hills provide an opportunity to collect specimens and to observe ecology and distribution of native species of flowering plants. Prerequisites: BIOL 204 or 211 and CHEM 112.

Biol 523. Freshwater Invertebrates (4). 2R; 4L. Emphasizes the ecology, taxonomy, and form 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. Prerequisites: BIOL 211 and CHEM 112.

Biol 524. Vertebrate Zoology (4). 2R; 4L. Evolution, distribution, systematic, 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 the instructor. Prerequisite: BIOL 204 or 211 and CHEM 112; BIOL 527 is also recommended.

Biol 525. Introduction to Ecotoxicology (4). 2R; 2L. An overview of the concepts and methodology for conducting tests in the field of ecotoxicology. Examines tests at the molecular, individual, and population level. Covers basic ecological assessments, such as Index of Biological Integrity, Index of Biological Well-Being, and Rapid Bioassay Protocols; and toxicological protocols like acute and chronic bioassays, biomarkers, and modeling techniques using Quantitative Structure Activity Relationships. Recommended for students interested in learning about the applied methodology used in the rapidly evolving field of ecotoxicology. Prerequisites: BIOL 418 or equivalent and CHEM 531 or equivalent, or instructor's permission.

Biol 526. Endocrinology (4). 3R; 3L. The hormonal regulation of bodily functions is considered in representative vertebrate systems, including humans. Students enroll in both lecture and laboratory portions of class. Students earning graduate credit submit a term paper on a topic chosen in consultation with the instructor. Prerequisite: BIOL 204/211 and CHEM 112.

Biol 527. Comparative Anatomy (5). 3R; 4L. An intensive study of representative chordate 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. Prerequisites: BIOL 204 or 211 and CHEM 112.

Biol 528. Parasitology (4). 2R; 4L. 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. Prerequisites: BIOL 204 or 211 and CHEM 112.

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, interactions with higher organisms, biogeochemical cycling, biotechnology, and biomediation. Students earning graduate credit produce an additional research paper based on original literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 112.

Biol 532. Entomology (5). 3R; 4L. An introduction to the morphology, physiology, life cycles, behavior, ecology, and economic significance of insects. Students earning graduate credit produce a term paper based on technical literature on a topic chosen in consultation with the instructor or development efficiency in a specific taxon by performing an individual systems project. Prerequisite: BIOL 204 or 211 and CHEM 112.

Biol 534. Mammalian Physiology (3). An organ systems approach to mammalian—primarily human—physiology. Emphasizes nervous and endocrine control systems and the coordination of body functions. Students earning graduate credit submit a term paper based on library research on a topic in mammalian physiology chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 531, or instructor's consent.

Biol 535. Mammalian Physiology Laboratory (2). 4L. An empirical approach to mammalian 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. Prerequisite or corequisite: BIOL 534.

Biol 540. Developmental Biology (4). 2R; 4L. 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. Prerequisites: BIOL 204 or 211 and CHEM 112; BIOL 420 recommended.

Biol 553. Ecological Risk Assessment (4). Risk assessment is the process of assigning magnitudes and probabilities to the adverse effects of human activities or natural disasters. It involves global climate change, habitat loss, acid rain deposition, reduced biological diversity, and the ecological impacts of pesticides and toxic chemicals. It uses measure-
BIOL 560. Plant Ecology (2). 2R. An examination of the relationship of plants to their environment at the organism, population, community, and ecosystem levels. For graduate credit, a student must prepare and present a thirty-minute lecture over one of the topics covered in this course. Prerequisites: BIOL 418 or equivalent and CHEM 531 or equivalent, or instructor’s consent.

BIOL 561. Plant Ecology Laboratory (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. Prerequisite: prior or current enrollment in BIOL 560.

BIOL 562. 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 produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 or 211 and CHEM 112 and instructor’s consent.

BIOL 563. Behavioral Ecology (3). A study of the biological basis of social behavior, stressing the underlying evolutionary and ecological mechanisms. Lectures examine altruism and kin selection, kin recognition mechanisms, sexual behavior, sexual selection and mate choice, mating systems, and reproductive strategies from the perspective of natural selection. Students earning graduate credit write a term paper based on the technical literature and present this in a class seminar. Prerequisite: BIOL 418.

BIOL 564. Field Ecology (3). 9L. 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: BIOL 418 or instructor’s consent.

BIOL 578. Aquatic Ecology (5). 2R, 6L. Introduction to the biological and physical processes that operate in lakes, streams, and estuaries. Requires assigned readings, individual projects, and field trips. Students earning graduate credit investigate and compare the characteristics and properties of two freshwater ecosystems or investigate a specific taxon or trophic level in a freshwater ecosystem. The results of this investigation are reported as a technical paper. Prerequisite: 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. Prerequisites: BIOL 204 or 211 and CHEM 531.

BIOL 610. Topics in Botany (3-4). Selected offerings in botany. Consult the Schedule of Courses for current offerings. 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. Prerequisites: BIOL 204 or 211, CHEM 112 and instructor’s consent.

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 produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: BIOL 420. BIOL 526 is strongly recommended.

BIOL 630. Behavioral Ecology (3). A study of the biological basis of social behavior, stressing the underlying evolutionary and ecological mechanisms. Lectures examine altruism and kin selection, kin recognition mechanisms, sexual behavior, sexual selection and mate choice, mating systems, and reproductive strategies from the perspective of natural selection. Students earning graduate credit write a term paper based on the technical literature and present this in a class seminar. Prerequisite: BIOL 418.

BIOL 640. Topics in Zoology (3-4). Selected offerings in zoology. Consult the Schedule of Courses for current offerings. 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. Prerequisites: BIOL 204 or 211, CHEM 112 and instructor’s consent.

BIOL 654. Pathogenic Microbiology (4). 2R, 4L. An introduction to the important pathogenic micro-organisms and their relationships to health and disease in humans. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: BIOL 330.

BIOL 660. Topics in Microbiology (2-3). See BIOL 610. Prerequisite: BIOL 330 and 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. Prerequisites: BIOL 204 or 211, CHEM 662 and 663.

BIOL 669. Research in Biochemistry (2). Cross-listed as CHEM 669. S/U grade only. Primarily for students who choose the biochemistry field major. Requires participation in a biochemistry research project under the direction of a faculty member and a written report summarizing the results. May be repeated once for credit. Prerequisites: BIOL 420 or 500, CHEM 662 or 663, CHEM 664, and instructor’s consent.

BIOL 702. Environmental Science I (5). 3R, 4L. Cross-listed as GEOL 702 and CHEM 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. The laboratory portion addresses local environmental problems from a risk assessment perspective. BIOL 702 and 703 (or equivalent) are required for all graduate students in the master’s of environmental science program. Prerequisite: acceptance into the master of environmental science program or instructor’s consent.

BIOL 703. Environmental Science II (5). 3R, 4L. Cross-listed as GEOL 703 and CHEM 703. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic microbial biochemistry, environmental biochemistry, water treatment, photochemical smog, and hazardous waste chemistry. The laboratory portion addresses local environmental problems from a risk assessment perspective. BIOL 702 and 703 (or equivalent) are required for all graduate students in the master’s of environmental science program. Prerequisite: BIOL 702 or instructor’s consent.

BIOL 704. Environmental Science Colloquium (1). Cross-listed as GEOL 704 and CHEM 704. Students in the master’s program in environmental science are required to enroll each semester (maximum 4 credit hours). Includes presentations by guest speakers and required readings for class discussion. May also include student involvement in environmentally related community groups and projects. Graded S/U only. May be repeated for up to four hours credit.

BIOL 706. Environmental Science Internship (3-5). Cross-listed as GEOL 706 and CHEM 706. Students in the master’s program in environmental science may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internships projects with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved pro-
Biol 700. Glycobiology (3). Introduction to glycophosphorylation, structure, and function. Covers the various roles of carbohydrate 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: Biol 420.

Biol 709. Neurobiology (3). Basic course in contemporary neurobiology emphasizing learning and memory. Exploration of the current research literature covering all levels of organization from complex behavior to brain information processing pathways, neuronal cell biology, and molecular biology. Each student chooses a topic, completes a written report, and gives an oral presentation to the class. Graduate students do more reading in the primary neurobiology literature. Prerequisites: Biol 420 and 534 or equivalents and instructor's consent.

Biol 737. Aquatic Toxicology (4). 2R; 2L. The qualitative and quantitative study of the fate and effects of toxic agents in the aquatic environment. Class examines the concentrations or quantities of chemicals that occur in the aquatic environment and includes a detailed study of the transport, distribution, transformation, and ultimate fate of various environmentally important chemicals. Class is for undergraduate or graduate students interested in advanced training in toxicology. Prerequisite: Biol 525 or equivalent and chem 531 or equivalent, or instructor's consent.

Biol 750. Biology Workshop (1-3).

Biol 760. Experimental Molecular Biology (4). 2R; 6L. 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: 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 gonadotropins, luteinizing hormone, follicle-stimulating hormone, chorionic gonadotropin, thyroid-stimulating hormone, steroid hormones, thyroid hormone, 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. Prerequisites: Biol 420 and Chem 662 or their equivalents, plus either Biol 534 or 526 or their equivalents, and instructor's consent.

Biol 771. Evolutionary Ecology (4). 3R; 2L. Presents a synthesis of basic principles in population genetics and ecology as a framework for the study of topics in evolutionary ecology. Emphasizes (1) the maintenance and structure of population level genetic variation; (2) mating structure and the evolutionary advantages of sex; (3) individual, kin, group selection; (4) population demographic structure; (5) population regulation and dispersal; (6) life history strategies in heterogeneous environments; and (7) demographic and genetic covariance. Teaches basic techniques in population ecology on several short field trips throughout the semester. Prerequisite: Biol 418, 419, or instructor's consent.

Biol 780. Molecular Genetics (3). Studies the biochemical nature of genetic material and the mechanisms of genetic regulation and 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: Biol 419 or 594.

Biol 790. Advanced Immunology (3). Contemporary problems in immunologic research. Includes lectures, assigned readings, and reports. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with instructor. Prerequisites: Biol 590 and instructor's consent.

Biol 797. Departmental Seminar (1). Forum for the weekly presentation and discussion of the ongoing research projects performed by departmental faculty, graduate students, and guest scientists from outside departments and institutions. All MS degree-bound graduate students are required to attend the seminar each semester and must enroll for credit during the two semesters in which they give presentations that are the basis for their grade. One of these presentations may be their thesis defense. Prerequisite: acceptance into MS program.


Courses for Graduate Students Only

Biol 890. Research (2-5). 5U plate only. Students performing research on their thesis projects should enroll for an appropriate number of hours. An oral presentation of the research results must be presented to the student's thesis committee before a grade is assigned.

Biol 891. Thesis (2). 5U plate only. Students must be enrolled in this course during the semester in which the thesis is defended.

Chemistry (CHEM)

The chemistry department offers a broad and flexible curriculum leading to a variety of degrees and options: Bachelor of Science (BS) in chemistry, Bachelor of Science (BS) in chemistry-pre-medicine, Bachelor of Arts (BA) in chemistry, biochemistry field major (BS), and chemistry/business field major (BS).

Bachelor of Science in Chemistry

This program requires Chem 514, 524, 532, 545, 546, 547, 615, 616, and 661, 2 credit hours of 690, and their necessary prerequisites, including MATH 344 and Phys 313, 314, 315, and 316, or their equivalents. An additional 4 credit hours of professional elective courses must be taken. Courses that will satisfy the professional elective requirement are: (a) Chem 602, 603, 605, 662, 663, 664, 666, 669, and 1 additional credit hour of 690; (b) mathematics courses with MATH 344 prerequisite or MATH 555; (c) physics courses with Phys 314 prerequisite; (d) one academic year of German or French; and (e) other courses as approved by the Undergraduate Affairs Committee.

In agreement with the American Chemical Society, the chemistry department strongly encourages students considering the BS degree to select courses in computer science, economics, marketing, and business to utilize every opportunity to develop competence in technical writing and oral communication.

The curriculum for the BS in chemistry is approved by the American Chemical Society for the professional training of chemists. Students completing the program receive certification from the American Chemical Society. Students should consult with an advisor for details.

Bachelor of Science in Chemistry—Pre-medicine

Students in premedical, pre-dental, pre-veterinary, pre-pharmacy, pre-optometry, or other preprofessional programs may desire this option for which the following courses are required: Chem 514, 524, 532, and 663 and their necessary prerequisites, MATH 144 or 242 and a one-year sequence of physics courses above 200, 6 additional credit hours of chemistry courses numbered above 500 (Chem 605 is recommended); and 8 credit hours consisting of Biol 210 and 211.

This program is designed for students not expecting to become professional chemists and therefore does not necessarily meet standards of certification by the American Chemical Society or entry requirements for graduate work in chemistry.

Bachelor of Arts in Chemistry

This degree requires Chem 524, 532, 545, 546, and 547 and the necessary prerequisites, including MATH 344 and one year of physics (Phys 313, 314, 315, and 316) or their equivalents. Students with a substantial interest in the biological sciences may satisfy the BA requirements by substituting Chem 602 and 664, or Chem 663, for Chem 524 (then Chem 523 is required) or by substituting Chem 662 or 665 for Chem 546. This degree requires foreign language (5 hours beyond 111-112 in one language or equivalent to 112 in two languages).

Students who meet the requirements of the BA program may be certified by the American Chemical Society if they also take Chem 514, 524, 545, 615, and 661 and 6 hours of professional development courses. Students planning to become teachers of chemistry should complete the Bachelor of Arts program.
**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. The required courses are: BIOL 210, 211, 419, and 420; CHEM 111, 112, 523, 351, 532, 662, 663, and 664; PHYS 213 and 214; and MATH 112 (or 111 and 123). Also required are CHEM 666 and 669 (two enrollments), which are cross-listed in the Department of Biological Sciences, and 21 hours of biochemistry electives.

**Chemistry/Business Field Major**

The Charles M. Russel program in chemistry/business is designed for students who wish to pursue careers in chemical sales, management, advertising, and other related areas. This program requires 30 hours of business courses as follows: ACCT 210 and 220; ECON 201 and 202; and 10 hours of general education courses. In addition, approximately 30 hours of mathematics and chemistry are required: CHEM 111, 112, 242, 243, 344. Students selecting this option should contact the chairperson of the Department of Chemistry as early as possible for advice.

**Minor**

The chemistry minor consists of at least 14 hours of chemistry courses and must include at least 4 hours from CHEM 531, 532, 533, 534, 545, and 546. Credit is not allowed for both CHEM 531, 532, and MATH 112, 242, 243, 344. A 2.000 GPA in chemistry is required.

**Advising**

All students pursuing one of the above degrees should consult closely with the Department of Chemistry in planning their program. Students should plan to begin required physical chemistry courses during their junior year (see below), thereby requiring that physics and calculus prerequisites be taken earlier. Students should consult advisors.

**Minimum Requirements—Chemistry Programs**

**Bachelor of Science**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 514</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 523, 524</td>
<td>8</td>
</tr>
<tr>
<td>CHEM 545, 546</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 547</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 615</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 616</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 661</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 690</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 313, 314, 315, 316</td>
<td>10</td>
</tr>
<tr>
<td>MATH 112, 242, 243, 344</td>
<td>18</td>
</tr>
<tr>
<td>Professional elective</td>
<td>4</td>
</tr>
</tbody>
</table>

Typical Course Sequence

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>ENG 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>MATH 112, Precalculus Mathematics*</td>
<td>5</td>
</tr>
</tbody>
</table>

**Second semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 112, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>MATH 242, Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 313, University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 102, College English II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 131 or 132, History of the U.S.</td>
<td>3</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 531, Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>MATH 243, Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 314, University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 220, 230, 232, or other, English Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 532, Analytical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 533, Analytical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 616, University Physics Lab II</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 111, Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>A general education introductory course in physics</td>
<td>3</td>
</tr>
<tr>
<td>A general education introductory course in a second social sciences department</td>
<td>3</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 545, Physical Chemistry*</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 524, Instrumental Methods of Chemical Analysis</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 106, Human Organism</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 546, Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 547, Physical Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 662, 663</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 664, 665</td>
<td>3</td>
</tr>
<tr>
<td>CHEM (Biol.) 666</td>
<td>3</td>
</tr>
<tr>
<td>CHEM (Biol.) 669</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 114 or 214</td>
<td>3-5</td>
</tr>
<tr>
<td>A general education introductory course in natural sciences</td>
<td>3</td>
</tr>
<tr>
<td>A general education introductory course in history, English, or fine arts</td>
<td>3</td>
</tr>
</tbody>
</table>

*CHEM 531, 532 all have CHEM 112 as a prerequisite and can be taken in any order.

**Bachelor of Science in Chemistry-Pre-Medicine**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 514</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 523, 524</td>
<td>8</td>
</tr>
<tr>
<td>CHEM 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 662, 663</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 500-800 (605 recommended)</td>
<td>6</td>
</tr>
<tr>
<td>MATH 144 or 242</td>
<td>3-5</td>
</tr>
<tr>
<td>Physics (one year)</td>
<td>10</td>
</tr>
</tbody>
</table>

**Biochemistry Field Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 523</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 662, 663</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 664</td>
<td>3</td>
</tr>
<tr>
<td>CHEM (Biol.) 666</td>
<td>3</td>
</tr>
<tr>
<td>CHEM (Biol.) 669</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 210, 211</td>
<td>10</td>
</tr>
<tr>
<td>BIOL 419</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 420</td>
<td>4</td>
</tr>
<tr>
<td>MATH 112 or 111, 122</td>
<td>5-6</td>
</tr>
<tr>
<td>PHYS 213, 214</td>
<td>10</td>
</tr>
<tr>
<td>Biochemistry electives</td>
<td>21</td>
</tr>
</tbody>
</table>
Chemistry/Business Field Major

Course                  Hrs.
CHEM 111, 112            10
CHEM 523                 4
CHEM 531, 532            10
CHEM 661 or 662          3
CHEM 603                 3
MATH 144 or 242          3-5
ACCT 210 and 223         6
ECON 201 and 202         6
MKT 300, 405, 608        9
FIN 340                  3
MGMT 360                3
B LAW 431                3

All programs require additional courses to satisfy general education curriculum requirements and the graduation requirements in Fairmount College of Liberal Arts and Sciences.

Lower-Division Courses

>CHEM 101. The Science of Chemistry (3). General education introductory course. Teaches the basic concepts of chemistry that will aid in understanding the physical world. No attempt to teach basic computer skills or laboratory skills; instead emphasizes such concepts as atomic and molecular theory, energy, structures, and theories regarding why reactions occur.

>CHEM 103. General Chemistry (3). General education introductory course. A survey of inorganic, organic, nuclear, and biological chemistry. Recommended for the student who plans to take only one course in chemistry. Students who expect to major in the natural sciences should take CHEM 111-112 sequence. Credit is not granted for both CHEM 103 and 111. Prerequisite: one year of high school algebra or MATH 101.

CHEM 110. Preparatory Chemistry (3). A 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. Credit is allowed in only one of the following: CHEM 103, 110, or 111. Prerequisites: one and a half units of high school algebra or MATH 101.

> CHEM 111. General Chemistry (5). 3R; 4L. Lab fee. General education further study course. Continuation of CHEM 111. Includes thermodynamics, gaseous and liquid equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative analysis, and an introduction to theories of bonding. Prerequisite: CHEM 111 with a grade of C or better.

CHEM 301. Issues and Perspectives in Chemistry (3). Students explore the chemical concepts involved in a minimum of four current national and international scientific, social, and economic issues, and analyze the complexity of the possible solutions of these issues. Prerequisites: CHEM 101, 103, or 111.

> CHEM 381. Cooperative Education in Chemistry (1-4). Permits chemistry students to participate in the Cooperative Education program. Offered Cr/NoCr only.

Courses for Graduate/Undergraduate Credit

> CHEM 514. Inorganic Chemistry (3). General education further study course. Basic inorganic chemistry emphasizing molecular symmetry and structure, fundamental bonding concepts, ionic interactions, periodicity of the elements, systems of chemistry of the elements, acid-base chemistry and non-aqueous solvents, classical coordination chemistry, and introductory biogeochemistry. Prerequisite: CHEM 112 with a C or better.

> CHEM 523. Analytical Chemistry (4). 2R; 6L. Lab fee. General education further study course. Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization, and oxidation-reduction volumetric analysis. Prerequisite: CHEM 112 with a C or better.

> CHEM 524. Instrumental Methods of Chemical Analysis (4). 2R; 6L. Lab fee. Introduction to analytical chemistry and optical method of analysis and separation and complex mixtures, both inorganic and organic. Also discusses basic computer programming as it applies to analytical chemistry. Prerequisite: CHEM 523.

> CHEM 531. Organic Chemistry (5). 3R; 6L. Lab fee. General education further study course. An introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry, and spectroscopic analysis. Prerequisite: CHEM 112 with a C or better.

> CHEM 532. Organic Chemistry (5). 3R; 6L. Lab fee. A continuation of CHEM 531 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Prerequisite: CHEM 531.

> CHEM 533. Elementary Organic Chemistry (3). General education further study course. Basic organic chemistry emphasizing topics of importance to health professions and education majors. Special emphasis to carbohydrates, proteins, drugs, pesticides, and energy production. Students should enroll in CHEM 534 simultaneously. Credit is not allowed for both CHEM 533-534 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: CHEM 112 or equivalent.

> CHEM 534. Elementary Organic Chemistry Laboratory (2). Lab fee. A basic laboratory course to provide pertinent experiences in the laboratory to fortify the survey lecture course CHEM 533. Prerequisite or co-requisite: CHEM 533.

> CHEM 545. Physical Chemistry (3). General education further study course. Thermodynamics. Studies gases, first law thermodynamics, second and third law, phase equilibria, solutions, chemical equilibria, electrochemistry and surface chemistry. Prerequisites: CHEM 112, MATH 344 or its equivalent and one semester of college physics.

> CHEM 546. Physical Chemistry (3). Kinetic theory, kinetics, transport phenomena, quantum mechanics, spectroscopy and statistical thermodynamics. Prerequisite: one year of college physics and MATH 344 or its equivalent.

> CHEM 547. Physical Chemistry Laboratory (2). 6L Lab fee. Physical chemistry experiments that illustrate principles learned in CHEM 545 and 546. Prerequisite or co-requisite: CHEM 546.


> CHEM 603. Industrial and Polymer Chemistry (3). Bridges the industrial-academic gap. Includes petrochemical refining processes and distillation technology: Inorganic topics include glass technology, electro-refining and electroplating, and battery chemistry. Discusses cellulose-based products such as gelling polysaccharides and natural fibers along with industrial adhesives (dyes, zeolites, ion exchange resins, carbon blacks), and emulsion technology. Topics in polymer chemistry include cartons of making polymers, resins, elastomers, and synthetic fibers; methods of polymer analysis, structure-property relations (how structure influences physical properties) plastics recycling, and methods of plastics and composites processing. Prerequisite or co-requisite: CHEM 532.
CHEM 605. Medicinal Chemistry (3). For students interested in chemistry related to the design, development, and mode of action of drugs. Course 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. Prerequisites: CHEM 352 or 533 or equivalent; a semester of biochemistry (CHEM 651 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, boron, inorganic ring systems and polymers, inorganic environmental chemistry, mechanisms of inorganic reactions, and solid state chemistry. Prerequisites: CHEM 514 and 546.

CHEM 616. Inorganic Chemistry Laboratory (2). 6L Lab fee. Experimental methods of inorganic chemistry. Prerequisite or co-requisite: CHEM 615.

CHEM 660. Biochemistry of Cell Constituents, Catalysis, Oxidation, Photosynthesis (3). Study of major constituents of the cell: protein, carbohydrate, lipoprotein, lipid, nucleic acid, protein; enzyme catalysis; biological oxidations; photosynthesis; and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Prerequisites: CHEM 523 and 532 or equivalents.

CHEM 663. Biochemistry of Cell Metabolism, Biosynthesis, Structure, Function, and Regulation of Proteins and Nucleic Acids (3). Study of metabolism and control of carbohydrates, lipids, phospholipids, amino acids, and proteins; synthesis of proteins; peptidase; amides and polypeptides; synthesis and metabolism of purines, pyrimidines, and nucleotides; synthesis and structure of DNA, RNA, 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: CHEM 662.

CHEM 664. Biochemistry Laboratory (3). 3R; 6L 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 radioactive labeling techniques. Should be taken concurrently with CHEM 662 or CHEM 663. Prerequisite: CHEM 532 or equivalent.

CHEM 666. Special Topics in Biochemistry (3). (Offered spring semester in odd-numbered years.) Discusses a small number of current problems in biochemistry in depth. Requires reading of published research in the field. Prerequisites: BIOL 201 and CHEM 662 and 663.

CHEM 669. Research in Biochemistry (2). Cross-listed as BIOL 669. SU grade only. 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. May be repeated once for credit. Prerequisites: BIOL 420 and CHEM 662 or 663 and 664.

CHEM 690. Independent Study and Research (2-3). Studies performed must be directed by a faculty member in the Department of Chemistry. Repeatable for credit. A maximum of 3 credit hours may be counted toward graduation. Prerequisite: departmental consent.

CHEM 700. Chemistry Seminar (1). SU grade only. Students give seminars on either papers recently published in the literature or on their own research. Repeatable for credit.

CHEM 701. Chemistry Colloquium (1). SU grade only. Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit.

CHEM 702. Environmental Science I (4). 2R; 3L. Cross-listed as BIOL 702 and GEOL 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. Prerequisite: acceptance into the master's program in environmental science or instructor's consent.

CHEM 703. Environmental Science II (4). 2R; 3L. Cross-listed as BIOL 703 and GEOL 703. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic microbial biochemistry, environmental biochemistry, water treatment, photochemical smog, and hazardous waste chemistry. Prerequisite: acceptance in the master's program in environmental science or instructor's consent.

CHEM 704. Environmental Science Colloquium (1). Cross-listed as BIOL 704 and GEOL 704. Students in the master's program in environmental science are required to enroll each semester (maximum 4 credit hours). Includes presentations by guest speakers and required readings for class discussion. May also include student involvement in environmentally related community groups and projects.

CHEM 706. Environmental Science Internship (3-6). Cross-listed as BIOL 706 and GEOL 706. Students in the master's program in environmental science may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internships with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: CHEM 702 and 703.

CHEM 709. Special Topics in Chemistry (2-3). A discussion of topics of a special significance and interest to faculty and students. Offerings announced in advance. Repeatable for credit.

CHEM 712. Coordination Chemistry (3). The study of the synthesis, characterization, and properties of coordination compounds. Includes nomenclature, fundamental bonding concepts, principles of synthesis, mechanisms of substitution and electron transfer reactions, catalysis, and solid-state phenomena. Prerequisite: CHEM 615 or equivalent.

CHEM 713. Physical Methods in Inorganic Chemistry (3). An introduction to electronic and vibrational spectroscopy, magnetic susceptibility, EPR, NMR, Mössbauer spectroscopy, and X-ray crystallography as applied to inorganic systems. Emphasis on interpretation of results and understanding of the electronic and molecular structure of compounds.

CHEM 731. Physical Organic Chemistry (3). Discussion of advanced topics in stereochemistry and conformational analysis and organic reaction mechanisms. Prerequisite: CHEM 532.

CHEM 732. Advanced Organic Synthesis (3). Discussion of modern synthetic methods in organic chemistry, including carbon-carbon forming reactions, oxidation and reduction reactions, protective groups, and organometallic chemistry. Prerequisite: CHEM 532.

CHEM 738. Structure Determination and Spectral Analysis of Organic Compounds (3). Discusses analytical techniques, infrared, ultraviolet, nuclear magnetic and electron spin resonance and mass spectroscopy, and their practical utilization in structure determination. Prerequisite: CHEM 532.

CHEM 741. Quantum Chemistry (3). Theoretical basis of atomic and molecular structure. Includes the postulates of quantum mechanics, exact solutions for the particle-in-a-box and the hydrogen atom, variation and perturbation techniques, electron spin, Hartree-Fock and configuration-interaction methods, molecular-orbital and valence-bond wave functions, and virial and Hellmann-Feynman theorems. Prerequisites: CHEM 532 and MATH 341 or equivalent. Co-requisite: CHEM 705 or equivalent.

CHEM 744. Computational Quantum Chemistry (3). An introduction to molecular orbital procedures and methods for
calculating a wide range of physical, chemical, and electronic properties of systems large enough to be of interest to inorganic, organic, and biochemists. Using commercial molecular orbital software programs such as MOPAC, SPARTAN, and GAUSSIAN, students learn to select appropriate "model" computational procedures to predict properties of molecules and reactions. By comparison with experiment, students learn to assess the range of applicability and accuracy of the "model" methods as applied to various categories of chemical systems. Properties considered include energies and structures of molecules, ions, and transition states; vibrational frequencies, IE and RAMAN spectra; thermochemical properties, heat of formation, bond and reaction energies; isomerization energy barriers; reaction pathways; molecular orbitals, atomic charges, dipole and multipole moments, ionization potentials, bond orders; orbital energies and photoelectron spectroscopy; excited state properties, singlet and triplet surfaces. Prerequisite: CHEM 546 or equivalent (MATH 344 is necessary.)

CHEM 751. Chain Growth Polymerization (3). Mechanisms, kinetic, and thermodynamic aspects of polymerization processes which proceed by a chain growth mechanism, free radical, anionic, cationic, and Ziegler Natta and group transfer polymerization. Prerequisites: CHEM 531 and 545.

CHEM 752. Step Growth Polymerization (3). Polymerization process which proceed by a step growth or ring-opening mechanism. Preparation of thermoplastics, including relationships between molecular weight and reaction condition. Preparation of thermosets including relationships between structure, conversion, and gelation. Discusses individual systems such as nylon, epoxy resin, and polysilanes in detail. Prerequisites: CHEM 531 and 545.

Courses for Graduate Students Only

CHEM 809. Special Studies in Chemistry (2-3). Systematic study in selected areas of chemistry. Repeatable for credit. Course content differs from one offering to the next.

CHEM 814. Organometallic Chemistry (3). A study of the synthesis, structure, bonding, reactivity, and industrial applications of organometallic and nontransition metal compounds. Prerequisite: CHEM 615 or equivalent.

CHEM 815. Bioinorganic Chemistry (3). The study of the role of inorganic chemistry in biological systems. Includes electron transport, biological catalysis mediated by metal ions, metal storage and transport, ion transport, and the role of transition metals in metabolism. Prerequisites: CHEM 615 and 663 or equivalents.

CHEM 822. Analytical Separations (3). The theory and practice of analytical separation methods including gas and liquid chromatography, ion exchange, and electrochemistry. Prerequisite: CHEM 524 or equivalent.

CHEM 823. Analytical Spectroscopy (3). Absorption (UV visible, IR, and atomic), emission, flame emission and atomic absorption spectrometry, molecular fluorescence, and phosphorescence methods; Raman, nuclear magnetic resonance, and electron spin resonance spectroscopy; X-ray methods. Lectures and discussions on theory and practice. Particular emphasis on instrumentation and the acquisition of artefact-free data. Prerequisite: CHEM 524 or equivalent.

CHEM 824. Electroanalytical Chemistry (3). Includes voltammetry, polarography, chromatometry, and coulometry; reversible and irreversible diffusion controlled processes; CE (chemical reaction before electrical reaction), EC (electrical reaction before chemical reaction), and catalytic reaction; and organic polaroetry and voltammetry. Prerequisite: CHEM 524 or equivalent.

CHEM 831. Advanced Physical Organic Chemistry (3). Includes molecular orbital theory, sigma tropic rearrangements, molecular vibrations, cyclic reactions, reactive intermediates, and photochemistry. Prerequisite: CHEM 731.

CHEM 832. Modern Synthetic Methods (3). Discussion of retrosynthetic analysis, applications, asymmetric syntheses, and stereo-chemistry. Prerequisite: CHEM 732.

CHEM 834. Heterocyclic Chemistry (3). An account of the physical and chemical properties of the major classes of heterocyclic compounds. Prerequisite: CHEM 732.

CHEM 835. Bioorganic Chemistry (3). Includes the chemistry of amino acids and peptides, enzyme structure and function, and inhibitor design. Prerequisites: CHEM 662, 663, and 732, or 662 and concurrent enrollment in 663 and 732.

CHEM 841. Advanced Quantum Chemistry (3). Considers advanced applications of quantum mechanics to atomic and molecular problems. Includes determinent wave-functions, angular momentum coupling, time-dependent perturbation theory, relaxation considerations, tensor operators, and molecular orbital calculations. Prerequisites: CHEM 705 and 741 or equivalents.

CHEM 842. Chemical Kinetics (3). A description of reacting systems, including the mathematical and experimental characteristics of simple and complex kinetic systems. Discusses the theories of chemical kinetics, as well as the kinetics of homogeneous reactions in the gas phase, the kinetic aspects of solution reactions, heterogeneous reactions, and selected topics of current interest. Prerequisite: CHEM 546 or equivalent.

CHEM 845. Chemical Thermodynamics (3). A presentation of the basic laws of thermodynamics in a classical framework to increase understanding of real physical systems. Emphases theory and its applications to chemical systems. Prerequisites: CHEM 545, 546, and MATH 344 or equivalents.

CHEM 846. Molecular Spectroscopy (3). The theoretical basis for spectroscopy and spectroscopic determinations of molecular structure. Includes polyatomic electronic states, time-dependent perturbation theory, vibration and rotation of diatomic molecules, vibration and rotation of polyatomic molecules, electronic spectra, and magnetic resonance spectroscopy. Prerequisites: CHEM 741 or its equivalent and CHEM 705 or its equivalent.

CHEM 852. Techniques of Polymer Characterization (3). A study of physical, spectroscopic, and diffraction techniques to determine the size, structure, and morphology of polymers.

CHEM 861. Enzyme Mechanisms (3). An introduction to the study of enzyme mechanisms. Modern approaches include steady-state, relaxation, and chemical modification methods. Prerequisite: CHEM 662 or 663 or equivalent.

CHEM 863. Bioanalytical Chemistry (3). A review of modern analytical methods used in biochemistry and molecular biology including absorbance and fluorescence spectroscopy, chromatography (affinity, gel-filtration, HPLC, ion-exchange, ion-pair), gel electrophoresis, radioactive tracer methods, cloning, sequencing, and recombinant DNA procedures. Prerequisites: BIOL 203 and 204 and CHEM 662 or 663 or equivalents.


CHEM 890. Research in Chemistry (2-12). SU grade only. Research for the student planning to receive an MS. Research is directed by a faculty member. Repeatable for credit.

CHEM 990. Research in Chemistry (2-16). SU grade only. Research for the student planning to receive a PhD. Research is directed by a faculty member. Repeatable for credit.

Communication (COMM), 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, broadcast journalism, electronic media, integrated marketing communications, or print journalism.

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, speak-
CHEM 605. Medicinal Chemistry (3). For students interested in chemistry related to the design, development, and mode of action of drugs. Course 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, carcinogenesis, 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. Prerequisites: CHEM 532 or 533 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, isomers, inorganic ring systems and polymers, inorganic environmental chemistry, mechanisms of inorganic reactions, and solid state chemistry. Prerequisites: CHEM 534 and 546.

CHEM 616. Inorganic Chemistry Laboratory (2). 6L. Lab fee. Experimental methods of inorganic chemistry. Prerequisite: or co-requisite: CHEM 615.

CHEM 661. Introductory Biochemistry (3). General education further study course. An introductory course for chemistry majors including chemistry/business majors and students in life sciences. Not recommended for the BS in chemistry for health sciences 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: CHEM 532.

CHEM 662. Biochemistry of Cell Constituents, Catalysis, Oxidation, Photosynthesis (3). Study of major constituents of the cell: protein, carbohydrate, glycoprotein, lipid, nucleic acid, nucleoprotein; enzyme catalysis; biological oxidation-reduction; photosynthesis; and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Prerequisites: CHEM 523 and 532 or equivalents.

CHEM 663. Biochemistry of Cell Metabolism, Biosynthesis, Structure, Function, and Regulation of Proteins and Nucleic Acids (3). Study of metabolism and control of carbohydrates, lipids, phosphoglycerides, sphingolipids, sterols, amino acids and proteins; synthesis of porphyrins, fadoids and polynucleotides; synthesis and metabolism of proteins, 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: CHEM 662.

CHEM 664. Biochemistry Laboratory (3). 1R; 6L. 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 radioactive labeling techniques. Should be taken concurrently with CHEM 662 or CHEM 663. Prerequisite: CHEM 532 or equivalent.

CHEM 666. Special Topics in Biochemistry (3). (Offered spring semester in odd-numbered years) Discusses a small number of current problems in biochemistry in depth. Requires reading of published research in the field. Prerequisites: BIOL 204 and CHEM 662 and 663.

CHEM 669. Research in Biochemistry (2). Cross-listed as BIOL 669. SU grade only. 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. May be repeated once for credit. Prerequisites: BIOL 420 and CHEM 662 or 663 and 664.

CHEM 670. Independent Study and Research (2-3). Studies performed must be directed by a faculty member in the Department of Chemistry. Repeatable for credit. A maximum of 3 credit hours may be counted toward graduation. Prerequisite: departmental consent.

CHEM 700. Chemistry Seminar (1). SU grade only. Students give seminars on either papers recently published in the literature or on their own research. Repeatable for credit.

CHEM 701. Chemistry Colloquium (1). SU grade only. Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit.

CHEM 702. Environmental Science I (4). 2R; 3L. Cross-listed as BIOL 702 and GEOL 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. Prerequisite: acceptance into the master's program in environmental science or instructor's consent.

CHEM 703. Environmental Science II (4). 2R; 3L. Cross-listed as BIOL 703 and GEOL 703. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic microbial biochemistry, environmental biotechnology, water treatment, photochemical smog, and hazardous waste chemistry. Prerequisite: acceptance into the master's program in environmental science or instructor's consent.

CHEM 704. Environmental Science Colloquium (1). Cross-listed as BIOL 704 and GEOL 704. Students in the master's program in environmental science are required to enroll each semester (maximum 4 credit hours). Includes presentations by guest speakers and required readings for class discussion. May also include student involvement in environmentally related community groups and projects.

CHEM 706. Environmental Science Internship (3-6). Cross-listed as BIOL 706 and GEOL 706. Students in the master's program in environmental science may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internship projects with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: CHEM 702 and 703.

CHEM 709. Special Topics in Chemistry (2-3). A discussion of topics of a special significance and interest to faculty and students. Offerings announced in advance. Repeatable for credit.

CHEM 712. Coordination Chemistry (3). The study of the synthesis, characterization, and properties of coordination compounds. Includes nomenclature, fundamental bonding concepts, principles of synthesis, mechanisms of substitution and electron transfer reactions, catalysis, and solid-state phenomena. Prerequisite: CHEM 615 or equivalent.

CHEM 713. Physical Methods in Inorganic Chemistry (3). An introduction to electronic and vibrational spectroscopy, magnetic susceptibility, EPR, NMR, Mossbauer spectroscopy, and X-ray crystallography as applied to inorganic systems. Emphasis on interpretation of results for understanding the electronic and molecular structure of compounds.

CHEM 731. Physical Organic Chemistry (3). Discussion of advanced topics in stereochemistry and conformational analysis and organic reaction mechanisms. Prerequisite: CHEM 532.

CHEM 732. Advanced Organic Synthesis (3). Discussion of modern synthetic methods in organic chemistry, including carbon-carbon forming reactions, oxidation and reduction reactions, protective groups, and organometallic chemistry. Prerequisite: CHEM 532.


CHEM 741. Quantum Chemistry (3). Theoretical basis of atomic and molecular structure. Includes the postulates of quantum mechanics, exact solutions for the particle-in-a-box and the hydrogen atom, variation and perturbation techniques, electron spin, Hartree-Fock and configuration-interaction methods, molecular-orbital and valence-bond wave functions, and virial and Hellmann-Feynman theorems. Prerequisites: CHEM 546, MATH 344 or equivalent. Co-requisite: CHEM 705 or equivalent.

CHEM 744. Computational Quantum Chemistry (3). An introduction to molecular orbital procedures and methods for
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 325. Speaking in Business and the Professions (3). A study of 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 communications. Prerequisite: COMM 111 or instructor's consent.

>COMM 430. Communication Research and Inquiry (3). General education further study 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: junior standing and COMM 130 or instructor's consent.

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 area of emphasis. Ideally completed in a student's final semester before graduation. Graded Cr/Nc. Prerequisites: senior standing, completion of 18 hours of communication course work, and departmental consent.

>COMM 535. Communication Analysis and Criticism (3). General education further study course. Introduces the methods used for the analysis and critique of various linguistic, pictorial, and verbal 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. Prerequisites: junior standing and COMM 301 with a C or better 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 the First Amendment rights, libel, privacy, copyright, advertising, obscenity, pornography, and corporate communication concerns. Prerequisite: COMM 301 with a C or better or instructor's consent.

>COMM 631. Historical and Theoretical Issues in Communication (3). General education further study 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. Prerequisites: junior standing and COMM 130 or instructor's consent.

Lower-Division Courses

COMM 011. Reducing Fear of Speaking (2). For students who feel an unwarranted degree of fear, nervousness, or stage fright when confronting situations calling for oral communication, especially not exclusively, before groups of people. Goal is to reduce the fear of such situations through practice in supportive settings and other specific methods developed in the fields of counseling and speech communication that have been demonstrated effective in reducing communication anxiety.

>COMM 111. Public Speaking (3). General education basic skills course. Studies basic concepts of speech communication as applied to public speaking. For students wishing to enhance leadership potential by improvement in traditional public speaking situations (The University's requirement in oral communication must be fulfilled by completion of COMM 111. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the Elliott School of Communication.)

>COMM 111H. Public Speaking (4). General education basic skills course. Counts as an Honors Seminar. Studies basic concepts of speech communication as applied to public speaking and critical analysis. Goal is to learn basic strategies for tailoring messages to overcome obstacles in a variety of public speaking situations. Prerequisite: Honors standing.

COMM 150. Debate Workshop (2). Instruction in theory and techniques of debate and preparation for debating the national high school debate topic. Not repeatable for credit. Prerequisite: departmental consent.

>COMM 190. Introduction to Human Communication (3). General education introductory course. Explores the structure of human communication and the communication process as a whole. Uses a variety of perspectives to examine the nature of human communication, its function, and its role in society. Prerequisite: COMM 301.

>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 maximum of 6 hours credit. May not be counted toward a major. Prerequisite: departmental consent.

COMM 220. Introduction to Film Studies (3). 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 221. Oral Interpretation (3). General education further study course. Cross-listed as THEA 221. Develops the mental, vocal, and analytical techniques essential to the oral interpretation of literature.

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 260. Seminar in Communication (1-3). Special seminars dealing with current problems, issues, or interests in various areas of communication. For the introductory student in communication. Repeatable for credit in different topics only.

Upper-Division Courses

>COMM 302. Interpersonal Communication (3). General education further study 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 303. 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.

COMM 304. Studio Video Production (3). 2R; 2L. Basic principles, procedures, and techniques of video production, including operation of studio equipment and direction of television programs and other video productions. Prerequisite: COMM 303 or instructor's consent.

COMM 310. Introductory Photojournalism (3). 2R; 3L. Lab fee. Basic photographic theory and technique emphasizing aspects of importance to students, writers, and editors. Students take, develop, and prepare pictures for publication. Prerequisite: COMM 310.

>COMM 311. Persuasion (3). General education further study course. Explores the history, development, and manifestation of persuasive techniques through the study and/or creation of persuasive messages in speeches, mass media, advertising, politics, and organizations. The student becomes a better user and critic of persuasive messages and strategies. Prerequisite: COMM 311.

>COMM 312. Nonverbal Communication (3). General education further study course. A study of 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: COMM 311.

>COMM 313. Argumentation and Advocacy (3). General education further study 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 invalid reasoning as well as tests of evidence.

COMM 324. Introduction to Integrated Marketing Communications (3). Introduces the theory and practice of the integrated fields of advertising and public relations
Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>COMM 500</td>
<td>Advanced Reporting (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 502</td>
<td>Public Information Writing (3)</td>
<td>COMM 301 with a C or better, junior standing, or departmental consent</td>
</tr>
<tr>
<td>COMM 510</td>
<td>Editing for Print (3)</td>
<td>COMM 301 with a C or better</td>
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<tr>
<td>COMM 511</td>
<td>Strategic Communication in Organizations (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 522</td>
<td>Advanced Broadcast News (3)</td>
<td>COMM 301 with a C or better</td>
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<tr>
<td>COMM 525</td>
<td>Advertising Copywriting (3)</td>
<td>COMM 301 with a C or better</td>
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<tr>
<td>COMM 550</td>
<td>Opinion Writing (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 570</td>
<td>Magazine Production (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 571</td>
<td>Feature Writing (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 581</td>
<td>Communication Practicum (1-3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 604</td>
<td>Video Storytelling (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 612</td>
<td>School Publications Advising (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<td>COMM 622</td>
<td>Studio B: Alive Television News (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 626</td>
<td>Integrated Marketing Communications Campaigns (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 635</td>
<td>Leadership Techniques for Women (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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<tr>
<td>COMM 636</td>
<td>Advanced Public Speaking (3)</td>
<td>COMM 301 with a C or better or instructor's consent</td>
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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: 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). An examination of 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 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 661. Directing the Forensics Program (3). A study of the methods and procedures in coaching and directing the high school and collegiate forensics programs (debate and individual events). The future teacher is made aware of the literature and professional organizations in the field.

COMM 675. Directed Study (2-4). Cross-listed as Thea. 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: 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 academic programs. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated, but limited to a total of 4 credits in COMM 681 and COMM 690. Graded Cr/NoCr. Prerequisite: departmental consent.

COMM 712. Advanced Interpersonal Communication (3). Advanced exploration of concepts and variables in interpersonal communication through the study of different theories as well as practical experiences in dyadic and small-group communication. Prerequisite: COMM 302 or instructor's consent.

COMM 720. Dimensions of Mass Communication (3). A detailed study of mass media, their role as social institutions; their control, support, content, and audience; and their effects.

COMM 722. The Art of Conversation (3). Conversation is the form of communication people engage in most naturally and frequently, but about which they seldom think seriously. Helps participants enhance their understanding and appreciation of, as well as their skill in, the art of conversation. Includes the nature of conversation; principles of conversational communication; types of conversation; conversation in the media, and conversation analysis. Prerequisites: COMM 302 and junior standing or departmental consent.

COMM 750. Workshops in Communication (1-4).

COMM 770. The Audience (3). Application of research techniques to the measurement of audience behavior emphasizing mass media audiences. Includes focus group interviews, survey research, and radio and television ratings.

Courses for Graduate Students Only

COMM 801. Introduction to Communication Research (3). An integrative approach to an understanding of the nature and scope of communication research and graduate studies in communication and theatre/drama. Provides an overview of current research in the discipline. Instruction in the basic steps of research; availability of library and other sources; bibliographic search; computer accessing of source materials; organization, style, and format of a research report and citation of sources in accordance with standard style guides. Should be taken at the beginning of the graduate program.

COMM 802. Historical and Qualitative Methodologies in Communication Research (3). An introduction to historical, critical, and observational methodologies in communication research. Emphasizes historical, critical, and observational research, particularly those forms of research common to communication studies. Prerequisite: COMM 801.

COMM 803. Empirical/Quantitative Research Methodology in Communication Research (3). An introduction to empirical research methods in communication. Emphasizes both experimental and nonexperimental research, particularly those forms of research common in communication studies. Studies research design, methods, and reporting techniques. Prerequisite: COMM 801.

COMM 810. Directed Study (1-3). Cross-listed as Thea. 810. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

COMM 812. Contemporary Theories of Communication (3). Studies selected conceptual models useful in the academic study of human communication, including theories involving such contexts as interpersonal communication, public communication, and mass communication.

COMM 820. Investigation and Conference (2-3). Cross-listed as Thea. 820. Directed research and experimentation for graduate students in some phase of (a) speech communication, (b) electronic media, or (c) speech education. Repeatable for credit up to a total of 6 hours.

COMM 825. Group Communication (3). Examines communication processes that operate in groups in various contexts. Provides an overview of relevant theory, as well as methodologies through which group communication may be critically analyzed in applied settings.

COMM 830. Theories of Rhetoric Classical (3). Cross-listed as ENGL 820. An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Principal emphasis on Isocrates, Plato, Aristotle, Quintillian, Cicero, and Longinus.

COMM 831. Theories of Rhetoric: Renaissance to Early Modern (3). Cross-listed as ENGL 821. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analyzes the rhetorical systems associated with major figures as Augustine, Ficino, Budrew, Sheridan, Steane, Raus, John Quincy Adams, Blair, Campbell, and Whately.

COMM 860. 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 865. Organizational Communication (3). Cross-listed as MGMT 865. An analysis of communication methods emphasizing their applications to communication problems in organizations. Explores social psychological processes underlying persuasion in interpersonal relations and through the mass media. Critically analyzes communication systems and techniques within formal organizations.

COMM 870. Directed Study (1-3). Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

COMM 875-876. Thesis (1-3-1-3). Prerequisite: departmental consent.

Communicative Disorders and Sciences (CDS)

For students desiring an emphasis in applied language study, see requirements and curriculum for a major in communicative disorders and sciences through Fairmont College listed in the College of Education section of the Catalog.

Community Affairs, School of (CDS)

WSU's School of Community Affairs, created in 1999, brings together the departments of criminal justice, ethnic studies, and gerontology to form a unique and diverse curriculum to better serve the needs of students to work in an ever-changing urban and global community. Additionally, the Midwest Criminal Justice Institute (MCJI), the Regional Community Policing and Training Institute (RCPIT), and the Juvenile Justice Research Center provide opportunities and training to teach, research, and service. As a result, the School of Community Affairs 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 (CJ)

The Criminal Justice Program offers the Bachelor of Science and Master of Arts degrees in criminal justice. 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 program is described below.

Major. The major in criminal justice consists of at least 36 hours (but not more than 50 hours) which will count toward the BS degree with at least 21 semester hours of upper-division course work in criminal justice. ENGL 210 and ETH S 360 are additional requirements.
to be taken during the first two semesters as a criminal justice major. Students who plan to graduate with a BS in criminal justice must also satisfy Fairmont College requirements (including the foreign language requirement) and the University requirements for the Bachelor of Science degree. The curriculum is divided into two areas:


2. Students must complete the 18 hours of core courses and 18 hours of electives. Students may take 14 additional credit hours beyond the 36 hours required for the major (for a total of 50 hours). There is a maximum of 6 hours in each of the following: 481, 482, or 483; and there is a maximum of 12 hours total in any combination of 481, 482, and 483.

Minor: The minor in criminal justice consists of at least 18 hours of criminal justice courses, of which at least 6 hours must be at the upper-division level (300 and above). The following requirements must be met for the minor:

1. CJ 191.
2. A minimum of two and a maximum of three of the following courses: CJ 391, 392, 394, and 407.

Certificate Programs in Criminal Justice

Certificate programs are designed to enhance the career needs of law enforcement and other criminal justice system professionals or those who contemplate a career in the criminal justice profession. A certificate is not a substitute for an academic degree and will not qualify a person for a position which requires a degree.

Certificate in Forensic Criminology

The Certificate in Forensic Criminology is a four-course sequence that provides a study of the application of the natural sciences to assist law enforcement and the criminal justice system. It is designed for:

- Individuals who want to work as crime scene investigators, criminal investigators, and crime laboratory personnel.
- Individuals who have an interest in future careers in policing and scientific crime detection.
- Individuals who want exposure and knowledge of forensics as a possible career choice.

To qualify for a Certificate in Forensic Criminology, students must complete four of the following courses with an average grade of B or better. CJ 191, Introduction to Criminal Justice, is a prerequisite for all courses:

CJ 341, Criminalistics and Scientific Crime Detection
CJ 343, Special Investigations
CJ 541, Medical and Legal Aspects of Death Investigation
CJ 600, Forensic Anthropology
CJ 641, Forensic Psychiatry
CJ 649, Forensic Science

Certificate in Cross-Cultural Communications in Criminal Justice

The Certificate in Cross-Cultural Communications provides learning experiences that will prepare practitioners to promote favorable interaction between criminal justice agencies and the minority groups they serve. This emphasis area prepares students to develop empathetic responsiveness, combined with humanitarian insights, and to develop and maintain mutually dependent helping and working relationships between criminal justice agencies and a variety of minority groups.

Students majoring in criminal justice also may obtain the Certificate of in Cross-Cultural Communications in addition to the BS in criminal justice degree. Those students seeking this certificate must satisfactorily complete ETH S 210, Fundamentals of Cross-Cultural Communication, and one of the following:

ETH S 331, The Black Family
ETH S 332, The Native American
ETH S 333, Issues in the Chicano Community
ETH S 334, Ethnic American in the Twentieth Century

Also, students must take 12 additional hours in ethnic studies course work, of which must be in upper-division courses.

Certificate in Corrections

The Certificate in Corrections is designed to enhance the career needs of:

- Individuals who are employed as correctional practitioners.
- Individuals who want exposure to corrections as a possible career choice.

To qualify for a Certificate in Corrections, students must complete four of the following courses with an average grade of B or better. CJ 191, is a prerequisite for all courses:

CJ 391, Corrections
CJ 310, Community-Based Corrections or CJ 396, Seminar in Corrections
CJ 610, Correctional Counseling
CJ 652, Juvenile Justice and Social Policy

Certificate in Law Enforcement

The Certificate in Law Enforcement is designed to enhance the career needs of:

- Law enforcement officers.
- Individuals who want exposure and knowledge of law enforcement as a career choice.

To qualify for a Certificate in Law Enforcement, students must complete four of the following courses with an average grade of B or better. CJ 191, is a prerequisite for all courses.

CJ 392, Law Enforcement or CJ 385, Seminar in Policing
CJ 341, Criminalistics and Scientific Crime Detection or CJ 343, Special Investigations
CJ 692, Community Policing
CJ 861, Police Administration

Lower-Division Course

> CJ 191, Introduction to Criminal Justice (3). General education introductory 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.

Upper-Division Courses

CJ 310. Community-Based Corrections (3). Focuses on the analysis and evaluation of programs in community settings such as diversion, probation, parole, halfway houses, parole, study release, work release, and restitution. Discusses programs in terms of their definition, history, purpose, administration, processes, problems, cost, and effectiveness. Prerequisite: CJ 191.

CJ 315. Criminal Law (3). 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. Prerequisite: CJ 191.


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. Prerequisite: CJ 191.

> CJ 351. The Victim in Criminal Justice (3). General education introductory 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. Prerequisite: CJ 191.

> 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. Prerequisite: CJ 191.

CJ 355. Special Populations in the Criminal Justice System (3). Cross-listed as ETH S 355. General education introductory course. Examines the role of women and minorities as employees of the criminal justice system. Also explores the role of women, minorities, juveniles, and elderly 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. Prerequisite: CJ 191.

CJ 381. Special Topics (1-3). Detailed study of topics in criminal justice with particular emphasis established according to the expertise of the various instructors. Prerequisite: CJ 191.

CJ 382. Workshop in Criminal Justice (1-3). Prerequisites: CJ 191 and instructor's consent.


CJ 392. Law Enforcement (3). Examines the interaction of police and citizens as regulated by constitutional provisions and other legal and social constraints. Prerequisite or co-requisite: CJ 191.

CJ 393. Serial Killers (3). Examines the history, dynamics, causation, investigation, and control of the phenomenon of serial crimes, particularly homicide. Emphasizes investigative techniques including psychological and geographic profiling. Prerequisite: CJ 191.

>CJ 394. Courts and Judicial Systems (3). General education further study 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. Student plays 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. Prerequisite: CJ 191.

CJ 401. Management of Criminal Justice Agencies (3). An intensive examination of a variety of emerging administrative and management concepts and the processes related to the determination and implementation of administrative philosophy. Prerequisite: CJ 191.


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; witness and privileged communications; the hearsay rule and its exceptions; and judicial notice, burden of proof, and presumptions. Emphasizes the rules of evidence that govern the criminal justice process. Prerequisite: CJ 191.


>CJ 453. Crime Prevention (3). General education further study course. A study of the 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. Prerequisite: CJ 191.

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. Prerequisites: criminal justice major, 15 hours of CJ courses, junior or senior standing, and consent of the criminal justice agency. Offered credit only.

CJ 482. Internship (1-3). Supervised field placement with a governmental or private law enforcement, court, correction, juvenile justice, forensic science, or security agency. Provides a learning experience in which the student can integrate and apply knowledge and theory derived from the criminal justice curriculum. Interns work 96 hours for 3 hours credit; there is a maximum of 6 credit hours. Prerequisites: 15 hours in criminal justice, junior or senior standing, consent of the criminal justice agency, and internship coordinator's 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 credit not to exceed a total of 6 hours. Prerequisites: 15 hours in the criminal justice core and individual directed study coordinator's consent.


Courses for Graduate/Undergraduate Credit

CJ 501. Integrity in Public Service (3). Cross-listed as ETH S 501, GERON 502, P ADM 501. Exposes the student to basic principles of personal and professional integrity and how these principles apply to their daily life as a member of the community and as an employee of a government or social service agency. Employs a case study method, using cases and examples from a wide range of government and non-profit 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: junior or senior-level or instructor's permission.

>CJ 513 Violent Crime (3). General education further study 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. and will provide 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 will be required. Prerequisite: CJ 191.

CJ 515. Sex Crimes (3). Examines and defines what is classified as criminal forms of sexual behavior and the unique challenge they present to the criminal justice system. Also examines the extent and nature of sex crimes, sexual predator laws, sexual harassment and the victims of such crimes. Also discusses the theoretical developments in the field. Prerequisite: CJ 191.

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. Prerequisite: CJ 191.

CJ 517. Homicide Investigation. (3) Introduction to death investigations from an investigation-oriented perspective. Emphasis will be given to crime scene investigations, mechanisms of injury and death and sex-related homicides. Prerequisite: CJ 191.

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: CJ 191.

CJ 551. Workshop (1-6). Specialized instruction using variable format in relevant criminal justice subjects. Repeatable for credit up to 6 hours.

>CJ 593. Crime Causation and Criminal Justice Policy (3). General education further study course. Introduction to theoretical issues in criminal justice. Primary emphasis is on 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 the application of these perspectives to criminal justice agencies. Prerequisite: CJ 191.

CJ 600. Forensic Anthropology (3). Cross-listed as ANTHR 600. Encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition, and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification, and identification emphasizing anthropological interpretation. Prerequisite: CJ 191.

CJ 610. Correctional Counseling (3). Analysis of 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. Prerequisite: CJ 191.

CJ 621. Environmental Law (3). Cross-listed as ETH S 621 and P ADM 621. An in-depth analysis of emerging federal, state, and local legislation; judicial decisions, and administrative policies in environmental protection. Explores the roles of a variety of governmental agencies and nongovernmental organizations as related to prevention and enforcement processes of environmental protection. Includes issues in the development and implementation of environmental policy. Prerequisite: an approved methods class.


CJ 641. Forensic Psychiatry (3). Analysis of the role of psychiatry in the criminal justice process. Introduces the student to concepts and procedures of forensic psychiatry. Prerequisite: CJ 191.


CJ 651. Dispute Resolution (3). Cross-listed as ETH S 651, GERON 651, P ADM 651. Examines a range of topics including causation, typologies, communications, mediation, arbitration, and other dispute resolution techniques. Includes criminal and victim mediation and both inter-group and inter-organization relations and dispute resolution techniques. Analyzes case studies.


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, and empowering the community, and the integration of these concepts into community policing. Prerequisites: CJ 191.

CJ 702. Research Methods (3). Cross-listed as ETH S 702, GERON 702, P ADM 702. Acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising, and utilizing both primary and secondary sources of data of the type used in policy, planning, and administrative research. Students must complete several short research projects.

CJ 781. Cooperative Education (1-6). Provides a paid 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. Offered Cr/NoCr only.

CJ 782. Workshop in Criminal Justice (1-6). Prerequisite: CJ 191 and instructor’s consent.

CJ 783. Advanced Special Topics in Criminal Justice (1-3). Detailed study of topics in criminal justice with particular emphasis established according to the expertise of the various instructors. Prerequisites: CJ 191 and junior, senior, or graduate-level standing.

CJ 797. Policy Analysis and Program Evaluation (3). Cross-listed as P ADM 845. An 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. Focuses on methodologies for collection of data and their use in the assessment of programs and program impact. Prerequisites: an approved statistics class and an approved methods class.

Courses for Graduate Students Only

CJ 802. Quantitative Methods for Public Sector Professionals (3). Cross-listed as GERON 802 and PADM 802. Uses standard microcomputer statistical software and analysis to introduce statistics and quantitative analysis for organizational and policy decision making. Emphasizes the application of statistics and writing with quantitative evidence to real public sector policy questions. Assumes little or no background in statistics and software applications. Prerequisite: either CJ 702, GERON 702, or PADM 702.

CJ 816. Correctional Administration (3). Analyzes basic methods utilized in the organization and accomplishment of objectives in correctional institutions. Reviews methods utilized in traditional correctional institutions, diagnostic centers, halfway houses, and other treatment models.

CJ 817. Crime in Popular Culture (3). Analyzes film as an expression of popular culture; focuses on films dealing with subject of crime. Particular attention to portrayal of violence and the images of women. Discusses the images of police, correctional officers, and other criminal justice professionals.

CJ 820. Terrorism and Modern Societies (3). A broad overview of the many theoretical approaches to the study of terrorism and studies recurring issues regarding the interpretation of various types of terrorism. Focuses not only on theoretical concerns, but also on policy debates and the substantive ramifications of current events. Exposes students to the range and complexity of both domestic and international terrorism and also to different approaches to the study of terrorism.

CJ 821. Hostage Negotiation (3). A comprehensive examination of theory, research, and practice in hostage negotiation from the perspectives of both law enforcement and the behavioral sciences. Exposes students to the range and complexity of both domestic and international hostage negotiations with the focus not only on theoretical concerns, but also on policy debates and the substantive ramifications of current events. Explores the need for more rigorous application of behavioral science to the practice of crisis negotiation.

CJ 850. Workshop (1-6). Specialized instruction using variable format in relevant criminal justice subjects. Repeatable for credit up to 6 hours. Restricted to graduate students.

CJ 853. Crime Prevention through Environmental Design (3). Examines the premises and concepts of Crime Prevention through Environmental Design (CPTED), including: access control, natural surveillance, territorial reinforcement, and activity support. Emphasizes case studies and field research.

CJ 861. Police Administration (3). A comparative survey and analysis of administrative philosophy, problems, procedures, organizations, and functions of effective agency organization. Considers administrative skills related to operations and personnel.

CJ 881. Internship (3-6). Supervised field placement in a criminal justice agency. For 3 credits, the student works 180 hours and completes an academic project under the direction of a faculty member. Prerequisites: 15 hours of graduate-level criminal justice courses and consent of criminal justice agency and internship coordinator.

CJ 882. Individual Directed Study in Criminal Justice (3-6). Faculty directed readings and/or research in special areas of interest of the field of criminal justice. Prerequisite: consent of graduate coordinator and instructor.

CJ 891. Seminar in the Judicial Process (3). Reviews and analyzes the functional and legal theories impacting the administration and operation of the judicial system. Examines actual practice as well as statutory and case law.

CJ 892. Criminal Justice and Community Action (3). An overview of the literature on community organizations and
and work diligently with dedicated faculty to develop strategies for harmonious living.

Major. The major in ethnic studies consists of at least 30 hours, including ETHS 100 and 210 and two of the following: 540, 545, 548, and 725. Students must complete 18 additional elective hours from ethnic studies in consultation with their advisor. This major is currently suspended.

Minor. A minor in ethnic studies consists of at least 18 hours. The courses are to be approved by the student's advisor in the program.

Lower-Division Courses

- ETHS 100. Introduction to Ethnic Studies (3). General education introductory 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.


- ETHS 240. Ethnic Women in America (3). General education further study course. Cross-listed as WOMS 240. An examination of the lives, talents, and contributions to the American culture by ethnic women that have been generated and perpetuated through the ages. To help people relate better to ethnic women in America and understand their attitudes, sensitivities, and emotions.

Upper-Division Courses

- ETHS 320. Martin Luther King (3). Studies the life and philosophy of the Rev. Dr. Martin Luther King, Jr. Emphasizes his motivation, obstacles he faced, and the impact of his life on the civil rights movement and race relations in the United States.

- ETHS 330. Ethnic America, ca. 1500-1924 (3). General education further study course. Cross-listed as HIST 330. An introduction of 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 improvement.

- ETHS 331. The Black Family (3). General education further study 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. Prerequisites: ETHS 100, 210, or instructor's consent.

- ETHS 332. The Native American (3). General education further study course. Examines contemporary issues facing the Native American focusing on the Osage tribe. Prerequisites: ETHS 100, 210, or instructor's consent.

- ETHS 333. Issues in the Chicano Community (3). General education further study course. Examines a variety of social, psychological, and political concerns affecting Mexican Americans, especially the impact of immigration and the media's role in the portrayal of Chicanos. Prerequisites: ETHS 100, 210, or instructor's consent.

- ETHS 334. Ethnic America in the Twentieth Century (3). General education further study course. Cross-listed as HIST 334. An in-depth study of the ethnic experience in the twentieth century. Major historical topics include identity formations, inter-generational conflict, class differentiation and mobility, the politics of ethnicity, resistance, and civil rights movements; the racialization of immigration laws, and transnationalism.

- 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.

- ETHS 355. Special Populations in the Criminal Justice System (3). Cross-listed as CJ 355. General education further study course. Examines the role of women and minorities as employees of the criminal justice system. Explores the role of women, minorities, juveniles, and elderly citizens as individuals who commit crimes 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.

- ETHS 360. Dealing with Diversity (3). General education further study course. Discusses the pluralistic nature of U.S. society. Equips students with skills to live and work within a diverse society, with particular attention to the global community.

- ETHS 361. Prominent Ethnic People in the Making of America (3). General education further study course. Explores the history, contributions, and challenges of important ethnic groups in the United States. Emphasizes the role of individuals and organizations in shaping the cultural and political landscape of the United States.

- ETHS 370. The Black Experience in America (3). Examines the status of blacks in American society. Emphasizes the role of blacks in the development of economic, political, and social institutions in the United States. Prerequisites: ETHS 100, 210, or instructor's consent.

- ETHS 380. Native American Tribal Systems (3). An overview of the history, culture, and legal systems of American Indian tribes. Discusses the impact of colonialism and subsequent policies on Native American societies. Prerequisites: ETHS 100, 210, or instructor's consent.

- ETHS 381. Special Topics (1-3). Detailed study of topics in ethnic studies with particular emphasis established according to the instructor's expertise. Prerequisites: ETHS 100.
> ETH S 390. Asian American Contemporary Issues (3).

General education further study course. Explores current trends and issues that affect Asian Americans in the U.S. Includes the history of Asian American immigration, education, work, violence, and family.

ETH S 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 childcare. Exposes students to good practices at home and 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 transitions into adult life. Prerequisite: ETH S 100, 210, or equivalent, or instructor’s consent.


> ETH S 410. The African American Male (3). General education further study course. Examines the impact of racism on the role and lifestyle of the African American male in American society. Prerequisites: ETH S 100, 210, or instructor’s consent.

ETH S 481. Cooperative Education (1-4). Allows the student to examine the impact of minority status in the work environment. Examines interpersonal interactions, communication, and acceptance in and adjustment to the multicultural work environment. Offered C/NCR only. Prerequisite: program consent.

ETH S 491. Urban Seminar (3). Explores 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 required to devote 16 hours per month for three months with a neighborhood-based agency. WSU will make a 3-hour tuition (in-state rate) gift to the student upon acceptance to the course. Prerequisites: 2.00 GPA; must be currently enrolled in at least 3 hours in addition to ETH S 491; ETH S 100 or 210 or instructor’s consent.

Courses for Graduate/Undergraduate Credit

ETH S 501. Integrity in Public Service (3). Cross-listed as CJ 501, GERON 502, P ADM 501. Explores the student to basic principles of personal and professional integrity and how those principles apply to their daily life as a member of the community and as an employee of a government or social service agency. Emphasizes a case study method, using cases and examples from a wide range of government and non-profit 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: junior- or senior-level or instructor’s permission.

> ETH S 512. Aging and Ethnicity (3). Cross-listed as GERON 512. General education further study course. Addresses the needs of students interested in (1) providing services to; (2) exploring the "issues" of; (3) becoming familiar with the rights of; (4) learning the legal procedures for resolving specific problems of; and (5) offering practical solutions for the difficulties encountered by ethnic older persons. Prerequisites: ETH S 100, GERON 100, SOC 111, or instructor’s consent.

> ETH S 532. Women in Ethnic America (3). General education further study course. Cross-listed as HIST 532 and WOM S 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.


ETH S 580. Individual Projects (3). Student conducts independent research related to a specific ethnic group. Prerequisite: 50 hours of Wichita State credit or program consent. Repeatable for a total of 6 hours.


ETH S 725. Concepts of Cross-Cultural Communications (3). A critical survey of the concepts of cross-cultural communications. An in-depth examination of the rationale used to evaluate different ethnic groups’ language and behavior. Course provides a conceptual understanding of special implications and necessary adaptations of communications to, between, and among diverse ethnic groups in our society.

ETH S 750. Workshop (1-4). Focuses on the nature and scope of ethnic studies. Emphasizes the unique experiences of ethnic groups in this country.

Gerontology (GERON)

The gerontology program offers the Bachelor of Science (suspended) and Master of Arts degrees in gerontology. The instructional mission of degree programs in gerontology 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, and institutions.

The undergraduate major in gerontology, which meets the standards of the Association for Gerontology in Higher Education and follows the association’s suggested format, consists of 45 hours and leads to the Bachelor of Science degree, described below.

Students who plan to graduate with a BS in gerontology also must satisfy Fairmount College requirements (including the foreign language requirement) and the University requirements for the Bachelor of Science degree.

Required gerontology courses. For most students, a 24-hour core of gerontology course work is required:

Gerontology courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>GERON 100</td>
<td>Introduction to Gerontology</td>
</tr>
<tr>
<td>GERON 401</td>
<td>Aging, Work, and Retirement</td>
</tr>
<tr>
<td>GERON 404</td>
<td>Psychology of Aging</td>
</tr>
<tr>
<td>GERON 501</td>
<td>Field Experience</td>
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<tr>
<td>GERON 513</td>
<td>Sociology of Aging</td>
</tr>
<tr>
<td>GERON 518</td>
<td>Biology of Aging</td>
</tr>
<tr>
<td>GERON 560</td>
<td>The Aging Network</td>
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</tbody>
</table>

Students who have professional work experience in aging may, with faculty approval, substitute 3 hours of elective credit for the second 3 hours of field experience.

Required research courses. Gerontology majors also complete 3 hours in approved statistics courses and 3 hours in an approved research methods course.

Elective courses. Students will enroll in 15 hours of elective course work in gerontology, including at least one course from each of the following four clusters.

Cluster I. Humanities. GERON 514, Anthropology of Aging; GERON 515, Women and Aging; PHIL 327, Philosophy of Health Care.

Cluster II. Behavioral/Social Science. GERON 512, Aging and Ethnicity; GERON 520, Family and Aging; GERON 715, Adult Development and Aging.

Cluster III. Physiology/Health. GERON 537, The Social Consequences of Disability; GERON 550M, Long Term Care and Aging; HS 331, Principles of Dietetics and Nutrition; SOC 248, Medical Sociology.

Cluster IV. Applied Social Science. SC WK 300, Understanding Social Welfare; COMM 325, Speaking in Business and the Professions; MGMT 360, Management and Organizational Behavior; POL 321, Introduction to Public Administration.

Minor. The minor in gerontology consists of at least 15 hours of gerontology courses, including GERON 100 and 560, and 9 hours selected from the following: GERON 401, 404, 513, and 518.

Note: For other relevant/required courses, see P ADM 710, 725, 745, 775, and 865; NURS 789; ACC 500; MKT 800; PHS 804, 812, 818, 822, 826, 834, and 858; and PSY 813.
Lower-Division Courses

GERON 100. Introduction to Gerontology (3). A multidisciplinary overview of the field of aging, with attention to cultural, social, psychological, biological, and economic factors which influence the circumstances of the elderly.

GERON 150. Workshop in Gerontology (1-3). Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

Upper-Division Courses

GERON 401. Aging, Work, and Retirement (3). Examines the impact of population aging upon the national income and poverty among the elderly, retirement and work choices; the impact of lifetime income, Social Security, Medicare, private pensions, and health on the income security of the elderly. Prerequisite: GERON 100.

GERON 402. Computer and Statistical Applications (3). Cross-listed as CJ 402, ETH S 402, and P ADM 402. Introduces computer and statistical applications used in public agencies. Emphasizes availability and use of data sources, quantitative decision-making techniques, and interpretation of statistical analyses. Prerequisite: MATH III or equivalent.

GERON 404. Psychosocial Aging (3). Cross-listed as PSY 404. An examination of 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 prevention of psychological problems of the elderly. Prerequisite: PSY 111.


GERON 481. Cooperative Education (1-3). Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Repeatable up to 6 hours. Offered CR/NC only. Prerequisites: GERON 100 and instructor's consent.

Courses for Graduate/Undergraduate Credit

GERON 501. Field Experience (2-6). A 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 6 hours credit. Prerequisite: 12 hours of gerontology credit and instructor's consent.

GERON 502. Integrity in Public Service (3). Cross-listed as CJ 502, ETH S 501, and P ADM 501. Exposes the student to basic principles of personal and professional integrity and how those principles apply to their daily life as a member of the community and as an employee of a government or social service agency. Employs case study method, using cases and examples from a wide range of government and non-profit 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: junior or senior-level or instructor's permission.

>GERON 512. Aging and Ethnicity (3). Cross-listed as ETH S 512. General education further study course. Addresses the needs of students interested in (1) providing services to (2) exploring the "issues" of (3) becoming familiar with the (4) learning the legal procedures for resolving specific problems of; and (5) offering practical solutions for the difficulties encountered by ethnic older persons. Prerequisites: ETH S 100, GERON 100, SOC 111 or instructor's consent.

GERON 513. Sociology of Aging (3). Cross-listed as SOC 513. Analysis of the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: SOC 111.

GERON 514. Anthropology of Aging (3). Cross-listed as ANTH 514. An anthropological exploration of the various stages of the life cycle with historical and cross-cultural perspectives.

GERON 515. Women and Aging (3). Introduces students to issues in aging that are unique to women, 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 lifespan perspective.

GERON 518. Biology of Aging (3). Cross-listed as BIOC 518. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, emphasizing human. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: a basic course in biology that satisfies the general education requirements.

GERON 520. Family and Aging (3). Cross-listed as SOC 520. An analysis of the families and family systems of older people. Emphasizes demographic and historical changes, family development, caregiving, and intergenerational relationships as these relate to the family life of older people. Prerequisites: GERON 100, SOC 111, or junior standing.

GERON 550. Selected Topics in Gerontology (1-6). Study in a specialized area of gerontology with the focus upon preprofessional programs and current issues in the field of aging. Emphasizing knowledge and skills in applied areas of gerontology as they relate to an emerging area of research and application. Repeatable to 6 hours. Prerequisite: instructor's consent.

GERON 551. Workshop (3). Specialized instruction using a variable format in relevant gerontology subjects. Repeatable for credit up to 6 hours.

GERON 560. The Aging Network (3). An overview of federal, state, and local programs concerned with planning, managing, or direct delivery of services to the older population. Prerequisite: 9 hours of gerontology credit or instructor's consent.


GERON 651. Dispute Resolution (3). Cross-listed as CJ 651, ETH S 651, and P ADM 651. Examines a range of topics including causation, typologies, communication, 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.

GERON 663. Economic Insecurity (3). Cross-listed as ECON 663. Personal economic insecurity, such as unemployment, old age, health care,disability, and erratic economic fluctuations. Includes costs and benefits of government action to aid in meeting such insecurities. Prerequisites: ECON 202 or instructor's consent, and junior standing.

GERON 700. Grant Proposal Preparation (3). Concerned with the process of research and project proposal development, including response to published guidelines, project planning, and proposal development and submission. Examines grant funding, including types of funding sources and their purposes and methods and processes of proposal evaluation. Students write and evaluate proposals.

GERON 702. Research Methods (3). Cross-listed as CJ 702, ETH S 702, and P ADM 702. acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising, and utilizing both primary and secondary sources of data of the type used in policy planning, and administrative research. Students must complete several short research projects.

GERON 715. Adult Development and Aging (3). Explores theory and research related to the development of adults and to the aging process. Utilizing an interactive, interdisciplinary perspective, the course examines the process of change, transition, growth, and development across the adult lifespan. Prerequisites: GERON 798 or 6 hours of gerontology.

GERON 720. Independent Readings in Gerontology (1-3). Directed study in a specialized topic in gerontology. Repeatable up to 6 hours. Prerequisite: 12 hours of gerontology credit and departmental consent.
GERON 750. Workshop in Gerontology (1-3). Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

GERON 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 up to 6 hours. Prerequisites: 12 hours of gerontology and instructor's consent.

GERON 798. Multidisciplinary Perspectives on Aging (3). Introduction to 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 gerontology. Prerequisite: admission to Graduate School.

Courses for Graduate Students Only

GERON 801. Field Research in Gerontology (3). An examination of the methods of participant observation and interviewing as approaches to understanding aging and the aged. Students gain practical experience in these methods through individual fieldwork projects. Prerequisites: GERON 798, 12 hours of gerontology credit, or instructor's consent.

GERON 802. Quantitative Methods for Public Sector Professionals (3). Cross-listed as CJ 802, P ADM 802. Uses standard microcomputer statistical software and analysis to introduce statistics and quantitative analysis for organizational and policy decision making. Emphasizes the application of statistics and writing with qualitative evidence to real public sector policy questions. Assumes little or no background in statistics and software applications. Prerequisite: either CJ 702, GERON 702, or P ADM 702.

GERON 803. Program Planning and Evaluation in Aging Services (3). Examines the process of developing service programs in response to a defined community need in aging services. Includes assessment of need; identification and development of community resources; and evaluation and reporting of program goals, objectives, and methods of implementation. Prerequisite: 12 hours of gerontology or instructor's consent.

GERON 804. Aging Programs and Policies (3). Analyzes and evaluates policies and programs related to aging and old age. Emphasizes the importance of social values and historical context for understanding current policies, programs, and practices. Prerequisites: GERON 798, 12 hours of gerontology, or instructor's consent.

GERON 810. Advanced Gerontology Internship (3-6). Integrates academic gerontology and practical experience through supervised placement of students in an agency or organization engaging in planning, administering, or providing direct services to older people. Internship requires 200 contact hours for each 3 hours of credit. An internship paper is also required. Prerequisites: 12 hours of gerontology credit and instructor's consent prior to registration.

GERON 850. Selected Topics in Gerontology (1-6). Advanced study in a specialized area of gerontology focusing upon professional programs and current issues in the field of aging. Emphasizes knowledge and skills in applied areas of gerontology as they relate to an emerging area of research and application. Repeatable up to 6 hours. Prerequisite: instructor's consent.

GERON 897. Advanced Research Methods (3). Cross-listed as CJ 897, P ADM 897. Advanced research course; studies the selection and formulation of research problems, research design, hypothesis generation, scale construction, sampling procedures, and data analysis and interpretation. Prerequisite: either CJ 597, ETH S 597, GERON 597, P ADM 597, or equivalent.

GERON 898. Applied Research Paper (1-3). Original research project under a faculty member's direction. Project requires a written report and defense of that report before a faculty committee. Must be an individual effort, not a group project. Intended to be a major project or capstone activity completed at the end of a student's program of study. Prerequisite: graduate-level research methods class. Repeatable.

GERON 899. Thesis (1-3). Repeatable, but total credit hours counted toward degree shall not exceed 4 hours.

Computer Science (CS)
The Department of Computer Science offers a broad and flexible curriculum that emphasizes core computer science technologies and their applications.

Students may earn either the Bachelor of Science (BS) or the Bachelor of Arts (BA) degree in computer science. Both degrees provide in-depth preparation for professional work in business, industry, or government. The BS degree also provides a good preparation for graduate study in computer science or related areas.

Students must take a minimum of twelve credit hours of computer science core courses or advanced computer science electives in residence at Wichita State University to qualify for a computer science Bachelor of Science or Bachelor of Arts degree.

Major: Bachelor of Science (BS)

1. Computer science: The following computer science courses are required: 210, 211, 300, 312, 320, 410, 411, 510, 540.

2. Mathematics: The following required mathematics courses add strength to the major in computer science: MATH 141, MATH 241, and STAT 460.

3. Ethics: The science requirement for the BS degree provides a solid grounding in scientific studies, including the concepts of the scientific method and the practical skills acquired in a two-semester lab sequence. Choose one of the following options:

A. BIOL 210 (4)
BIOL 211 (4)
Any one of the following:
CHEM 111 (5)
GEOL 111 (4)
PHYS 213 (5)
PHYS 313 (4)

B. PHYS 313 (4)
PHYS 315 (1)
PHYS 314 (4)
PHYS 316 (1)
ANTHR 101 (3) or BIOL 210 (4)

C. CHEM 111 (5)
CHEM 112 (5)
ANTHR 101 (3) or BIOL 210 (4)

D. GEOL 111 (4)
GEOL 212 (3)
ANTHR 101 (3) or BIOL 210 (4)

4. Engineering: A designated ECE course that introduces students to computer organization.

5. Additional required course for CS majors: PHIL 354, Ethics and Computers, gives students an ethical context for their professional work.

Major: Bachelor of Arts (BA)

1. Computer science: The following required core computer science courses provide a good foundation for the discipline: I1S, 210, 211, 300, 312, 320, 410, 411, 510, 540.

2. Mathematics: The following required mathematics courses add strength to the major in computer science: MATH 111, MATH 144, and STAT 370.

3. Ethics: The following required core course introduces students to computer organization.

4. Additional required course for the major: PHIL 354, Ethics and Computers, gives students an ethical context for their professional work. ENGL 210, Composition: Business, Professional, and Technical Writing, improves students' workplace communication.

5. Sequence electives: In addition, students complete 15 hours of sequence electives. These courses can be chosen from fields such as computer science information systems, software engineering, systems analysis, or some application area such as business administration. Other choices are also possible. Students should choose electives in consultation with their advisor and with the approval from the departmental academic advisor.
Minor
The minor provides a valuable addition to other majors and can help a student demonstrate ability in the computer science discipline. Students complete a required minimum of 18 hours of computer science courses. These 18 hours must include CS 211, CS 211, CS 300, and two CS courses numbered above 300. CS 350 workshops are not counted toward meeting the minor requirements. Also, students may count no more than one 497 course toward the minor.

Example Schedule for BS in Computer Science
Students must complete ENGL 100 or ENGL 101 and MATH 111, College Algebra, with a C or better, or have equivalent CLEP or transfer credit before taking any computer science courses toward the BS degree.

Freshman Year
(fewer than 30 credit hours earned)
ENGL 101, College English I ........................................... 3
MATH 242, Calculus I ......................................................... 5
First Natural Science course .............................................. 4-5
COMM 111, Public Speaking .............................................. 3

Second Semester
ENGL 102, College English II ........................................... 3
CS 210, Introduction to Computer Science ......................... 4
CS 211, Problem Solving and Programming in C ................ 4
MATH 243, Calculus II ......................................................... 5

Sophomore Year
(30-59 credit hours earned)
CS 300, Data Structures and Algorithms I ......................... 4
CS 320, Discrete Structures in Computer Science ................. 4
Second Natural Science course ........................................... 3-5
American Government (HIST 131 or 132 or POL 121) (HIST is Humanities; POL 5 is Social and Behavioral Sciences) ..... 3

Second Semester
CS 312, Assembly Language and Systems Programming ....... 3
CS 410, Programming Paradigms ......................................... 3
CS 411, Object Oriented Programming ................................ 3
STAT 460, Elementary Probability and Mathematical Statistics. 3
Third Natural Science course ............................................. 3-5

Junior Year
(60-89 credit hours earned)
ECE Designated Hardware Course ..................................... 4
CS 510, Programming Language Concepts ......................... 3
Humanities Introductory course (PHIL 125) ......................... 3
Fine Arts Introductory course ............................................... 3
Social and Behavioral Sciences Introductory course ............... 3

Second Semester
CS 540, Operating Systems ................................................. 3
Advanced CS elective .......................................................... 3
Advanced CS elective .......................................................... 3
Humanities Further study or Issues and Perspectives course (PHIL 354) ......................................................... 3
Elective ............................................................................. 3

Senior Year
(90 credit hours earned)
Advanced CS elective ......................................................... 3
Advanced CS elective .......................................................... 3
Humanities Introductory course (literature) ......................... 3
Social and Behavioral Sciences Further Study or Issues and Perspectives course ................................................. 3
Elective ............................................................................. 3

Second Semester
CS 560, Data Structures and Algorithms II ......................... 3
Advanced CS elective .......................................................... 3
Advanced CS elective .......................................................... 3
Issues and Perspectives course or Fourth Natural Science course or elective (as needed) ................................................. 3
Elective ............................................................................. 3

Third Semester
CS 510, Programming Language Concepts ......................... 3
Computer science sequence elective .................................... 3
Natural Science Introductory Course (physical) ..................... 3
Second Social and Behavioral Sciences course ..................... 3
Humanities/Fine Arts Further study or Issues and Perspectives course ................................................................. 3

Senior Year
(60-89 credit hours earned)
CS sequence elective .......................................................... 3
CS sequence elective ........................................................... 3
Humanities Introductory course (literature) ......................... 3
Natural Science Further study or Issues and Perspectives course ................................................................. 3
Social and Behavioral Sciences Introductory course (second area) ................................................................. 3

Second Semester
CS 540, Operating Systems ................................................. 3
CS sequence elective ........................................................... 3
CS sequence elective ........................................................... 3
ENGL 210, Composition: Business, Professional, and Technical Writing ................................................................. 3

Sophomore Year
(30-59 credit hours earned)
ENGL 101, College English I ............................................. 3
MATH 111, College Algebra .................................................. 3
MATH 243, Calculus II ......................................................... 5

Second Semester
ENGL 102, College English II ............................................. 3
CS 210, Introduction to Computer Science ......................... 4
CS 211, Problem Solving and Programming in C ................. 4

Third Semester
ENGL 102, College English II ............................................. 3
ENGL 210, Composition: Business, Professional, and Technical Writing ................................................................. 3

Junior Year
(60-89 credit hours earned)
ECE Designated Hardware Course ..................................... 4
CS 510, Programming Language Concepts ......................... 3
Humanities Introductory course (PHIL 125) ......................... 3
Fine Arts Introductory course ............................................... 3
Social and Behavioral Sciences Introductory course ............... 3

Second Semester
CS 540, Operating Systems ................................................. 3
Advanced CS elective .......................................................... 3
Advanced CS elective .......................................................... 3
Humanities Further study or Issues and Perspectives course (PHIL 354) ......................................................... 3
Elective ............................................................................. 3

Senior Year
(90 credit hours earned)
Advanced CS elective .......................................................... 3
Advanced CS elective .......................................................... 3
Humanities Introductory course (literature) ......................... 3
Social and Behavioral Sciences Further Study or Issues and Perspectives course ................................................. 3
Elective ............................................................................. 3

Second Semester
CS 560, Data Structures and Algorithms II ......................... 3
Advanced CS elective .......................................................... 3
Advanced CS elective .......................................................... 3
Issues and Perspectives course or Fourth Natural Science course or elective (as needed) ................................................. 3
Elective ............................................................................. 3

Third Semester
CS 510, Programming Language Concepts ......................... 3
Computer science sequence elective .................................... 3
Natural Science Introductory Course (physical) ..................... 3
Second Social and Behavioral Sciences course ..................... 3
Humanities/Fine Arts Further study or Issues and Perspectives course ................................................................. 3

Senior Year
(60-89 credit hours earned)
CS sequence elective ........................................................... 3
CS sequence elective ........................................................... 3
Humanities Introductory course (literature) ......................... 3
Natural Science Further study or Issues and Perspectives course ................................................................. 3
Social and Behavioral Sciences Introductory course (second area) ................................................................. 3

Second Semester
CS 540, Operating Systems ................................................. 3
CS sequence elective ........................................................... 3
CS sequence elective ........................................................... 3
ENGL 210, Composition: Business, Professional, and Technical Writing ................................................................. 3


Programming Courses
No credit toward BS Degree in Computer Science
CS 201, FORTRAN Programming (3) 2R, 2L Fundamentals of computer programming in FORTRAN and their application to problems. No credit toward the BS in computer science. Prerequisites: ENGL 101 and MATH 111 or 112 or equivalents, with a C or better, or departmental consent.
CS 203. Visual BASIC (3). Fundamentals of computer programming in Visual BASIC and their application to problems. No credit toward the BS in computer science. Prerequisites: ENGL 101 and MATH 111 or 112, or equivalents, with a C or better, or departmental consent.

CS 205. COBOL Programming (3). 2R; 2L. Fundamentals of computer programming in COBOL and their application to problems. No credit toward the BS in computer science. Prerequisites: ENGL 101 and MATH 111 or 112, or equivalents, with a C or better, or departmental consent.

CS 206. BASIC Programming (3). 2R; 2L. Fundamentals of computer programming in BASIC and their application to problems. No credit toward the BS in computer science. Prerequisites: ENGL 101 and MATH 111 or 112, or equivalents, with a C or better, or departmental consent.

CS 207. C Programming (3). 2R; 2L. Fundamentals of computer programming in C and their application to problems. No credit toward the BS in computer science. Prerequisite: C or better in a high-level programming language course, or departmental consent.

Upper-Division Courses

> CS 300. Data Structures and Algorithms I (4). 3R; 2L. General education further study course. Basic data structures and associated algorithms. Includes stacks, queues, linked lists, trees, and graphs. Analyzes algorithms for efficiency and correctness. Prerequisites: CS 210 and 211, each with a C or better.

> CS 312. Assembly Language and Systems Programming (3). 3R; 1L. Fundamentals of assembly language programming. Includes assembler, text editor, arithmetic, machine instructions, macros, code view debugger, and memory segments. Programming assignments reinforce textbook knowledge. Prerequisites: CS 210 and 211, each with a C or better.

> CS 320. Discrete Structures in Computer Science (4). 3R; 1L. Covers the basic concepts relevant to computer science, including propositional and predicate logic, proof techniques, recursion, induction, and analysis of algorithms. Sets and combinatorics, counting principles, permutations and combinations, the binomial theorem, partially ordered relations, equivalence relations, functions, one-to-one versus onto functions, matrices, graphs and trees, elementary graph algorithms, finite automate and regular languages, context free grammars and languages. Prerequisites: CS 210 and 211, each with a C or better.

> CS 350. Workshop (1-5). Short-term courses with special computer science emphasis. Repeatable for credit. No credit toward the major or minor in computer science. Prerequisite: departmental consent.

> CS 365. Introduction to Computer Graphics (3). 2R; 2L. Introduces interactive computer graphics, including primitives and basic concepts, transforming equations, and data structures. Discusses computer hardware and the implications of finite precision floating point arithmetic. Also covers technique for initial and boundary value problems in ordinary differential equations. Selected algorithms are implemented on the computer. Prerequisites: MATH 243 and CS 300 with grades of C or better.

> CS 410. Programming Paradigms (3). 3R; 1L. Exposure to computer programming in various styles of languages. Emphasizes programming rather than theory. Prerequisites: CS 330 and 320 with a C or better in each.

> CS 411. Object-Oriented Programming (3). 3R; 1L. Concepts of object-oriented programming. Includes data abstractions, classes and objects, methods, inheritance, polymorphic language, dynamically-bound methods, data encapsulation. Uses programming experience in an object-oriented programming language. Prerequisites: CS 300 with a grade of C or better.

CS 444. Introduction to Unix (3). (RI) 1L. The objective of this course is to introduce the fundamental Unix operating system, and shell programming. Prerequisite: any high-level programming language with a grade of C or better.

CS 465. Oracle Development Environment (3). 3R; 1L. Oracle is the most widely used database management system in the world. This course will cover basic relational database concepts, the SQL query language, PL/SQL, object creation, including indexes, tables, triggers, and stored procedures. Oracle Forms, SQL Loader in the transition of legacy systems, and web-enabled applications. Students work with real-life projects. Prerequisite CS 211 with a C or better, or departmental consent.

CS 501. Numerical Programming Techniques (3). 2R; 2L. A study of the programming techniques used to solve nonlinear equations, interpolation, integrate, and solve systems of linear equations. Discusses the implications of finite precision floating point arithmetic. Also covers techniques for initial and boundary value problems in ordinary differential equations. Selected algorithms are implemented on the computer. Prerequisites: MATH 243 and CS 300 with grades of C or better.

CS 510. Programming Language Concepts (3). Theoretical concepts in the design and use of programming languages, including scope of declarations, storage allocation, subroutines, modules, formal methods for the description of syntax, and semantics. Introduction to the concepts of different styles of languages—imperative languages, functional languages, logic languages, object-oriented languages, etc. Prerequisite: CS 410 with a C or better.

CS 540. Operating Systems (3). 3R; 1L. Covers the fundamental principles of operating systems: process synchroniza-
tion, scheduling, resource allocation, deadlocks, memory management, file systems. Studies a specific operating system in depth. Programming assignments consist of modifications and enhancements to the operating system studied. Prerequisite: CS 440 with a C or better.

CS 560. Data Structures and Algorithms II (3). 3R; 1L. Design and analysis of algorithms and proof of correctness. Analysis of space and time complexities of various algorithms including several sorting algorithms. Hashing, binary search trees, and height balanced trees. Algorithm design techniques including divide and conquer, greedy strategies, and dynamic programming. Elementary graph algorithms. Prerequisites: CS 300, CS 320; and Math 243 and STAT 460 with a C or better in each.

CS 612. Systems Programming (3). 2R; 2L. A study of system software including assemblers, dissemblers, macroprocessors, link editors, loaders, language translators, and debuggers. Practical experience in building system software through programming laboratory exercises. Prerequisites: CS 300 and 312 with a C or better.

CS 615. Compiler Construction (3). 2R; 2L. First compiler course for students with a good background in programming languages and sufficient programming experience. Covers overall design and organization of compilers and interpreters, lexical and syntax analysis, construction of symbol tables, scope analysis, type checking, error recovery, run-time organization, intermediate code and its interpretation, code generation, and optimization. Project-oriented course. Emphasizes practical experience gained through the design and implementation of a simplified but non-trivial compiler for a strongly typed, procedural language. The implementation is carried out in a modern systems programming environment. Prerequisite: CS 510 or equivalent with a C or better.

CS 632. Symbolic Computation with LISP (3). An in-depth study of LISP as a functional programming language with its application to artificial intelligence, polynomial computation, and theorem proving. Complete substantial programming projects in LISP. Prerequisites: Math 243 with a C or better; and CS 300 and CS 320 with a B or better in each; or CS 410 or CS 560 with a C or better; or departmental consent.

CS 644. Advanced Unix Programming (3). Improves skills in C programming under the Unix environment. Covers file I/O, both buffered and unbuffered, working with the Unix file system, concurrent programming with multiple processes, and process control. Also includes the use of signals and concepts of interprocess communication with pipes and FIFOs. Students must have prior knowledge of C language and its use of structures and pointers. Prerequisite: CS 300 with a C or better or instructor's consent.

CS 655. Information Delivery on the Internet (3). Explores the capabilities of providing Information on the World Wide Web. Information is typically provided through some sort of Web site that incorporates static text and the dynamic capabilities of the Web. Learn how to create an interactive Web site through the use of CGI and Java programming and how to interconnect a Web site to databases and generate images on the fly. Java portion covers a wide range of Java language and the Applet interface and utilities. Prerequisite: CS 300 with a C or better or instructor's consent.

CS 665. Introduction to Database Systems (3). Fundamental aspects of database systems, including conceptual database design, entity-relationship modeling, and object-oriented modeling; the relational data model and its foundations, relational languages, and SQL (Structured Query Language); logical database design, dependency theory, and normal forms; physical database design, file structures, indices, and decomposition; integrity, security, concurrency control, recovery techniques, and optimization of relational queries. Prerequisite: CS 300 and 320 with a C or better.

CS 680. Introduction to Software Engineering (3). 2R; 2L. An introduction to the body of knowledge, presently available tools and current theories and perspectives regarding the process of program development. Studies these topics from several different viewpoints, ranging from the individual program statement to a large programming project. Prerequisites: CS 300 and 410, each with a C or better.

CS 684. Applications Systems Analysis (3). A study of the methods for analyzing business systems problems and other large-scale applications of the computer. At the crossroads of computer technology, management science and human relations, systems analysis is the key to the education of the well-trained computer applications analyst. Includes systems design, cost benefit analysis, data base design, distributed processing, project management, and documentation. Prerequisite: CS 300 with a C or better.

CS 690. Information Systems Engineering (3). Study of information systems design techniques, issues of systems evolution, project management, engineering design, various views of information systems and software, and formal design approaches. Covers structured analysis and design approach, object-oriented approach, software design, database design, rule modeling, user interface design, performance evaluation issues relative to software design, systems evolution aspects from a software maintenance perspective, project management techniques, and information systems engineering. Prerequisite: CS 300 with a C or better.

CS 697. Selected Topics (1-3). Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

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 non-deterministic, and concepts of decidability, computability, and formal language theory. Prerequisite: CS 320 or equivalent with a C or better.

CS 742. Computer Communication Networks (3). 2R; 2L. Introduction to network programming for the Internet environment including the basic concepts of TCP/IP, client-server paradigm, programming of clients, and various types of servers, remote procedure calls, concurrency management, and interconnection techniques. Emphasizes the design principles that underlie implementation of practical applications. Prerequisite: CS 300 with a C or better or departmental consent.

CS 750. Workshop in Computer Science (1-5). Short-term courses with special focus on introducing computer science concepts. Repeatable for credit. Prerequisite: departmental consent.

CS 771. Artificial Intelligence (3). Heuristic versus algorithmic methods, principles of heuristic approaches, and cognitive processes. Also covers objectives and methods of artificial intelligence research and simulation of cognitive behavior. Includes a survey of appropriate examples from various areas of artificial intelligence research. Prerequisites: CS 300 and 320 with a grade of C or better in each.

CS 776. Expert Systems (3). Planning, construction, and application of expert systems. Discusses major aspects of expert systems; illustrates with various examples, including data representation, knowledge bases, inference engines, user interfaces, explanatory facilities, metanotes, and dealing with uncertainty. Introduces basics of a production system language. Prerequisite: CS 410 with a C or better or instructor's consent.

CS 778. Cooperative Education in Computer Science (1-3). Practical experience in a professional environment to complement and enhance the student's academic program. For master's level CS students. Repeatable, but may not be used to satisfy degree requirements. Offered CR/NC only. Prerequisites: departmental consent and graduate GPA of 3.00 or above.

CS 798. Individual Projects (1-3). Allows beginning graduate students and mature undergraduate students to pursue individual projects of current interest in computer science. Graded S/U only. Prerequisite: departmental consent.

Courses for Graduate Students Only


CS 817. Advanced Java Technology (3). Covers advanced features of the Java language, the underlying implementation technology (Java Virtual Machine), and extensions of the Java technology. Includes concurrent object-oriented programming and Java core reflection, and extensions of the Java tech-
CS 821. Analysis of Algorithms (3). Deals with advanced topics in the design and analysis of algorithms, including sorting networks, algorithms for parallel computers, Strassen's algorithm for matrix multiplication, polynomial multiplication and the FFT, number theoretic algorithms (gcd computation), and hard problems and intractability. Prerequisites: CS 560 with a B or better.

CS 822. Parallel Algorithms (3). Deals with the design and analysis of parallel algorithms for various combinatorial problems in the Parallel Random Access Machine (PRAM) model. Covers models of parallel computation, the PRAM model, basic techniques for designing parallel algorithms, algorithms on lists and trees, and algorithms for selection, merging, sorting, searching, as well as algorithms for graph problems. Prerequisite: CS 560 with a B or better.

CS 841. Advanced Computer Architecture (3). A study of advanced topics in computer architecture like parallel processing, stack architectures, computer performance evaluation, and reliability of computing systems. Studies architectures of typical systems belonging to the IBM, CDC, and Burroughs families of computers. Prerequisite: CS 540.


CS 843. Distributed Computing Systems (3). A study of hardware and software features of on-line multiple computer systems emphasizing network design and telecommunications. Includes distributed data bases, interprocessor communication and centralization versus distribution. Also includes study of the use of microcomputers in representative configurations. Prerequisites: CS 540 and 742.

CS 862. Advanced Database Systems (3). This course covers recent developments and advances in database technology. It is designed for students who have had a first database course and have a good background in a related computer science discipline. Possible topics include: extended relational database management systems, object-oriented database management systems, deductive databases, database type systems and database programming language, persistent languages and systems, distributed databases. Prerequisite: CS 665.

CS 867. Object-Oriented Databases (3). Covers object-oriented technology as it applies to databases and persistent object systems. Focuses on the advantages of the object-oriented database technology in complex application areas. Java database and persistent technologies and the associated tools have an important role here, along with the related industrial standards, such as ODMG. Provides design and implementation experience using a challenging application. Devoted to recent research and development results. Prerequisites: CS 665 and an object-oriented programming language course such as CS 217 or 350, or instructor's consent.

CS 872. Machine Learning and Discovery (3). An advanced study of computer programs that learn, improve performance, and make discoveries. Includes objectives, methods, and research paradigms for such systems, a survey of existing methods and applications, including the most recent developments; theoretical principles for learning and discovery systems; computational theories of learning processes and cognitive models of human learning; concept and theory formation; and use of analogy in learning. Includes participation in a group project such as developing a computer learning system. Prerequisites: CS 771 or 776.

CS 873. Computer Vision (3). An introduction to computer vision, a rapidly growing subfield of artificial intelligence. The basic topic is the understanding or description of images by a computer or robot. Covers two-dimensional Fourier analysis, scene matching and understanding, texture, motion, shape recognition, relational image structure, and human perception. Prerequisite: CS 771 or instructor's consent.

CS 874. Simulation and Modeling (3). An up-to-date treatment of important aspects of simulation modeling, including data collection, input and output data analysis, modeling principles, simulation with general-purpose programming languages, and special-purpose simulation languages. Emphasizes theory, design, and implementation of modeling languages. Prerequisites: CS 500 and STAT 460 with a C or better in each; or instructor's consent.

CS 881. Software Specification and Design (3). A detailed presentation of the techniques and tools available for the specification of software requirements and their translation into a design. Includes formal specification and design methods such as structural analysis, object-oriented design, and JSD. Prerequisite: CS 680.

CS 886. Software Project Management (3). Presents the knowledge, techniques, and tools necessary to manage the development of software products. Includes the phases and activities involved in building a project, the skills and tools required for estimating and scheduling, and the responsibilities of the individuals involved. Prerequisite: CS 680.

CS 891. Project (3). An intensive project involving the analysis and solution of a significant practical problem which must be supervised by a CS graduate faculty advisor; it can be job-related. Students must write a report on the project and pass an oral final examination by an ad hoc faculty committee headed by the project advisor. Graded S/U only. Prerequisite: departmental consent.

CS 892. Thesis (1-6). May be repeated for up to 6 hours of credit. Graded S/U only. Prerequisite: departmental consent.

CS 893. Individual Reading (1-5). Graded S/U only. Prerequisite: departmental consent.

CS 898. Special Topics (2-3). Topics of current interest to advanced students of computer science. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Criminal Justice

See Community Affairs, School of.

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 skills in critical thinking and their abilities to use analytical tools to solve complex problems. It is a major that lays foundation for many career paths.

Major. The economics major in Fairmount College requires a minimum of 31 hours and a maximum of 41 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 Clinton Hall. Students in this major or minor must achieve a minimum 2.250 GPA. The following courses are required:

Course Hrs
MATH 144, Business Calculus I or MATH 242, Calculus I ...............3
ECON 201 and 202, Principles of Economics I and II ....................3
ECON 231, Introductory Business Statistics .........................6
ECON 301, Intermediate Macroeconomics ..........................4
ECON 302, Intermediate Microeconomics .......................3
ECON 340, Money and Banking ....................................3
Upper-division electives ........................................12
ECON 201 and 202 may be taken as part of the Fairmount College general education requirements.

Minor. A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of 15 hours exclusive of ECON 101, 102, and 231. ECON 201 and 202, or the equivalents, must be included.

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 Education for program planning.

Courses. Economics courses are listed in the Barton School of Business section of the Catalog.
English Language and Literature
(ENGL)

English Language and Literature
The English department offers a broad and flexible program of courses that are central to a liberal arts education while offering 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 communications skills acquired in their work in English a valuable asset as they seek entrance into a wide range of fields that include communications, education, government, law, and even business.

Major. A major consists of 33 hours, 3 of which may, with departmental consent, be taken in a cognate subject (such as foreign literature, theatre, and so forth) offered in a course by another department. The course work must be distributed as follows:
I. Basic Requirements (21 hours)
   ENGL 272; 310; 320 or 330; 360; 361; 362; 274 or 315
II. Major Requirements (12 hours with at least 6 upper-division) from ENGL 222, 252, 254, 275, 285, 290, 336, 340, 342, 345, 347, 365, 421, 450, 503, 504, 512, 513, 514, 515, 521, 522, 524, 526, 527, 532, 533, 535, 536, 537, 580, 610, 615, and 685

Minor. A minor with a creative writing sequence is available and consists of 12 hours of creative writing course work including ENGL 285 and 9 hours of skill courses listed above, plus 3 hours of ENGL 310 or 320 or 330.

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 secondary school English.

Major for Students Planning to Teach English in Secondary Schools: The teaching major in either Fairmount College or the College of Education is 51 hours distributed as follows:
I. Language (6 hours)
   ENGL 315 and one of the following: 316, 317, 667 or 274
II. Composition (6 hours)
   ENGL 680 and one of the following: 210, 685 or any course in the creative writing sequence
III. Literature (27 hours)
   A. Foundations: ENGL 272; 310; 320 or 330; and 340
   B. British and American literature: ENGL 362 or 503; 252 or 504; 360 or 611
   C. Cross-cultural language/literature: ENGL 342, 345, 365 or 672
   D. Literature for adolescents: ENGL 616
IV. Other (6 hours)
   A. THEA 143 and 221
   B. Electives (6 hours)

Electives in English or in certifiable minor

Composition
Non-credit Courses
ENGL 011. Syntax, Logic and Organization (3). Offered Cr/NoCr only. Reviews the basic elements of written English. 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). Offered Cr/NoCr only. Teaches the fundamental elements of written and spoken English, emphasizing the acquisition of basic grammatical and syntactical structures and the writing of paragraphs.

ENGL 015. Basic Skills for ESL II (3). Offered Cr/NoCr only. Extends the skills developed in ENGL 013. Students continue to practice using basic grammatical and syntactical structures, work on reading comprehension skills, and move from the writing of paragraphs in short essays. Prerequisite: ENGL 013.

Lower-Division Courses
ENGL 100. English Composition (3). A required composition course for non-native-speaking students. This course may be repeated once for credit. May be offered in a course by another department and is available as a credit for English teaching majors. Prerequisite: ENGL 013 or satisfactory score on placement test.

ENGL 101. College English I (3). General education basic skills course. Focuses on developing reading and writing skills appropriate to academic discourse. Introduces rhetorical process, effective communication, and library skills into writing assignments related primarily to nonfiction readings. Prerequisite: English placement score on ACT or placement exam, or successful completion of ENGL 011.

ENGL 102. College English II (3). General education basic skills course. Emphasizes critical reading, research, and argumentation. ENGL 102 should be taken after ENGL 101 in the freshman year. Prerequisite: ENGL 101, with a C or better.

ENGL 103. Reading, Thinking, and Writing (3). A third semester of English composition. Writing assignments based on literature read during the semester. Reading material varies with instructor, but generally follows a thematic scheme. Prerequisites: ENGL 101 and 102.

ENGL 150. Workshop (1-4). Repeatable for credit. Material varies according to the needs of students.

ENGL 210. Composition: Business, Professional, and Technical Writing (3). Offers instruction in the rhetorical, research, and argumentation aspects of writing, and encourages the development of reading, research, and argumentation skills in the context of a business or technical writing assignment. Prerequisites: ENGL 101 and 102 or instructor's consent.

Upper-Division Course
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. Offered Cr/NoCr only.

Courses for Graduate/Undergraduate Credit
ENGL 581. Composition Practicum (1). Required for all students in the English program. Must be taken as part of the English major program. Requires an application to the department. May be taken by graduate or undergraduate students.

ENGL 680. Theory and Practice in Composition (3). Technical introduction to rhetoric, research composition, and writing programs, and practices in school and colleges. Sta-
Courses for Graduate/Undergraduate Credit

ENGL 517-518. Playwriting I and II (3). Cross-listed as THTR 516 and 517. The writing of scripts for performance. Emphasizes both verbal and visual aspects of playwriting. If possible, the scripts are performed. Not repeatable for credit. Prerequisite: Instructor's consent.

ENGL 585. Writer's Tutorial: Prose Fiction (3). Tutorial work in creative writing in prose fiction with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 586. Writer's Tutorial: Poetry (3). Tutorial work in creative writing in poetry with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing director.

Courses for Graduate Students Only

ENGL 801. Creative Writing: Fiction (3). Advanced work in creative writing. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 803. Creative Writing: Nonfiction (3). Advanced work in creative nonfiction. Forms of nonfiction requiring a distinctive voice and demanding a formal flimy generally associated with fiction. Prerequisite: consent of creative writing director.

ENGL 805. Creative Writing: Poetry (3). Advanced work in the writing of poetry. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 875. MFA Final Writing Project (1–6).

ENGL 880. Writer's Tutorial: Fiction (3). SU grade only. Tutorial work in creative writing in prose fiction with visiting writer. Prerequisite: consent of creative writing director.

ENGL 881. Writer's Tutorial: Poetry (3). SU grade only. Tutorial work in creative writing in poetry with visiting writer. Prerequisite: consent of creative writing director.

Linguistics

Upper-Division Courses

>ENGL 315. Introduction to English Linguistics (3). General education further study course. Cross-listed as LING 315. Introduction to 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 development of English. Specifially designed for prospective English teachers, but open to all interested students. Prerequisite: LING 315 or departmental consent.

ENGL 318. Dialectology (3). Cross-listed as LING 318. An introduction to 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.

ENGL 351. Linguistics and Foreign Languages (3). Cross-listed as ANTH 351 and MCLL 351. Introduces general linguistic principles as they apply specifically to the study, acquisition, and analysis of foreign languages offered as major concentrations at WSU (French, German, Latin, and Spanish). Introduces acoustic phonetics (narrow transcriptions of foreign languages) and principles of phonology: morphemes and principles of morphology; and syntax and semantics. Prerequisite: LING 151.

Courses for Graduate/Undergraduate Credit

ENGL 667. English Syntax (3). Cross-listed as LING 667 and ANTH 667. Studies the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite: ENGL 315 or equivalent or departmental consent.

ENGL 672. Studies in Language Variety (3). Cross-listed as LING 672. Introduces the study of language variety with special attention to regional and social dialect in America and the methods of studying them. May be repeated for credit when content varies. Prerequisite: ENGL 315 or departmental consent.

ENGL 681. Editing American English (3). In this course, students will master the rules and conventions of grammar, sentence structure, spelling, punctuation, usage, and mechanics, and will learn how to apply them while they are revising and editing a written text. As part of the course requirement, students will spend time working as tutors in the writing center to learn and understand the practical application of editing rules. The course will include instruction in the conventions of editing Standard English (also known as American English) and in the methods of effective tutoring. Prerequisites: English 101; English 102.

ENGL 727. Teaching English as a Second Language (2-3). Cross-listed as LING 727. Discusses current methods of teaching English to non-native speakers. Students learn to analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use.


Literature

Lower-Division Courses

ENGL 199A. Writing in Film (3)
>ENGL 220. The Literary Heritage: English Masterpieces (3). General education introductory course. Introduces to the lower-division general student selections from the English masterpieces that constitute the literary heritage.

ENGL 223. Books and Ideas (3). Reading, discussing, and some writing about literature from all periods and cultures (fiction, poetry, drama, and essays). For non-English majors; not credited toward an English major or minor.

>ENGL 230. Exploring Literature (3). General education introductory course. Perceptive reading of literature in its major traditional periods and in its various genres (especially fiction, drama, and poetry). Deepens the appreciation and understanding of literature what it is, what it does, and how it does it. Readings are selected with careful attention to the needs and interests of non-English majors and a cultural rather than a technical approach is employed.

>ENGL 232. Themes in American Literature (3). General education introductory course. Instruction in perceptive reading through the study of representative works in American fiction, poetry, drama, and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Multimedia presentations (films, readings, and recordings), which are closely correlated to the representative works being studied, amplify the scope and range of literature per se.

>ENGL 252. Modern American Writers (3). General education further study course. A survey of important works by major American writers since World War I.

>ENGL 254. Modern British Literature (3). General education further study course. A survey of important works by major writers of the British Isles, including Ireland, in the 20th century.

>ENGL 272. Origins of the Western Literary Tradition (3). General education further study course. A study of the literary forms that first appear in classical and Biblical literature and reappear in the English literary tradition. Readings from mythology, the classics, and elected books of the Bible.

ENGL 274. The Language of Literature (3). An examination of the principles and problems of literary interpretation that are especially related to language structure.

>ENGL 275. Studies in Popular Literature (3). General education further study course. Cross-listed as ANTH 275. Studies various forms of popular literature (e.g., revolutionary literature, science fiction, western fiction, detective novel) emphasizing both the literary merit of the work and the way it reflects popular tastes and values. Repeatable for credit with change of content.

>ENGL 290. The Bible as Literature (3). General education further study course. 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.

Upper-Division Courses


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.

ENGL 310. The Nature of Poetry (3). 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.

>ENGL 320. The Nature of Drama (3). General education further study 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.

>ENGL 330. The Nature of Fiction (3). General education further study 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.

ENGL 336. Women's Personal Narratives (3). Cross-listed as WOM S 330. Explores the literary genre of the journal as practiced by both historical and modern women. Examines works by well-known diarists and little-known notebook keepers. Students complete in-class and out-of-class assignments and are encouraged to do daily work in a journal of their own. Prerequisites: ENGL 101 and 102.

>ENGL 340. Major Plays of Shakespeare (3). General education further study course. For students who wish to study the best work of Shakespeare's career in one semester. Students who take this course may take ENGL 515 once for credit.

ENGL 342. American Folklore (3). Cross-listed as ANTH 342. Survey of the types and functions of unwritten traditional materials in the United States, including beliefs, tales, jokes, folk music, customs, and crafts, including some ethnic varieties: the unwritten materials that form the uniqueness of American culture.

ENGL 343. Great Plains Literature (3). General education major study and perspectives 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. Prerequisites: ENGL 101 and 102.

>ENGL 345. Studies in Comparative Literature (3). General education further study course. Studies representative works in the western and ancient Near Eastern literary traditions emphasizing the contrastive relations between themes, types, and structures. Readings may be drawn from one or several periods and may include works of fiction, drama, poetry, epic, romance, satire, and other types.

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, Chicano/a, and immigrants from other cultures. Prerequisites: ENGL 101 and 102.

>ENGL 347. World Comparative Literature (3). Focuses on emergent, contemporary literatures written in or translated into English from Africa, Asia, Australia, the Pacific and the Americas. Texts may include novels, poetry, plays, essays, films and other forms of creative expression. Prerequisites: ENGL 101 and 102.

>ENGL 360. Major British Writers I (3). General education further study course. Covers the primary writers in British literature from the beginnings through the 18th century.

>ENGL 361. Major British Writers II (3). General education further study course. Covers the primary writers in British literature from the 19th century to the present.

>ENGL 362. American Writers of the 19th Century (3). General education further study course. Studies the major works in the different genres by important American writers of the 19th century as they relate to the growth of a national literature.

>ENGL 365. African-American Literature (3). General education further study course. A survey course; acquaints the student with 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. Prerequisites: ENGL 101 and 102.

>ENGL 398. Travel Seminar (3). A two-week travel course to Great Britain, including Ireland, Scotland, and Wales, focusing on the connection between literary works and the sites and landscapes that inspired them. Students are assigned readings when they enroll and are required to keep a literary journal. Prerequisite: ENGL 101 and 102.

>ENGL 400. The Literary Imagination: The Tragic, Comic, Heroic, Satiric Modes (3). General education further study course. Acquaints the general student with the major modes that have shaped the Western literary tradition. Focuses on the tendency of the imagination to construct different kinds of fictions that produce tragic pleasure from pain and suffering; comic pleasure from human folly; heroic pleasure from love, war, adventure; satiric pleasure from hypocris-
Also acquaints students with the nature of literary inquiry by approaching works from a variety of critical perspectives.

ENGL 421. Epic and Romance (3). Cross-listed as Honors 403. Readings in classic and early western European 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. 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 world view.

ENGL 450. Independent Reading (1-3). For majors and non-majors who wish to pursue special reading or research projects in areas not normally covered in course work. Repeatable for credit.

Courses for Graduate/Undergraduate Credit

ENGL 503. Studies in 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 transatlantic period, and the rise of western and regional literatures.

ENGL 504. Studies in American Literature II (3). Fiction, poetry, and drama from the late 19th century to the 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.

ENGL 512. Studies in Fiction (3). Subjects announced each semester. Repeatable for credit.

ENGL 513. Studies in Poetry (3). Subjects announced each semester. Repeatable for credit.

ENGL 514. Studies in Drama (3). Subjects announced each semester. Repeatable for credit.

ENGL 515. Studies in Shakespeare (3). Subjects announced each semester. Repeatable for credit, except by students who take ENGL 340. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 521. Readings in Medieval Literature (3). English and Continental literature, 12th to 15th century. Chaucer, Malory, the Pearl Poet, medieval lyric, drama, epic, romance, and saga. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 522. Readings in Renaissance Literature (3). Sidney, Spenser, Shakespeare (poetry), Donne, Jonson, Milton, and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 524. Readings in Restoration and 18th Century Literature (3). Swift, Pope, Johnson, and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 526. Readings in Romantic Literature (3). Blake; Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 527. Readings in Victorian Literature (3). Writers from Carlyle to Yeats studied in relation to political events and the social, scientific, and religious thought of the age. Prerequisites: junior standing and one college literature course, or instructor's consent.


ENGL 533. Studies in Contemporary Literature (3). Modern literature, primarily British and American, since 1950. Subjects announced each semester. Repeatable for credit.

ENGL 535. Literary Images of Women: Diverse Voices (3). Cross-listed as WOM S 535. Explores literature written in English by women of diverse ethnic, racial, class, and other backgrounds, as well as of varying sexual orientations, ages, and degrees of physical ability. Materials analyzed both as literary works and as expressions of women's differences from one another. World selected on their specific attention to the question of gender as it intersects with other elements of culture.

ENGL 536. Writing by Women (3). Cross-listed as WOM S 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.

ENGL 537. Contemporary Women's Drama (3). Cross-listed as WOM S 537. Examines contemporary plays by and about women to discover and explore the insights of various playwrights into the lives and roles of women. In addition to reading and analyzing plays, students write plays of their own.

ENGL 580. Special Studies (1-3). Topic selected and announced by the individual instructor. Repeatable for credit. Prerequisite: departmental consent.

ENGL 610. Old English (3). Cross-listed as LNG 610. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf, in the original. Some literature, including all of Beowulf, is read in translation, with attention to important literary and cultural features of the period.

ENGL 615. Chaucer (3). Chaucer's Canterbury Tales, Troilus and Cressida, and selected lyrics, with a few works by other late 14th century authors and some critical and historical studies. Focuses on close reading of Chaucer in Middle English. Prerequisites: junior standing and one college literature course, or instructor's consent.

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. Prerequisites: ENGL 101 and 102.

ENGL 750. Workshop (2-4). Repeatable for credit.

Courses for Graduate Students Only

ENGL 800. 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.

ENGL 817. Graduate Readings in 20th Century British Literature (3). Yeats, Joyce, Lawrence, Auden, Spender, and their contemporaries.

ENGL 821. Graduate Readings in American Literature I (3). From the beginnings to 1870 emphasizing Emerson, Thoreau, Hawthorne, Melville, Whitman and Dickinson.

ENGL 822. Graduate Readings in American Literature II (3). From 1870 to 1920 emphasizing James, Twain, Crane, Dreiser, Robinson and Frost.

ENGL 823. Graduate Readings in American Literature III (3). From 1920 to 1970, including Eliot, Stevens, Hemingway, Faulkner, and their contemporaries.

ENGL 825. Theories of Rhetoric: Classical (3). An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Emphasizes Isocrates, Plato, Aristotle, Quintilian, Cicero and Longinus.

ENGL 826. Theories of Rhetoric: Renaissance to Early Modern (3). Cross-listed as COMM 851. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analyzes the rhetorical systems associated with such figures as Augustine, Fenelon, Bolwer, Sheridan, Steele, Rush, John Quincy Adams, Blair, Campbell, and Whately.

ENGL 830. Graduate Studies in Drama (3). Selected topics in the history and nature of dramatic literature.

ENGL 832. Graduate Studies in Fiction (3). Selected topics in the development of the form and content of prose fiction.
ENGL 834. Graduate Studies in Poetry (3). Selected topics in forms, techniques, and history of poetry.

ENGL 840. Graduate Studies in Criticism (3). Selected topics in the theory and practice of literary criticism.

ENGL 841. Graduate Studies 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.

ENGL 845. Graduate Studies in a Major Author (3). Careful study of the works of a major author with readings in secondary sources; reports, discussions, and papers. Repeatable for credit with change of content.

ENGL 855. Directed Reading (2-3). For graduate students who want to pursue special research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

ENGL 860. Graduate Seminar (1-3). Intensive study of selected texts, writers, or literary problems. Seminar discussions, reports, and research projects. Repeatable for credit with departmental consent.

ENGL 870. Master's Essay (2-3).

Environmental Science
WSU offers an interdisciplinary Master of Science degree program in environmental science. This graduate program educates scientists in a multidisciplinary approach (involving primarily biology, chemistry, and geology) rather than from the perspective of a single discipline. For more information, consult the WSU Graduate Bulletin.

In preparation for entry to the graduate program in environmental sciences, students may complete an undergraduate program using one of a variety of degree designs. See the LAS Advising Center for assistance.

Ethnic Studies
See Community Affairs, School of.

Film Studies
The film studies minor at Wichita State University is designed to provide students interested in film and the visual media with a focused sense of the possibilities, limitations, and actual accomplishments of the visual media as they have, in fact, developed. The minor also offers opportunities to study film as an art form and to gain experience in media production. The film studies minor consists of 18 semester hours from the courses listed below, selected with the approval of the coordinator of film studies.

Certificate in Film Studies
The Certificate in Film Studies requires English 199A, Writing About Film and 15 additional semester hours in any film-oriented courses from any department and disciplines that offer such courses. The Certificate is offered both for those students seeking employment in some aspect of film or film criticism or for those wishing to improve their understanding of film.

Wichita State University does not at this time offer a film studies major. However, the minor can prove useful to students majoring in literature, journalism, and speech; it also can appeal to those in fields where some knowledge of mass communication as a cultural phenomenon is desirable, including sociology, history, anthropology, psychology, education, administration, and American studies.

Students seeking more information about the film studies minor should contact Dr. Christopher Brooks in the Department of English.

Courses approved for the film studies minor are:

- HIST 106, The Way It Was: Western Civilization in Film
- COMM 220, Introduction to Film Studies
- ART G 231, Basic Photography (Motion Picture)
- ENGL 199A, Writing in Film
- ENGL 307, Narrative in Literature and Film
- COMM 320, Cinematography
- ART G 430, Television for Graphic Design
- COMM 304, Studio Video Production
- COMM 604, Field Video Production
- ENGL 308, Critical Studies in Film
- WOM S 480A, Hollywood Melodrama: The Women's Film
- WOM S 523, Feminist Film Criticism
- ANTH 150, American Culture in Film
- POL S 390V, Topics in Film (film topic varies)
- HIST 499, The Holocaust in Film
- SPAN 515, Classic Spanish Films

Certification in Film Studies
The Certificate in Film Studies requires English 199A.

GEOG 150. Workshop in Geography (1-4). Short-term courses focusing on geographical problems. Prerequisite: instructor's consent.

> GEOG 201. Physical Geography (3). 2R; 3L. General education introductory course (natural science). Lab fee. Emphasizes the physical basis of geography, including climate, terrain, soils, landforms, and the seas; economic resources; cartographic elements; introduction to regional studies. Field trips are required at the option of the instructor.

> GEOG 210. Introduction to World Geography (3). General education introductory course (social science). A general survey of world geography including an analysis of the physical, political, economic, historical, and cultural geography of the world's 11 regions.

> GEOG 235. Meteorology (3). 2R; 2L. General education further study course (natural science). Lab fee. An 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: instructor's consent.

Upper-Division Course

GEOG 311. Climatology (3). Cross listed as GEOG 311. A study of the average weather around the world. Fundamentals in climatology will be presented with an emphasis on applying them to climatology. Emphasis on world climate regions, causes of climate variation, and the effects of climate on the environment. This course is designed for those with little or no background in math or science. Prerequisite: GEOG 239 or instructor's consent.

Courses for Graduate/Undergraduate Credit

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 an in-depth study and analysis. Prerequisite: instructor's consent. May not be taken if credit has been received for GEOG 210.

> GEOG 330. Geography of Latin America (3). General education further study course (social science). Physical, political, economic, historical, and human geography of Latin America.

> GEOG 542. Geography of Europe (3). General education further study course (social science). Physical, political, economic, historical, and human geography of Europe.

GEOG 695. Special Studies in Geography (1-3). 3R or 2R; 3L. 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: junior standing.

French
See Modern and Classical Languages and Literatures.

Geography (GEOG)

Only courses 201, 235 and 311 are intended as physical science courses. All other geography courses are intended as social science offerings.

Geography Minor. A minor in geography consists of at least 15 hours including GEOG 125 or 201 or the equivalent.

Lower-Division Courses

Geology (GEOL)

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 a Master of Science (MS) degree in geology and, in conjunction with the departments of biological sciences and chemistry, an MS degree in environmental science. For more information about the graduate programs, see the Graduate Bulletin.

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 co-sponsor extra-curricular activities as field trips, visiting lecturers, short courses, attendance at academic conferences, and social gatherings.

Geology Major—BA. The BA degree program, providing flexible, broad training in the Earth sciences, is for students who wish to combine the geology major with another preparation (K-12), environmental studies, and 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 experience. This program represents a minimum deficiency. Students are strongly advised to elect additional courses in geology and supporting sciences if they are interested in pursuing graduate studies in the sciences after earning the BA.

A major with the BA requires a minimum of 30 hours in geology, including:

1. Required core courses—24 hours
   GEOL 102, Earth Science and the Environment, with lab (4) or
   GEOL 111, General Geology (4)
   GEOL 302, Earth and Space Sciences (3)
   GEOL 312, Historical Geology (4)
   GEOL 320, Mineralogy and Optical Mineralogy (4)
   GEOL 526, Sedimentary Geology (3)
   GEOL 544, Structural Geology (3)
   GEOL 545, Field Mapping Methods (2)
   GEOL 546, Structural Geology (3)
   GEOL 552, Physical Stratigraphy (3)
   GEOL 570, Palaeontology (3)
   Required capstone course: GEOL 640, Field Geology (6)

2. An additional 11 hours of upper-division electives chosen from the Catalog listings for geology to match the student's career interests and in consultation with an advisor from the geology department. An additional elective capstone course is GEOL 650, Geohydrology (3).

3. Required supporting sciences:
   MATH 242 and 243, Calculus I and II (10)
   STAT 370, Elementary Statistics (3)
   CHEM 111 and 112, General and Inorganic Chemistry (10)
   PHYS 213 and 214, General College Physics I and II (10) or PHYS 313 and 314.
   University Physics I and II (8)

It is recommended that these 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 science should also consider taking BIOL 210 and 418. CS 105 is recommended for students with little experience with computers.

Minor. A minor in geology consists of at least 15 hours of geology including GEOL 102 (with lab for 4 credit hours) or GEOL 111. 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.

Lower-Division Courses

GEOL 102. Earth Science and the Environment (3). 3R, or (4). 3R; 2L. General education introductory 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. GEOL 102 (4) 3R; 2L is recommended for students desiring general education credit for a natural science laboratory experience. Credit not allowed in both GEOL 102 and 111.

GEOL 111. General Geology (4). 3R; 2L. General education introductory course. An overview of the earth, the processes, and the origin, composition, materials, structure, landforms, and history; 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.

GEOL 235. Meteorology (3). 2R; 2L. General education further study course (physical science). Lab fee. An 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: Instructor's consent.
Upper-Division Courses

>GEOL 300. Energy, Resources, and Environment (3). General education issues and perspectives 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. Prerequisite: Any introductory course in biology, chemistry, geology, or physics.

>GEOL 302. Earth and Space Sciences (3). General education further study course. A general survey of the physical environment, including elements of geology, geography, meteorology, climatology, oceanography, and astronomy. May require field trips.

>GEOL 310. Oceanography (3). General education further study 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 311. Climatology (3). Cross-listed as GEOG 311. A study of the average weather around the world. Fundamentals of meteorology will be presented with an emphasis on applying them to climatology. Emphasis on world climate regions, cause of climate variations, and the effect of climate on the environment. This course is designed for those with little or no background in math or science. Prerequisite: GEOG 255 or instructor's consent.

>GEOL 312. Historical Geology (4). 2R; 2L. General education further study 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: GEOL 102 or GEOG 312 or equivalent.

>GEOL 320. Mineralogy and Optical Mineralogy (4). 1R; 6L. 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. Prerequisites: GEOL 102 or 111 or GEOL 320 or equivalent.

>GEOL 324. Petrology and Petrography (3). 1R; 6L. The origin, distribution, occurrence, description, and classification of igneous, metamorphic, and sedimentary rocks with laboratory emphasis on their hand-sample and optical (thin-section petrographic) recognition. Prerequisite: GEOL 320.

>GEOL 410. Honors in Geology (3). Senior thesis for departmental honors. The independent study project on a topic of the student's choice must be original research or creative work. Repeatable to a maximum of 6 credit hours. Prerequisite: acceptance by the Emory Lindquist Honors Program and departmental approval.

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.

Courses for Graduate/Undergraduate Credit

GEOL 526. Sedimentary Geology (3). 2R; 3L. Origin, classification, primary structures, and physicochemical processes controlling deposition of sedimentary rocks. Reviews diageneis of carbonate rocks and evaporites. Includes an survey of modern and ancient depositional environments and petrographic study of sedimentary rocks in thin sections. May require field trips. Prerequisite: GEOL 102 (with lab) or 111.

GEOL 540. Field Mapping Methods (2). 6L. Field mapping methods with special reference to use of level, compass, barometer, altimeter, and airphotos. Field trips required. Prerequisite: GEOL 102 (with lab) or 111 or GEOL / GEOG 201.

GEOL 554. Structural Geology (3). 2R; 3L. 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. Prerequisites: MATH 112 or 123; GEOL 312; and GEOL 324 or 526.

GEOL 552. Physical Stratigraphy (3). 2R; 3L. Description, classification, methods of correlation, and determination of relative ages of stratigraphic rocks; units, stratigraphic principles and their practical importance in use of biostratigraphy; the nature of cyclic sedimentation and controls on deposition; elements of sequence stratigraphy; measurement and correlation of stratigraphic sections in outcrops. Requires field trips. Prerequisites: GEOL 312 and 526.

GEOL 560. Geomorphology and Land Use (2). General education further study course. Identification of landforms, 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: GEOL 102 or GEOL / GEOG 201.

GEOL 562. Regional Geology of the United States (2). A detailed regional survey of the general geology, geomorphology, and structural geology of the U.S., including its national parks, and their interrelationships. Requires field trips (instructor's option). Prerequisite: GEOL 102 or GEOL / GEOG 201.

GEOL 564. Remote Sensing Interpretation (3). 2R; 3L. 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: GEOL 102 or 111 or GEOL / GEOG 201.

GEOL 570. Biogeology (3). 2R; 3L. General education further study course. Systematic survey of major fossil biogeochemical materials: analysis of the origin and evolution of life, and paleoecological interpretation of ancient environments and climates. Includes hand lens and binocular microscopic examination of major fossil biogeochemical materials. Includes application of analyzed fossil data to the solution of problems in biogeochronology, paleoecology, paleoclimatology, and paleoecology. Gives examples from fields of invertebrate, vertebrate, and microfaunal and palynology. May require museum and field trips. Prerequisite: GEOL 312.

GEOL 574. Special Studies in Paleontology (3). 2R; 3L. General education further study course. A systematic study in the selected areas of biogeochemistry 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 602. Laboratory Methods in Geology (1). Methods of data collection and analysis of geologic samples; special instruction in the use of (a) scanning electron microscope; (b) X-ray diffractometry; (c) atomic absorption spectrophotometry; (d) cathodoluminescence petrography; and (e) other instrumentation. Repeatable for credit. Prerequisite: GEOL 312, 320; or instructor's consent.

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 through time; and their importance in the environment. Prerequisites: GEOL 102 (with lab) or GEOL 111 and CHEM 111; or instructor's consent.

GEOL 630. Field Studies in Geology (2-6). (A) Geology of Kansas (1-3); (B) Geology and Natural History of Tropical Marine Environments (C). Off-campus, systematic field study in a selected area of geologic significance. Course given upon demand; repeatable for credit when demand and content differ. Where appropriate, travel, lodging, and board costs are charged. Prerequisite: 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. Prerequisites: GEOL 324, 540, 544, and 552.

GEOL 650. Geohydrology (3). 2R; 3L. 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. Prerequisites: GEOL 552, MATH 242 and 243; or instructor's consent.

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: senior standing and department chairperson's permission.

GEOL 678. Geologic Perspectives on Climatic Change (3). Capstone course. Modern climate and climatic changes and analysis of climatic deterioration; systematic study of geologic evidence of climate change through time. Emphasizes theoretical causes, feedback mechanisms, and recognition of effects on climatic perturbations in the rock record. Prerequisites: GEOL 312 and 526.

GEOL 680. Geologic Resources and the Environment (3). 2R; 3L. Occurrence and origin of metallic and nonmetallic economic mineral deposits; laboratory examination of ores and industrial minerals. Occurrence and supply, regeneration, and future demand for water and soil resources; and fossil and nuclear fuels. Studies environmental aspects of resource exploitation and use, generation and disposal of waste, environmental hazards, and reclamation. May require field trips. Prerequisite: GEOL 324.

GEOL 682. Petroleum Geology (3). 2R; 3L. 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. Prerequisites: GEOL 526 and 552.

GEOL 684. Methods of Subsurface Analysis (2). 1R; 3L. 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. Prerequisites: GEOL 312, 526, and 552; or instructor's consent.

GEOL 690. Special Studies in Geology (1-5). 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: instructor's consent.

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) palaeontology, (f) economic geology, (g) sedimentation, (h) stratigraphy, (i) geophysics, and (j) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

GEOL 702. Environmental Science I (5). 3R; 4L. Cross-listed as BIOL 702 and CHEM 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. The laboratory portion addresses local environmental problems from a risk assessment perspective. GEOL 702 and 723 (or equivalent) are required for all graduate students in the master's of environmental science program. Prerequisite: acceptance in the master's of environmental program or instructor's consent.

GEOL 703. Environmental Science II (5). 3R; 4L. Cross-listed as BIOL 765 and CHEM 765. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic microbial biochemistry, environmental biochemistry, water treatment, photochemical smog, and hazardous waste chemistry. The laboratory portion addresses local environmental problems from a risk assessment perspective. GEOL 702 and 703 (or equivalent) are required for all graduate students in the master's of environmental science program. Prerequisite: GEOL 702 or instructor's consent.

GEOL 704. Environmental Science Colloquium (1). Cross-listed as BIOL 704 and CHEM 704. Students in the master of environmental science program are required to enroll two semesters during their program of study. Includes presentations by guest speakers and required readings for class discussion. May also include student involvement in environmentally related community groups and projects. Graded S/U only. May be repeated for up to four hours credit.

GEOL 706. Environmental Science Internship (3-6). Cross-listed as BIOL 706 and CHEM 706. Students in the master's program in environmental science may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internship projects with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: Environmental Science I and II.

GEOL 720. Geochemistry (3). The chemistry of natural aqueous solutions and their interaction with minerals and rocks; thermodynamics and kinetics of reactions; emphasis on application to sedimentary environments and environmental problems. Requires some laboratory work. Prerequisites: GEOL 324 and Chem 112 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 725. Clay Mineralogy (3). 2R; 3L. An evaluation of compositional and structural elements of clay-mineral families, related phyllosilicates and associated diagenetic authigenic minerals in sedimentary environment. Also laboratory identification and classification of minerals by x-ray powder diffraction and thermal analysis. Prerequisite: GEOL 526.

GEOL 726. Carbonate Sedimentology (3). 2R; 3L. 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. Prerequisites: GEOL 526, 552, or equivalents.

GEOL 727. Carbonate Diagenesis (3). 2R; 3L. Analyzes diagenesis of carbonate sediments and rocks. Includes mineralogic stability in natural waters, meteoric, marine and deep-burial diagenesis, diagenesis processes and products, trace-elements and isotopes as diagnostic tools, cathodoluminescence and X-ray diffraction studies of carbonates; origin and porosity. Prerequisite: GEOL 726 or instructor's consent.

GEOL 730. Perspectives: Geoscience and the Environment (3). A perspective of global issues of geo-environmental concern with regard to past, present, and future exploitation, use, and availability of earth's resources; marine and terrestrial pollution and resource use; water, minerals, and fuel resources; population growth and resource availability; the Greenhouse effect, global climatic change, and sea level rise and their effects on populations; future trends in environmental management and remediation of environmental problems of geologic scope. Prerequisite: GEOL 312, 680, 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 evaluation of sedimentary facies systems and hydrocarbons maturation history. Includes compilation of existing data to determine geologic evolution of basins. Prerequisites: 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 7-day field trip. Prerequisites: GEOL 312, 526, and 726.

GEOL 750. Workshop in Geology (1-3). Short-term courses with special focus on geological problems. Prerequisites: graduate standing and/or instructor's consent.

GEOL 751. Advanced Geohydrology (3). Integrations of practical and theoretical coverage of subsurface fluid flow as applied to shallow aquifers. Cover the mass transport in both the saturated and vadose zones as well as the occurrence and movement of non-aqueous 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 chemistry. Computer simulation models used whenever practical along with detailed analysis of case histories, including those related to environ-
mental geoscience. Prerequisite: GEOL 650, 681, MATH 344, 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; and seismic reflection techniques. Prerequisites: completion of geology undergraduate math and physics requirements; MATH 344 or 555; GEOL 324 and 544; and 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; and the application of linear and non-linear discriminate analysis, various factor analytic techniques, hard and fuzzy clustering, linear and non-linear unmixing analysis, and other forms of data modeling. Prerequisites: GEOL 681 or equivalent; competence in one or more high level computer languages, MATH 344 or 555, and instructor's consent.

Courses for Graduate Students Only

GEOL 800. Research in Geology (3). 9L. Research in special areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (h) stratigraphy, (i) geophysics, and (k) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

GEOL 808. History of Geology (1-5). Selected events and personalities in geology that have led to our present understanding of geology's place in science. Prerequisite: instructor's consent.

GEOL 810. Advanced Graduate Studies in Geology (1-6). Systematic study in a selected topic of professional or applied geology. Course given upon demand; repeatable for credit when content differs. May require field trips. Prerequisites: graduate standing, instructor's consent, and two years of professional postgraduate practice in geology.

GEOL 821. Special Studies in Geochemistry (3). A systematic study in selected areas of geochemistry. Content differs upon demand to provide in-depth analysis in fields of (a) sedimentary carbonate and silicate geochemistry and mineralogy, (b) organic geochemistry, (c) high pressure and temperature thermodynamics of Earth materials, (d) exploration geochemical geochemistry, (e) exogenic geochemical cycling, (f) stable isotope geochemistry. May be repeated for credit to cover all six areas listed. May require some laboratory work. Prerequisite: GEOL 720 or instructor's consent.

GEOL 823. Igneous and Metamorphic Petrology (3). 18; 6L. Mineral paragenesis, bulk chemical compositions, physical chemical relationships, textures, structures, origins, and classifications of igneous and metamorphic rocks. Thin-section studies to facilitate rock identifications and the determination of petrogenetic relationships. May require field trips. Prerequisite: instructor's consent.

GEOL 826. Sedimentary Petrology (3). 2R; 3L. Detailed study of sedimentary rocks and their origins. Facilitates determinations of mineral compositions, textures, structures, fabrics, and petrogenetic relationships by the use of thin sections, peels, and geochemical analyses. May require field trips. Prerequisite: GEOL 526.

GEOL 830. Field Studies in Geology (2-6). Off-campus systematic field study in a selected area or region of geologic significance. Course given upon demand; repeatable for credit when locality and content differ. Where appropriate, travel, lodging, and board costs are charged. Prerequisite: instructor's consent.

GEOL 846. Geotechnics (3). Physical and geological principles of crustal deformation and tectonic interpretation. Studies the relationship of interior earth processes to crustal deformation with special reference to global tectonics. May require field trips. Prerequisite: instructor's consent.

GEOL 852. Field Stratigraphy (3). 2R; 3L. Advanced concepts and principles of stratigraphic analysis and interpretation emphasizing original sources and current research investigations. Required field work and field trips. Prerequisites: GEOL 544 and 552 or instructor's consent.

GEOL 860. Special Topics in Geophysics (3). Systematic study in one or more selected topics of theoretical and applied geophysical techniques. Emphasizes applications of state-of-the-art concepts and principles to problems of regional to global significance. Potential topics include seismic stratigraphy, vertical seismic profiling, reservoir petrophysical response estimation, shallow aquifer geophysical modeling, geophysical basin modeling, and regional and global environmental modeling. Prerequisites: GEOL 681, 760; MATH 344 or 555; or instructor's consent.

GEOL 870. Advanced Biogeology (3). 2R; 3L. Palaeoecological reconstruction of ancient plant/animal communities and environments emphasizing community structure, biogeography, synthesis of total raw data, and problem solving. May require field trips. Prerequisite: a course in biogeology or equivalent.

GEOL 881. Special Topics in Numerical Geology (3). Systematic study in one or more topics of theoretical and applied quantitative analysis appropriate for environmental and geological research. Emphasizes applications of state-of-the-art concepts and principles to problems of regional to global significance. Potential topics include quantitative shape analysis, petrographic image analysis, multi-variable linear and non-linear un-mixing, extrapolation and interpolation techniques, quantitative isotope chronostratigraphic techniques, modeling global phenomena, and simulations of multi-phase flow in aquifers and reservoirs. Prerequisites: GEOL 681, 781, and Math 344 or 555; or instructor's consent.

GEOL 890. Thesis (1-6). Prerequisite: departmental consent.

German, Greek
See Modern and Classical Languages and Literatures.

Gerontology
See Community Affairs; School of.

History (HIST)
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 assure 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, communications, and public affairs.

Major: A major in history requires the successful completion of a minimum of 33 hours. All majors complete HIST 200 and 207; 5 credit hours of either either HIST 100, 101, or 102; 3 credit hours of either HIST 105 or 132; and a minimum of 15 upper-division (300-level or above) hours, including at least 3 hours from each of the following areas: ancient and medieval history, modern European history, or American history (including Latin America).

Minor: A minor in history requires students to complete a total of 15 hours in history. Only 6 of these hours may be lower-division (100- and 200-level) courses. Students who complete the minor are limited to 6 hours of HIST 310.

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 Education for program planning beyond the requirements of the history major.

Lower-Division Courses

>HIST 100. The Human Adventure: World Civilization Since 1500 (3). General education introductory course. An 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.

>HIST 101. History of Western Civilization to 1648 (3). General education introductory course. Examines the development of Western Civilization and Culture from its origins in the Ancient Near East to the Reformation. Pays attention to the people, cultures, and ideas which contributed to the growth of the societies of Western Europe.
HIST 102. History of Western Civilization since 1648 (3). General education introductory 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 103. World Civilization to 1500 (3). Introduces great world civilizations before 1500, both western (Near East, Greece, Rome, and 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.

HIST 110. Russian Studies (3). Cross-listed as RUSS 110 and POLS 110. Taught-by-faculty from history, political science, and modern and classical languages and literatures. Prepares students wishing to pursue additional courses and/or programs in Russian history. Russian language and literature, Russian government and politics, and/or international relations, including business. Covers medieval, czarist, Soviet, and present-day (post-Soviet) Russia.

HIST 131. History of the United States: Colonial to 1865 (3). General education introductory 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 “happies” 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 introductory 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 WW I, WW II, Korea, and Vietnam—continue to affect Americans and present a challenge to democracy within a growing diverse population that tests traditional institutions.

HIST 150. Workshop in History (2-3).

HIST 220. Media Courses in History (2-3). Courses created or coordinated by the Department of History which are offered through various media: radio, television, and newspaper. Areas of historical emphasis vary from course to course.

HIST 225. Your Family in History (3). 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.

Upper-Division Courses

HIST 300. Introduction to Historical Research and Writing (3). Basic “hands-on” introduction to historical research methodology, writing, and criticism. Students do individual research and write article and book reviews, a lengthy research paper, and critiques of their colleagues’ papers drafted. 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 further study course. An examination of the major social and political events of the turbulent twentieth 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 issues and perspectives course. A comparative examination of lost civilizations of both the Old World and New World, including the Sumerians, Hittites, Minoans, Mycenaeans, Etruscans, Mayans, Moche-Daro, Klymery, Incas, Mayas, and Aztecs.

HIST 310. Special Topics in History (2-3). Repeatable twice for credit. Prerequisite: departmental consent.

HIST 311. Colonial Latin America (3). General education further study course. Explores the pre-Columbian civilizations in the New World, Spanish and Portuguese exploration and colonization, the consequences of contact between Europeans and Americans, and forces that set in place the drive for independence in the early 19th century.

HIST 312. Modern Latin America (3). General education further study course. Begins with the war for independence, continues with the challenges to achieve nationalhood, and concludes with an examination of major social, political, and economic issues Latin America nations faced in the 20th century. Roles of Bolivar, Santa Anna, Evita, and Castro are key components.

HIST 314. English History (3). General education further study courses. English History: from the beginning of the Stuart period to the present.

HIST 315. Modern German History (3). General education further study course. Surveys German history from the end of the Napoleonic era in 1815 to the fall of the Berlin Wall in 1989.

HIST 316. The Jewish Experience in Christian Europe (3). Introductory survey course. Exposes students to some of the main themes in the history of Jewish civilization in Western culture and society from the early Middle Ages to the present.

HIST 317. The Holocaust (3). General education further study course. Investigates the conditions within European society which led to and ultimately culminated in the murder of approximately 6 million Jews.

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 further study course. A survey of Russian history from 862 A.D. to the present.


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 and an introduction to the tools and techniques that historians use to present historical research in non-academic settings.


HIST 332. Ethnic America, ca. 1500-1924 (3). General education further study course. Cross-listed as ETH S 330. An introduction to the history of 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.

HIST 333. Ethnic America in the Twentieth Century (3). General education further study course. Cross-listed as ETH S 334. An in-depth study of the ethnic experience in the 20th century. Major historical topics include identity formation, inter-generational conflict, class differentiation and social mobility, the politics of ethnicity, resistance and civil rights movements, the racialization of immigration laws, and transnationalism.

HIST 339. Religion in America (3). Cross-listed as REL 339. Surveys various religious traditions in American history from colonial times to the present. Discusses how religious 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 America; and the impact of Native American, Asian, and African beliefs and practices on the religious landscape.

**HIST 340. World War II (3).** General education further study course. An introduction to the background and causes of World War II, as well as the military dynamics, political, 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 villains, and its impact on society and culture.

**HIST 349. The Greek World (3).** Surveys Greek history and culture from the Minoans to the Roman Conquest.

**HIST 357. Women in the Ancient World (3).** General education further study course. Examines the mythology 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 matrarchy to the Christian era. Investigates the influence of these cultures on our own.

**HIST 504. Civil War (3).** General education further study course. This class explores the course of the bloodiest war this nation has ever fought. Students will study antebellum America, focusing on the sectional differences between North and South, the institution of slavery, and the abolitionists' crusade; and the battlegrounds of the Civil War.

**HIST 505. The United States, 1865 to 1900 (3).** Covers the development of America's political, social, and cultural dimensions of the late 19th century. Includes industrialism, the frontier, the city, immigration, race, class, culture, empire, gender, and reform.

**HIST 507. The United States, 1900-1945 (3).** General education further study course. Major topics explored in this class 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, it is also characterized by the enormous changes and transformations that have shaped our modern society. An examination of political leadership will be a major component of this course. The emphasis, however, will be "history from the bottom up" as we examine the lives of ordinary Americans.

**HIST 508. The United States Since 1945 (3).** General education further study course. In this 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 profound social, economic, and political repercussions in the United States. This course covers major issues and events of the period with a focus on the local level, the regional level, the national level, and the international level. The Civil Rights Movement, and the growth of the imperial presidency.

**HIST 511. Women in Early America, 1600-1830 (3).**

**HIST 512. Women and Reform in America, 1830-present (3).**

**HIST 515. Economic History of the United States (3).** Cross-listed as ECON 627.

**HIST 516. History of American Business (3).** General education further study course. A history of American business enterprise from colonial times to the present, emphasizing the impact of the industrial age since the Civil War, on case studies of individual firms, on biographies of business people, and on the social and political impact of business.

**HIST 517 & 518. Constitutional History of the United States (3 & 3).** General education further study courses. 517: the evolution of the American constitutional system from English and colonial origins through the Civil War. 518: American constitutional development from Reconstruction to the present.

**HIST 521. Diplomatic History of the United States to 1914 (3).** General education further study 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. The focus will be on the movement toward independence, territorial expansion across the continent, the Civil War and the emergence of America as a world power.

**HIST 522. Diplomatic History of the United States Since 1900 (3).** General education further study course. This course examines American diplomatic history during the twentieth century; that is, from the era of Theodore Roosevelt and the "Big Stick" through the presidency of Bill Clinton. This was a period when the United States emerged as a major player in global affairs, engaged in numerous conflicts, waged a cold war against the "evil empire" of the Soviet Union, and ultimately stood alone as the world's only economic and military "super power."

**HIST 525. American Military History (3).** General education further study course. This course surveys the American military experience and its role in shaping the modern United States. Students will study the history of warfare from frontier conflicts during the colonial period through the Civil War, 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 528. History of Wichita (3).** 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).** Cross-listed as WCM 530. Examination of the history, status, and changing role of women in American society.

**HIST 531. American Environmental History (3).** General education further study course. Examines the historical, physical, economic, scientific, technological, and industrial interactions of the peoples of America with their environment. Emphasizes the period, 1800-present.

**HIST 532. Women in Ethnic America (3).** Cross-listed as ETH S 532 and WCM S 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.

**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 suburban political and ecological adjustments; and the influence of new technology and forms of business organization.
HIST 534. History of the Old South (3). General education further study course. Examines Southern civilization prior to the American Civil War.

HIST 535. History of Kansas (3). General education further study 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 further study 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.

HIST 537. The Trans-Mississippi West (3). Spanish, French, and Anglo-American penetration and settlement west of the Mississippi River from the 16th century to about 1900.

HIST 538. The American West in the Twentieth Century (3). General education further study 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 further study course. History of the major trends in French history from Napoleon to De Gaulle emphasizing French attempts to adjust politically, socially, economically, and culturally to the changing conditions of modern industrial society.

HIST 543. History of Mexico (3). General education further study course. Pre-Columbian Mesoamerica; the Spanish conquest and the colonial period; the independence movement; Juarez, the Reform, and the French intervention; the Porfiriato; the Mexican Revolution; Mexico in recent years.

HIST 558. The Ancient Near East (3). General education further study course. Political and cultural history of ancient Mesopotamia, Iran, Egypt, Palestine, Syria, and Asia Minor to the death of Alexander the Great.

HIST 559 & HIST 660. Greek History (3 & 3). General education further study courses. 559: the Hellenic world from prehistoric times to the end of the Peloponnesian War. 660: the 4th century and the Hellenistic period.

HIST 562 & HIST 563. Roman History (3 & 3). General education further study courses. 562: the Roman Republic. 563: the Roman Empire.

HIST 566 & HIST 567. Medieval History (3 & 3). General education further study courses. 566: the history of Europe from the fall of the Roman Empire through the Crusades, 500 to 1200. 567: history of Europe, 1200 to 1500.

HIST 568. Social, Economic, and Intellectual History of the Middle Ages (3). Examines fundamental themes in the development of the social, economic, and intellectual history of the Middle Ages, emphasizing the rise of cities, universities, scholastic thought, diverse patterns of daily life, and economic activities of the Middle Ages.

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 become the English will receive particular attention.

HIST 575. The Italian Renaissance (3). General education further study course. Italian history from the 14th through the 16th centuries emphasizing cultural achievements.

HIST 576. The Reformation (3). General education further study course. Cross-listed as REL 476. The great religious changes in the 16th century in the political, social, and intellectual contexts.

HIST 577. Medieval Women (3). Deals with the lives and accomplishments of Christian women in Late Antiquity and the Middle Ages.

HIST 581. Europe, 1789-1870 (3). General education further study 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 further study 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 588. History of Early Russia (3). General education further study course. Covers the social, political, and cultural history of Kievan and Muscovite Russia.

HIST 589. History of Imperial Russia (3). General education further study course. A survey of the political, social, and cultural history of Imperial Russia.

HIST 592. History of the Soviet Union (3). General education further study course. A survey of Soviet history from the Bolshevik Revolution to the present.

HIST 593. Former Soviet Union (3). General education further study course. An examination of 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 613. European Diplomatic History (3). General education further study course. European international politics and diplomatic practices, emphasizing the actions of the great powers and their statesmen. Versatile settlement, totalitarian aggression, appeasement, World War II, the cold war, and decolonization of Southeast Asia and the Middle East as prelude to major power involvement.

HIST 639. Religion in America (3). Covers major trends in American religious history focusing on the scholarly issues related to the study of these subjects. Students explore such subjects as religious awakenings, fundamentalism, pentecostalism, and rationalism and examine how historians have studied and disagreed over these topics.

HIST 698. Historiography (3). Review of the major schools of historical thought, philosophies of history, and eminent historians from the ancient world to the present. Required of history majors.

HIST 701. Introduction to Public History (3). Introduces the various areas of public history including historic preservation, archival administration, museum studies, litigation support, and corporate history. Students learn the philosophies, techniques, and practices that comprise the field and ways these areas interact with their academic training. Prerequisite: 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: 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: 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: 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: graduate standing and/or instructor's consent.

HIST 725. Advanced Historical Method (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. Prerequisite: departmental consent.

HIST 727. Readings in History (3). Readings in ancient, medieval, modern, European, and American field bibliographies. Repeatable for credit. Prerequisite: departmental consent.

HIST 729. Seminar in American History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 730. Seminar in American History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 733. Seminar in European History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 734. Seminar in European History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 750. Workshop in History (1-3). Repeatable for credit but does not satisfy requirements for history majors.

HIST 781. Cooperative Education in History (1-2). Graduate history students participate in internship experiences through the Cooperative Education program. Augments HIST 803. Prerequisite: instructor's consent.

Courses for Graduate Students Only

HIST 801. Thesis Research (2).

HIST 802. Thesis (2).

HIST 803. Internship in Public History (1-2). Public history students practice their skills in summer or semester internships. Type and level of responsibility vary depending on student's interests and work setting. Internship should be in area related to student's MA thesis. Prerequisites: HIST 701 and consent of public history faculty.

HIST 810. Special Topics in History (1-3). Repeatable for credit to a maximum of 6 hours.

Interdisciplinary Liberal Arts and Sciences Program (LAS-I)

Fairmount College is the home for interdisciplinary courses and programs. Among those are academic service courses such as Introduction to the University, Adult Seminar, Topics in Career Exploration, and Inquiry in Liberal Arts and Sciences. 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 course work from several departments around a unique area—Great Plains Studies—is also offered through LAS-I. Further, the foundation courses for the Master of Arts in Liberal Studies are part of the LAS-I range of course work. More information about LAS-I, its courses, and its programs may be obtained through the LAS Advising Center.

Certificate in Great Plains Studies

Fairmount College offers a Certificate in Great Plains Studies, an interdisciplinary program for undergraduate and graduate 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. Non-degree adults can earn the certificate for professional or personal enrichment.

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 hours of course work 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.

Students complete 20 hours of course work, including three required courses (LAS-I 201, 202, and 510) with the remaining courses selected from these designated courses: ANTH 612, ANTH 613, BIOL 503, BIOL 574, ENGL 434, ETHS 332, ETHS 380, GEOL 562, GEOL 570, HIST 535, and HIST 536.

Lower-Division Courses

LAS-I 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.

LAS-I 10A. Adult Seminar (1). A special class for adults who have been out of school one year or more. Helps adults learn more about themselves and about the Wichita State University. Covers career information, interest testing and interpretation, educational planning, and other activities. Offered Cr/NC only.

LAS-I 101. Introduction to the University (3). Helps students make connections with academic programs, faculty, staff, and other students; develop required academic and career competencies; and make sense of the higher education environment.

LAS-I 102. Topics in Career Exploration (2). When applicable, will focus on career development theories. Uses various assessments and exercises to explore values, interests, and skills that 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. Offered Cr/NC only.

LAS-I 150. Workshop: Special Topics (1-3). Meets identified needs of specific audiences. Offered Cr/NC only.

LAS-I 190. Inquiry in Liberal Arts and Sciences (3). Introduces the liberal arts and sciences as the foundation of the university education. Team taught by faculty from the humanities, social sciences, and natural sciences. Topics of general interest from various disciplinary perspectives and ways of knowing. Students gain insights which may guide them towards majors, areas of concentration, and their own pursuit of understanding.

LAS-I 201. Introduction to Great Plains Studies (3). For students pursuing the certificate in Great Plains Studies. Acquaints students with the Great Plains region—its physical characteristics and historical and contemporary issues which concern scholars and residents of the region. Students read and discuss texts focusing on the Great Plains from various disciplinary perspectives. Prerequisite: admission to Great Plains Studies certificate program or instructor's consent.

LAS-I 281. 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. Offered Cr/NC only.

Upper-Division Courses

LAS-I 300. Global Issues (3). General education issues and perspectives 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, poverty 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.

LAS-I 350. Workshop: Special Topics (1-3). Meets identified needs of specific audiences.

LAS-I 390. Liberal Arts and Sciences Issues and Perspectives (3). Offers an opportunity to consider personal, intellectual, and social issues and perspectives engaging in interdisciplinary strategies employed by a team of collaborating faculty from the humanities, social sciences, and natural sciences. Prerequisites: completion of basic skills courses and at least three introductory courses from fine arts, humanities, social and behavioral sciences, and natural sciences included in the General Education Program. This Issues and Perspectives course can be applied to any of the disciplines of the humanities, social sciences, and natural sciences.

LAS-I 398. Travel Seminar (1-4). 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.
LAS-1 480. National Student Exchange (12-18). 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 course work from the selected university will be transferred to Wichita State at the end of the exchange semester. At that time, the transfer courses will 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.


Courses for Graduate/Undergraduate Credit

LAS-1 501. 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: LAS-1 201 or 300 or instructor's consent.

LAS-1 510. Great Plains Seminar (3). For students completing the Great Plains Studies certificate program. Focuses on contemporary issues and critical contexts for research. Students develop research projects appropriate to their classification as undergraduates or graduates and which reflect their particular interests in Great Plains Studies. Supplemental resources provided by faculty through lectures, consultation, course materials, and mentoring. Prerequisites: 12 hours of Great Plains Studies course work, including LAS-1 201 and 301; undergraduates must have senior status or instructor’s consent.

LAS-1 750. Workshop: Special Topics (1-3). Meets identified needs of specific audiences.

Courses for Graduate Students Only

LAS-1 800. Research Goals and Strategies (3). Introduces the methodology and practice of interdisciplinary research. Emphasizes the integration of methods native to the humanities, social sciences, and natural sciences. Develops skills required for the writing of research papers and theses. Required of all students in the Master of Arts in Liberal Studies (MALS) program during the first 12 hours of course work.

LAS-1 875. Thesis (1-6). For students who are finishing the Master of Arts in Liberal Studies. The student writing a thesis is enrolled in this course until the thesis is completed and all thesis requirements have been satisfied. Prerequisite: consent of student’s degree committee chairperson and instructor.

LAS-1 885. Terminal Project (1-6). For students who are near the end of their MALS program and involved in a terminal project. The terminal project may have many aspects such as field work, practicum, curriculum development, or some other individualized activity. The project must have been approved by the student’s advisory committee and the MALS Graduate Coordinator prior to beginning work on any terminal activity, whether thesis or project. While the terminal project allows for more creative flexibility than the thesis option, students and their terminal project committee should be aware that the standards of quality and research expectations are equivalent. The student involved in a project must be enrolled in this course until the project is completed and all project requirements have been satisfied.

Italian, Japanese, Latin
See Modern and Classical Languages and Literatures.

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 Bulletin.

LING 636. 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.


Courses for Graduate/Undergraduate Credit

LING 667. Linguistics. English Syntax (3). Cross-listed as ENGL 677 and ANTH 667. Studies the basic principles of English syntax, covering the major facts of sentence construction and relating them to linguistic theory. Prerequisite: LING 315 or equivalent or departmental consent.

LING 668. Dialectology (3). Cross-listed as ENGL 668. 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: LING 315 or departmental consent.


LING 682. Linguistics. Structure of a Selected Non-Indo-European Language (3). Language offered depends on student demand and staff availability. May be conducted as a field methods course; repeatable for credit when different languages are offered. Prerequisite: LING 315.

Group B—Linguistic Study of Specific Languages or Language Groups

Courses for Graduate/Undergraduate Credit

LING 505A. French. Advanced Phonetics and Diction (2). Cross-listed as FREN 505. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future French teachers. Prerequisite: any 200-level course or departmental consent.

LING 505B. Russian. Russian Phonology (2). Cross-listed as RUSS 505.

LING 505C. Spanish. Spanish Phonetics (2). Cross-listed as SPAN 505.

LING 610. English. Old English (3). Cross-listed as ENGL 610. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf in the original. Some literature, including all of Beowulf, is read in translation, with attention to important literary and cultural features of the period.
LING 635. French and Spanish. Introduction to Romance Linguistics (3). Cross-listed as FREN 635 and SPAN 635.

Group C—Areas of Contact Between Linguistics and Other Disciplines

Upper-Division Courses

LING 304. CDS. Developmental Psycholinguistics (3). Cross-listed as CDS 304.

LING 351. Linguistics and Foreign Languages (3). Cross-listed as ANTH 351 and MCLL 351. Prerequisite: LING 151.

LING 545. Psychology. Psycholinguistics (3). Cross-listed as PSY 545.

LING 651. Language and Culture (3). Cross-listed as ANTH 651 and MCLL 661. Prerequisite: 3 hours of linguistics or MCLL 301 or 6 hours of anthropology.

LING 727. Teaching English as a Second Language (2-3).

Courses for Graduate/Undergraduate Credit

LING 545. Psychology. Psycholinguistics (3). Cross-listed as PSY 545.

LING 585. Language and Culture (3). Cross-listed as ANTH 585 and MCLL 585. Prerequisite: 3 hours of linguistics or MCLL 301 or 6 hours of anthropology.


Non-credit Courses

MATH 007. Arithmetic (3). Offered Cr/NoC only. 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). Offered Cr/NoC only. 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 (5). Offered Cr/NoC only. Content consists of algebra topics usually covered in the second year of a standard high school algebra course. Prerequisite: 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). Offered Cr/NoC only. 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. Prerequisite: MATH 111.

Lower-Division Courses

MATH 111. College Algebra (3). General education basic skills course. A survey of functions, theory of equations and inequalities, complex numbers, and exponential and logarithmic functions. High school geometry is a highly recommended preparatory course. Prerequisites: MATH 012 or two years of high school algebra and qualifying score in recent department placement exam. Credit is allowed in only one of the two courses MATH 111 and 112.

MATH 112. Precalculus Mathematics (5). General education basic skills course. 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. Prerequisites: MATH 012 or two years of high school algebra, one unit of high school geometry, and qualifying score in recent departmental placement exam. Credit is allowed in only one of the two courses MATH 111 and 112.

MATH 121. Geometry for College Students (3). A study of lines, angles relationships, parallelograms, triangles, quadrilaterals, similar triangles, circles, areas of polygons and circles, and some material on surface and solids. Prerequisite: 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: MATH 111 with a C or better or equivalent high school preparation, and one unit of high school geometry.

MATH 131. Contemporary Mathematics (3). General education basic skills course for students majoring in nontechnical areas. A collection of applications of mathematics illustrating how

Mathematics (MATH)

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 and Statistics fulfills its mission by offering a broad and representative collection of courses to give students the ability to select, with their advisor, a program that fits their needs and goals. The Department of Mathematics and Statistics 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):

Group R: MATH 415, 511, 547, 551, 555
Group A: MATH 513, 615, 621, 690, 720, 725
Group B: STAT 460, 571, 572, 574, 576, 761, 762, 763, 771, 772, 775, 776
Group C: MATH 530, 545, 553, 640, 655, 657, 714, 751, 753, 755, 757.

Major. For the Bachelor of Arts (BA) degree with a major in mathematics, students must complete all courses in Group R plus MATH 531 and two additional courses from those listed in Groups A, B, and C.

For the Bachelor of Science (BS) degree in mathematics, students must complete all courses in Group R and one each from Groups A, B, and C. In addition, the BS candidate must complete two additional courses from those listed in Groups B and/or C.

For the Bachelor of Science (BS) degree in mathematics with emphasis in statistics, students must complete all courses in Group R, one course in Group A, one course in Group B, and one course in Group C. In addition, the BS candidate must complete 12 additional hours of courses in Group B which must include either STAT 571 or STAT 771 and one more course from Groups B or C. Students under this option may select statistics courses from other departments with the due approval of the Department of Mathematics and Statistics.

For the Bachelor of Science (BS) degree with emphasis in computing, students must complete all courses in Group R. Students also must complete MATH 451 and an additional high-level programming language. In addition, the BS candidate must complete CS 300 and 520, plus five courses selected from Math 351, 553, 657, 690, 751; STAT 774; CS 312, 410, 440, 510, 540, and 560. At least three of the five additional courses must be in computer science (CS).

For students who are contemplating graduate work, it is highly recommended that they include MATH 513, 547, and 640 in their program, along with courses in one or more of French, German, or Russian.

Students majoring in mathematics should consult closely with their mathematics advisor on any of these programs.

Minor. For a minor in mathematics, students must complete the calculus sequence (242, 243, 344) and take at least one additional upper-division course approved by both the Department of Mathematics and Statistics and the student's major department.

All bachelor's degrees in mathematics require a high-level algorithmic computer language. The MATLAB course, MATH 651, is strongly recommended.
MATH 144. Business Calculus (3). General education introductory course. A brief but careful introduction to calculus for students of business and economics. Credit in both MATH 144 and 242 is not allowed. Prerequisite: MATH 111 or 112 with a C or better or equivalent high school preparation.

MATH 150. Workshop in Mathematics (1-3). 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: departmental consent.

MATH 211. Elementary Linear Algebra (3). Covers topics in linear algebra together with elementary applications. Prerequisite: one and one-half units of high school algebra or MATH 111.

MATH 242. Calculus I (3). General education introductory course. Analytic geometry and the calculus in an interrelated form. Credit in both MATH 242 and 144 is not allowed. Prerequisite: MATH 112 with a C or better or two units of high school algebra, and 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.

Courses for Graduate/Undergraduate Credit
Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

MATH 501. Elementary Mathematics (3). A study of topics necessary to understanding all the elementary school curriculum, such as set theory, real numbers, and geometry. Not for major or minor credit. Prerequisite: elementary education major and MATH 111 or equivalent with C+ or better or departmental consent.

MATH 511. Linear Algebra (3). An elementary study of linear algebra, including an examination of linear transformations and matrices over finite dimensional spaces. Prerequisite: MATH 243 with C or better.

MATH 513. Fundamental Concepts of Algebra (3). Defines group, ring, and field and studies their properties. Prerequisite: MATH 415 and 511 with C or better or departmental consent.

MATH 520. 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: MATH 444 with C or better.

MATH 531. Discrete Mathematics I (3). A study of some of the basic topics of discrete mathematics, including elementary logic, properties of sets, mathematical induction, counting problems using permutations and combinations, trees, elementary probability, and an introduction to graph theory. Prerequisite: MATH 311 or 211 or equivalent college-level mathematics course.

MATH 544. Calculus III (3). A continuation of MATH 243. Includes a study of multiple integration and partial derivatives. Prerequisite: MATH 243 with a C or better.

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' Theorem, and the Divergence Theorem. Also includes the study of improper integrals with application to special functions. Prerequisite: MATH 444 with C or better.

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: MATH 344 with C 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 solution using power series and the Laplace transform. A standard course in differential equations for students in the sciences and engineering. Credit not allowed in both MATH 550 and 555. Prerequisite: MATH 243 with C or better or departmental consent.

MATH 561. Elementary Number Theory (3). Studies properties of the integers by elementary means. Prerequisite: MATH 444 with C or better or departmental consent.

MATH 640. Advanced Calculus II (3). A continuation of MATH 547. Prerequisites: MATH 531 and 547 with C or better in each.

MATH 655. Differential Equations II (3). A continuation of MATH 555. Prerequisite: MATH 555 with C 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: MATH 531 with C or better.
MATH 690. Introduction to Mathematical Logic (3). An axiomatic development of elementary mathematical logic through first-order logic culminating in theorems on completeness and consistency. Investigates connections with Boolean algebra, formal languages, and computer logic. Prerequisite: MATH 415 or 511 with C or better or departmental consent.

MATH 713. Abstract Algebra I (3). Treats the standard basic topics of abstract algebra. Prerequisite: MATH 513 with C or better or departmental consent.

MATH 714. Applied Mathematics (3). Cross-listed as PHYS 714. 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: MATH 555 or instructor's consent.

MATH 720. Modern Geometry (3). Examines the fundamental concepts of geometry. Prerequisite: MATH 513 with C or better or departmental consent.

MATH 725. Topology I (3). Studies the results of point set and algebraic topology. Prerequisite: MATH 547 with C 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: MATH 640 with C or better or departmental consent.

MATH 745. Complex Analysis I (3). Studies the theory of analytic functions. Prerequisite: MATH 640 with C or better or departmental consent.

MATH 750. Workshop (1-3). Topics appropriate for mathematics workshops that are not in current mathematics courses. May be repeated to a total of 6 hours credit with departmental consent. Prerequisite: departmental consent.

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. Prerequisites: MATH 511, 547, and 551 with C 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: MATH 545 or 547 with C 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: MATH 547 with C 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: MATH 555 with C or better.

MATH 758. Complex and Vector Analysis for Engineers (3). Includes the study 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: MATH 555 with C or better.

Courses for Graduate Students Only

MATH 813. Abstract Algebra II (3). A continuation of MATH 713. Prerequisite: MATH 713 or equivalent.

MATH 818. Selected Topics in Number Theory (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 825. Topology II (3). A continuation of MATH 725. Prerequisite: MATH 725 or equivalent.

MATH 828. Selected Topics in Topology (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 829. Selected Topics in Geometry (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 839. Selected Topics in Foundations of Mathematics (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 843. Real Analysis II (3). A continuation of MATH 743. Prerequisite: MATH 743 or equivalent.

MATH 845. Complex Analysis II (3). A continuation of MATH 745. Prerequisite: MATH 745 or equivalent.

MATH 848. Calculus of Variations (3). Includes Euler-Lagrange equations, variational methods, and applications to extremal problems in continuum mechanics. Prerequisite: MATH 547 or 757.

MATH 849. Selected Topics in Analysis (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.


MATH 852. Numerical Analysis of Partial Differential Equations (3). Includes analysis of algorithms for the solution of initial value problems and boundary value problems for systems of PDEs with applications to fluid flow, structural mechanics, electromagnetic theory, and control theory. Prerequisite: MATH 751.

MATH 854. Tensor Analysis with Applications (3). Introduces tensor analysis, considers applications to continuum mechanics, structural analysis, and numerical grid generation. Prerequisite: MATH 545 or 577.


MATH 857-858. Selected Topics in Engineering Mathematics I and II (3-3). Advanced topics in mathematics of interest to engineering students, including tensor analysis, calculus of variations and partial differential equations. Not applicable toward the MS in mathematics.

MATH 859. Selected Topics in Applied Mathematics (2-3). Repeatable with departmental consent.

MATH 880. Proseminar (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing.

MATH 881. Individual Reading (1-5). Repeatable up to a maximum of 6 hours with departmental consent. Prerequisite: departmental consent.

MATH 941-942. Applied Functional Analysis I and II (3-3). Introduces functional analysis and its applications. Prerequisites: MATH 843 and 755 (MATH 755 may be a corequisite).

MATH 947-948. Mathematical Theory of Fluid Dynamics I and II (3-3). Mechanics of fluid flow, momentum and energy principles, Navier-Stokes and Euler equations, potential flows, vortex dynamics, stability analysis, and numerical methods applied to fluid dynamics. Prerequisite: MATH 745.

MATH 952. Advanced Topics in Numerical Analysis (3). Advanced topics of current research interest in numerical analysis. Topics chosen at instructor's discretion. Possible areas of concentration are numerical methods in ordinary differential equations, partial differential equations, and linear algebra. Prerequisites: MATH 751, 851, and instructor's consent.

MATH 958 & MATH 959. Selected Advanced Topics in Applied Mathematics (3-3). To pick areas of current research interest in applied mathematics. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

MATH 981. Advanced Independent Study in Applied Mathematics (1-3). Arranged individual directed study in an area of applied mathematics. Repeatable to a maximum of 6 hours. Prerequisites: must have passed the PhD qualifying exam and instructor's consent.

MATH 985. PhD Dissertation (1-9). Repeatable to a maximum of 24 hours. Prerequisite: must have passed the PhD preliminary exam.
Statistics (STAT)

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 124 semester hours required for graduation, students may take up to 15 semester hours of statistics courses in addition to the 45 or 30 semester hours of course work allowed in mathematics.

Lower-Division Course

STAT 170. Statistics Appreciation (3). A nontechnical course stressing and explaining how statistics and probability help solve important problems in a variety of fields (e.g., biology, economics, education, government, health sciences, social sciences, etc.). The material is developed by examples rather than by traditional statistical methods and does not require any special knowledge of mathematics.

Upper-Division Courses

STAT 360. Elementary Probability (3). Includes probability functions, random variables and expectation of finite sample spaces. Prerequisite: MATH 111 with a C or better or equivalent.

STAT 370. Elementary Statistics (3). General education introductory course. Surveys elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference, linear correlation and regression. Not open to mathematics majors. Prerequisite: MATH 111 with a C or better or equivalent.

STAT 460. Elementary Probability and Mathematical Statistics (3). General education further study 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: MATH 243 with a C or better.

STAT 471. Probabilistic Models and Statistical Methods (3). General education further study course. Covers axioms of probability, Bayes' Theorem, random variables and their distribution, joint distributions of random variables, transformations of random variables, moment generating function, characteristic functions, central limit theorem and other topics with applications to engineering. Prerequisite: MATH 344 with a C or better.

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

STAT 570. Special Topics in Statistics (3). Covers topics of interest not otherwise available. Prerequisite: departmental consent.

STAT 571-572. Statistical Methods I and II (3-3). General education further study courses. Includes probability models, points and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to non-parametric statistical techniques, least squares, analysis of variance, and topics in design of experiments. Prerequisite: MATH 243 with C or better or departmental consent.

STAT 574. 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: STAT 763 and STAT 764 or departmental consent.

STAT 575. 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: STAT 763 with C or better or departmental consent.

STAT 576. 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: STAT 764 with C or better or departmental consent.

Courses for Graduate Students Only

STAT 861-862. Theory of Probability I and II (3-3). The axiomatic foundations of probability theory emphasize the coverage of probability measures, distribution functions, characteristic functions, random variables, modes of convergence, the law of large numbers and central limit theorem, and conditioning and the Markov property. Prerequisite: MATH 743 and STAT 761 or 771.

STAT 876. Applied Statistical Methods (3). An introduction to experimental design and analysis of data under linear statistical models. Studies single-factor designs, factorial experiments with two or three factors, analysis of covariance, randomized block designs, nested designs, and Latin square designs. Uses computer packages for doing problems. Prerequisite: STAT 571 and MATH 344 or 511 with C or better in each or departmental consent.

STAT 874. Statistical Computing (3). An introduction to statistical computing using 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: STAT 763 and STAT 764 or departmental consent.

STAT 875. Stochastic Models (3). An introduction to stochastic models. Covers topics of interest not otherwise available. Prerequisite: departmental consent.

STAT 876. Non-parametric Methods (3). An introduction to the theory of non-parametric statistics. Includes order statistics, tests based on ranks, tests of goodness of fit, rank-order statistics, one-, two-, and k-sample problems, linear rank statistics, use and evaluation of software for non-parametric problems, and asymptotic efficiency. Prerequisite: STAT 772.
STAT 877. Multivariate Statistical Methods (3). Elementary theory and techniques of analyzing multidimensional data; covers Hotelling's $T^2$, multivariate analysis of variance, principal components analysis, linear discrimination analysis, canonical correlation analysis, and analysis of categorical data. Prerequisites: MATH 511 and STAT 772.

STAT 878. Special Topics (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

STAT 879. Individual Reading (1-5). Prerequisite: departmental consent.

STAT 884. Statistical Computing II (3). Teaches special graphics and numerical methods needed in the analysis of statistical data. Includes advanced simulation techniques, numerical methods for linear and nonlinear problems, analysis of missing data, smoothing and density estimation, projection-pursuit methods, and graph techniques. Prerequisites: MATH 751 and STAT 772 with C or better or departmental consent.

STAT 971 & STAT 972. Selected Advanced Topics in Probability and Statistics (3&3). Topics of current research interest in probability and statistics. Repeatable for credit with departmental consent. Prerequisite: Instructor's consent.

STAT 978. Advanced Independent Study in Probability and Statistics (1-3). Arranged individual directed study in an area of probability or statistics. Repeatable to a maximum of 6 hours. Prerequisites: must have passed the PhD qualifying exam and instructor's consent.

STAT 986. PhD Dissertation (1-9). Repeatable to a maximum of 24 hours. Prerequisite: must have passed the PhD preliminary exam.

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 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 Italian and Japanese. The department also offers the Master of Arts in Spanish and participates in the Master of Arts in Liberal Studies 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 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

Qualified students may earn Fairmount College credit for previous language experience by successfully completing a language course, or courses, at the appropriate level.

Based on their previous experience, students enroll at their predicted level. Normally, predicted entry level is calculated by assuming that one year of high school language is the equivalent to one semester of college language.

Students must apply for retroactive credit during the semester in which they are enrolled in the retroactive credit eligible course(s). Deadline for application will be announced in all language classes.

If a student successfully completes the course, or courses (with a grade of C or better), the student receives the graded credit hours for that course, or courses, and the appropriate number of ungraded retroactive credit hours.

Modern and Classical Languages and Literatures: French (FREN)

Specialization. A specialization in French consists of a minimum of 33 semester hours beyond FREN 210 or its equivalent, and must include the following courses: FREN 223, 300, 324, 526, 531, or 552, or equivalents. In addition, 15 hours must be selected from courses numbered above 500. No fewer than 9 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.

Student Teachers. Students who plan to teach French should consult with the department's professor in charge of teacher education early in their college careers. 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.

Requirements for entering this program are:

1. Grade point average of 3.000 or higher in French
2. Special departmental approval based on demonstrated proficiency in the use of both oral and written French (based on Certification and Teacher Education Regulations issued by the Kansas State Department of Education.)
3. The professional foundation courses for education required by the Teacher Education Program (see College of Education).

Minor. A minor in French consists of a minimum of 12 semester hours beyond FREN 210 and must include FREN 223, 300, 324, and one upper-division French course numbered 500 or above.

Native Speakers. Native speakers are those who have completed a substantial amount of their education in a French-speaking country. Native speakers of French are normally not permitted to receive credit for 100- or 200-level courses. To complete a specialization, FREN 300 plus 12 hours of upper-division work are required. These students are advised to consult with a French professor before enrolling in French courses.

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.

Lower-Division Courses

FREN 111-112. Elementary French (5-5). Emphasizes the four fundamental skills in language learning: understanding, speaking, reading, and writing.

FREN 150. Workshop in French (2-4). Repeatable for credit.

FREN 210. Intermediate French (5). General education introductory course. Continues to develop the four fundamental language skills: understanding, speaking, reading, and writing; emphasizes conversation and cultural readings. Prerequisite: 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 (a) grammar, (b) conversation, (c) reading.

FREN 223. Intermediate French Readings I (3). General education further study course. Intensive reading of diverse literary works in French. Course will satisfy the LAS literature requirement. Prerequisite: FREN 210 or equivalent.

Upper-Division Courses

FREN 300. Intermediate French Readings II (3). General education further study course. Intensive reading and analysis of French literary works of all periods. Course will satisfy the LAS literature requirement. Prerequisite: FREN 223 or equivalent.

FREN 324. Intermediate Conversation and Composition (3). Improves oral and written proficiency through vocabulary acquisition and interactive grammar exercises. Prerequisite: FREN 210 or equivalent.

FREN 398. Travel Seminar in French (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following cultures: art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Prerequisite: departmental consent.

FREN 481. Cooperative Education (1-4). Field placement integrating theory with a planned and supervised professional experience which complements and enhances the student's academic program. Individualized programs formulated in
**COURSES FOR GRADUATE/UNDERGRADUATE CREDIT**

Upper-division courses are given on a rotating basis. FREN 344 is a prerequisite for all upper-division literature and civilization courses, unless otherwise indicated. All literature courses, including FREN 223 and 300, may fulfill the LAS literature requirement.

- **FREN 505. French Phonetics (3)**. Cross-listed as LING 505. Includes articulatory phonetics, phonemics, sound/symbol correspondence, dialectal and stylistic variations. Required for future French teachers. Prerequisite: any 200-level course or departmental consent.

- **FREN 525. Advanced French Conversation (3)**. Designed to increase proficiency in spoken French. Assignments include oral reports, dialogues, and work in the language laboratory. Prerequisite: 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: FREN 324 or departmental consent.

- **FREN 540. French Literature in English Translation (3)**. 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)**. A study of the concept of Ngritude through the works of major contemporary 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. Class work and required readings are in French. Prerequisite/co-requisite: FREN 300.

- **FREN 552. Contemporary French Civilization (3)**. Emphasizes the major events, themes, ideas, trends, and movements of French civilization since the Revolution. Interdisciplinary course complements French language and literature courses. Class work and readings are in French. Prerequisite/co-requisite: FREN 300.

- **FREN 623. Seminar in French (3)**. Seminar in French literature, language, or civilization. Prerequisite: FREN 300. Repeatable for credit.

- **FREN 630. Renaissance French Literature (3)**. Analyzes and discusses major French works, 1500-1600. Prerequisite: FREN 300.

- **FREN 631. 17th Century French Literature (3)**. Prerequisite: FREN 300.

- **FREN 632. 18th Century French Literature (3)**. Prerequisite: FREN 300.

- **FREN 633. 19th Century French Literature (3)**. Prerequisite: FREN 300.

- **FREN 634. 20th Century French Literature: 1900-1945 (3)**. Analyzes and discusses major works of French fiction, poetry, and drama from the Belle Epoque through World War II. Prerequisite: FREN 300.

- **FREN 635. Introduction to Romance Language Linguistics (3)**. Cross-listed as LING 635 and SPAN 635. An introduction to the historical phonology and morphology of the romance languages emphasizing French and Spanish. Prerequisite: departmental consent.

- **FREN 636. Contemporary French Literature (3)**. Analyzes and discusses major works of French fiction, poetry, and drama, 1945-present. Prerequisite: 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: FREN 526 or departmental consent.

- **FREN 750. Workshop in French (2-4)**. Repeatable for credit.

**COURSE FOR GRADUATE STUDENTS ONLY**

- **FREN 815. Special Studies in French (3)**. Prerequisite: departmental consent. Repeatable for credit.

**MODERN AND CLASSICAL LANGUAGES AND LITERATURES: GERMAN (GERM)**

- **GERM 200. Continuing German (5)**. General education introductory course. Grammar review and cultural readings primarily for students majoring in the German language and literature. For students majoring in the German language and literature. Prerequisite: FREN 300. Repeatable for credit.

- **GERM 233. Intermediate German I (3)**. General education further study course. Intensive reading and discussion of short works. Prerequisite: GER 112 with a C or better or departmental recommendation to transfer from GER 220.

- **GERM 225. German Conversation (2)**. The development of oral fluency. Prerequisite: GER 220, 223, or concurrent enrollment in 223.

**UPPER-DIVISION COURSES**

- **GERM 324. Intermediate German Conversation and Composition (3)**. Emphasizes development of written skills as conversational practice continues. Prerequisite: GER 225 or instructor's consent.

- **GERM 341. German in the European Context (3)**. General education issues and perspectives course. Selected topics on significant aspects of life and thought in Germany. Emphasizes the modern period with special attention to the interaction of cultural trends in the European context. A knowledge of German is not required.

- **GERM 344. Intermediate German II (3)**. General education further study course. Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: GER 223 or equivalent.

- **GERM 398. Travel Seminar in German (1-4)**. An 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: departmental consent.

- **GERM 441. Culture of Contemporary Germany (3)**. Study of the culture and life in the Federal Republic of Germany and the German Democratic Republic from 1945 to 1989 and the new unified Germany. A knowledge of German is not required. Does not count toward fulfillment of language requirement.

**COURSES FOR GRADUATE/UNDERGRADUATE CREDIT**

- **GERM 524. Advanced German Conversation and Composition (3)**. Prerequisite: GERM 524 or instructor's consent.

- **GERM 560. 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 1: from the medieval period through the Age of Goethe; (c) survey 1I: 19th century to 1945; (d) contemporary literature and culture, including the literatures of East and West Germany, 1949-1989; (e) special topics in literature, repeatable once for
Lower-Division Courses

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: ITAL 111 or equivalent.

ITAL 223. Intermediate Italian I (3). Grammar review, composition, conversation, and cultural readings. Prerequisite: ITAL 112 or instructor's consent.

Upper-Division Course

ITAL 398. Travel Seminar in Italian (1-4). An 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: departmental consent.

Modern and Classical Languages and Literatures: Japanese (JAPAN)

The following courses are offered in Japanese.

Lower-Division Courses

JAPAN 111. Elementary Japanese I (5). Introduces fundamentals of pronunciation, vocabulary building, practice in understanding and speaking phrases, reading, and writing. Also includes cultural material.

JAPAN 112. Elementary Japanese II (5). A continuation of JAPAN 111, completing the basic course in Japanese. Prerequisite: JAPAN 111 or equivalent.

JAPAN 223. Intermediate Japanese I (5). Includes fundamentals of pronunciation, vocabulary building, practice in understanding and speaking phrases, reading, and writing. Draws examples from Japanese culture, politics, and society. Prerequisite: JAPAN 112 or equivalent.

JAPAN 225. Japanese Conversation (2). Develops oral fluency. Prerequisite or co-requisite: JAPAN 223.

Upper-Division Courses

JAPAN 300. Special Studies (1-3). Topic announced by instructor. Repeatable for credit. Prerequisite: instructor's consent.

Modern and Classical Languages and Literatures: Latin (LATIN)

Specialization. A specialization in Latin consists of a minimum of 24 semester hours beyond LATIN 112 or its equivalent. LATIN 398 does not count toward the specialization in Latin.

Lower-Division Courses


LATIN 223. Intermediate Latin (3). General education introductory course. General review of grammar with selected readings of prose and poetry. Prerequisite: LATIN 112, two years of high school Latin or departmental consent.

LATIN 224. Intermediate Latin (3). General education further study course. Selected readings of prose and poetry. May be repeated for credit when the readings vary. Prerequisite: LATIN 223 or departmental consent.

LATIN 398. Travel Seminar in Latin (1-4). An 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: departmental consent.

Courses for Graduate/Undergraduate Credit


LATIN 541. Roman Lyric Poetry (3). The lyric poems of Catullus and Horace emphasizing imagery, symbolism, structure, diction, and meter.

LATIN 542. Vergil's Aeneid (3). Selected books of the Aeneid in the original and the rest in translation. Studies imagery, symbolism, structure, meter, and diction. Considers the place of the Aeneid in Augustan Rome and in the epic tradition.
LATIN 543. Roman Drama (3). A study of Roman comedy and tragedy, their Greek background, and their influence on European literature. Includes selected plays of Plautus, Terence, and Seneca, some in the original and some in translation.

LATIN 546. Advanced Latin (3). Directed reading of Latin. Reading may be combined with Latin prose composition at the option of the students. Repeatable for credit when content varies.


LATIN 652. Cicero (3). The orations, letters, and essays of Cicero. Concentrates on Cicero as the master of Latin prose and as one of the most important political figures of the fall of the Roman Republic.

LATIN 653. Lucretius and Epicureanism (3). Reading of Lucretius' De Rerum Natura and study of Epicureanism, the atomic theory, and Democritan materialism. Gives consideration to the place of Lucretius in Latin poetry.

Modern and Classical Languages and Literatures (MCLL)

Upper-Division Course

MCLL 351. Linguistics and Foreign Languages (3). Cross-listed as ANTH 351 and LING 351. Introduces general linguistic principles as they apply specifically to the study of the structure of one language, and analysis of foreign languages offered as major specialties at WSU (French, German, Latin, and Spanish). Introduces general linguistics; phonetics (narrow transcriptions of foreign languages) and principles of phonology; morphology and principles of morphology; and syntax and semantics. Prerequisite: LING 151 or any 3rd-semester foreign-language course.

Course for Graduate/Undergraduate Credit

MCLL 61. Language and Culture (3). Cross-listed as ANTH 651 and LING 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: 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

Modern and Classical Languages and Literatures: Russian (RUS)

Minor. A minor in Russian consists of a minimum of 17 hours beyond the RUS 210 level and must include at least RUS 300 or 325 and one 500-level course.

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.

Lower-Division Courses

RUS 110. Russian Studies (3). Cross-listed as HIST 110 and POL 5110. Team-taught by faculty from history, political science, and modern and classical languages and literatures. Prepares students wishing to pursue additional courses and/or programs in Russian history, Russian language and literature, Russian government and politics, and/or international relations, including business. Covers medieval, czarist, Soviet, and present-day (post-Soviet) Russia.

RUS 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.

RUS 112. Intermediate Russian (5). A continuation of RUS 111 to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: RUS 111 or equivalent.

> RUS 210. Intermediate Russian (5). General education introductory course. Reading, grammar review, and audiovisual presentations in Russian to enhance listening comprehension, speaking, reading, and basic writing skills. Prerequisite: RUS 112 or equivalent.

> RUS 224. Intermediate Russian (5). General education introductory course. A continuation of RUS 210 to further enhance of intermediate Russian grammar and enhance the four basic skills. Prerequisite: RUS 210 or instructor's consent.

RUS 225. Russian Conversation and Composition (2). Development of oral and written skills. May be taken concurrently with RUS 224. Prerequisite: RUS 112 or instructor's consent.

Upper-Division Courses

RUS 300. Intermediate Russian Readings (3). General education further study course. Introductory reading and analysis of Russian literary works of all periods. Prerequisite: RUS 224 or instructor's consent.

RUS 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: RUS 224 or 225 or instructor's consent.

RUS 396. Travel Seminar in Russian (1-4). An 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: departmental consent.

RUS 505. Russian Phonology (2). Cross-listed as LING 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 (intonations, intonation contour).

RUS 515. Special Studies in Russian (1-3). Advanced reading and translation in Russian social sciences, literature, and civilization. Repeatable for credit. Prerequisite: departmental consent.

RUS 540. Russian Literature in English (3). Consideration of the works of one or two major authors. Literary movement, trend, or specific genre. No knowledge of Russian is necessary, although some is desirable. Repeatable once for credit. Prerequisite: departmental consent.

Modern and Classical Languages and Literatures: Spanish (SPAN)

Specialization. A specialization in Spanish consists of a minimum of 30 semester hours beyond SPAN 210 or its equivalent and must include the following courses: SPAN 220, 223, 225, 300, 325, 525, and 562, or equivalents. In addition, 12 hours must be selected from courses numbered about 300. It is strongly recommended that students specializing in Spanish take courses in related fields such as foreign languages, art history, English, history, and philosophy.

Student Teachers. Students who plan to teach Spanish should consult with the department’s professor in charge of teacher education early in their careers. 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.

Requirements for this program are:
1. Grade point average of 3.000 or higher in Spanish
2. Special departmental approval based on demonstrated proficiency in the use of both oral and written Spanish (based on Certification and Teacher Education Regulations issued by the Kansas State Department of Education)
3. The professional foundation courses for education required by the Teacher Education Program (see College of Education).

Minor. A minor in Spanish consists of a minimum of 11 hours beyond the SPAN 210 level and must include SPAN 220, 223, 225, and 3 hours at the 500-level or above.

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. To complete a specialization, SPAN 300 plus 12 hours of upper-division work are required. These students are advised to consult with a Spanish professor before enrolling in Spanish courses.

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.

Lower-Division Courses

SPAN 111-112. Elementary Spanish. (3-5). Emphasizes the four fundamental skills in language learning: understanding, speaking, reading, and writing.

SPAN 150. Workshop in Spanish (2-4). Repeatable for credit.

>SPAN 210. Intermediate Spanish (3). General education introductory course. Continues the four fundamental skills in language learning: understanding, speaking, reading, and writing. Emphasizes conversations and cultural readings. Prerequisite: SPAN 112, two units of high school Spanish, or departmental consent.

SPAN 215. Intermediate Spanish II (3). Intensive review of Spanish; special emphasis on conversation. Course offered only in Puebla, Mexico. Prerequisite: SPAN 112, two units of high school Spanish, or departmental consent.

SPAN 220. Intermediate Spanish Grammar and Composition (3). Prerequisite: SPAN 210 or three units of high school Spanish or departmental consent.

>SPAN 223. Selected Spanish Readings (3). General education further study course. Intensive reading and analysis of Latin-American and Spanish literary works. Also includes outside readings and reports. Course will satisfy the LAS literature requirement. Prerequisite: SPAN 210 or three units of high school Spanish or departmental consent.

SPAN 225. Spanish Conversation I (2). Prerequisite: SPAN 210 or three units of high school Spanish or departmental consent. Should be taken with SPAN 220.

Upper-Division Courses

>SPAN 300. Intermediate Spanish Readings (3). General education further study course. Intensive reading and analysis of Spanish literary works of all periods. Course will satisfy the LAS literature requirement. Prerequisite: SPAN 223 or departmental consent.

SPAN 325. Spanish Conversation II (2). Continuation of SPAN 225 with continued emphasis on fluency in Spanish and on vocabulary building. Prerequisite: SPAN 225 or departmental consent.

SPAN 398. Travel Seminar in Spanish (1-4). An 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: departmental consent.

SPAN 481. Cooperative Education: Spanish (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. Offered Co/WM only. Prerequisite: SPAN 220 or departmental consent.

Courses for Graduate/Undergraduate Credit

SPAN 505. Spanish Phonetics (2). Cross-listed as LING 505. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectical and stylistic variations. Required for future Spanish teachers. Prerequisite: any 200-level course or departmental consent.

SPAN 515. Major Topics in Spanish (1-4). Special studies in (a) language, (b) literary reports, (c) commercial Spanish, (d) language laboratory, (e) music, (f) composition, (g) problems in teaching Spanish, (h) advanced conversation. Repeatable for credit. Prerequisite: departmental consent.

SPAN 525. Spanish Conversation III (2). Increases proficiency in spoken Spanish. Assignments include oral reports and dialogues. Prerequisite: SPAN 325 or departmental consent.

SPAN 526. Advanced Spanish Grammar and Composition (3). Prerequisite: SPAN 220 or departmental consent.

SPAN 531. Survey of Spanish Literature (3). Main currents of Spanish literature from 1700 to the present. Prerequisite: SPAN 300 or departmental consent.

SPAN 532. Survey of Spanish Literature (3). Spanish literature from the beginning to 1700. Prerequisite: SPAN 300 or departmental consent.

SPAN 534. Contemporary Spanish Theater (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 536. Contemporary Spanish Novel (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 540. Contemporary Spanish Literature in English Translation (3). Content may vary from semester to semester, including Spanish and/or Latin-American literature. No knowledge of a foreign language is necessary. May be used to satisfy the general education literature requirement and may count toward a Spanish major or minor if readings and papers are done in Spanish and prerequisite of SPAN 300 is met. Repeatable for credit.

SPAN 552. Business Spanish (3). Provides the opportunity to learn and practice commercial correspondence, business vocabulary, translation, and interpretation of business texts. Prerequisite: SPAN 526.

SPAN 557. Literary and Technical Translating in Spanish (3). Extensive translation of literary works and technical and legal documents from Spanish to English and English to Spanish. Prerequisite: SPAN 526 or departmental consent.

SPAN 620. Survey of Latin-American Literature (3). Main currents of Latin-American literature, 1500-1800. Prerequisite: SPAN 300 or departmental consent.

SPAN 621. Survey of Latin-American Literature (3). Main currents of Latin American literature, 1800-present. Prerequisite: 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: instructor's consent.

SPAN 623. Seminar in Spanish (1-5). Seminar in Spanish literature, language, or civilization. Repeatable for credit. Prerequisite: SPAN 300.

SPAN 625. Contemporary Latin-American Novel (3). Prerequisite: 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. Prerequisite or co-requisite: SPAN 300 or departmental consent.

SPAN 627. Latin-American Civilization (3). Intensive study of Latin-American culture, including the historical and geographical factors in its development and its contributions to world civilization. Prerequisite or co-requisite: SPAN 300 or departmental consent.

SPAN 628. Contemporary Latin-American Theater (3). Study of contemporary theater, 1900-present. Prerequisite: SPAN 300 or departmental consent.

SPAN 631. Latin-American Short Story (3). Study of the main writers in contemporary Latin-American literature. Prerequisite: SPAN 300 or departmental consent.

SPAN 635. Introduction to Romance Linguistics (3). Cross-listed as FREN 635 and LING 635. An introduction primarily to the historical phonology and morphology of the romance languages emphasizing French and Spanish. Prerequisite: departmental consent.

SPAN 640. Mexico: Its People and Culture (3). Study of the cultural development of Mexico, exploring the legacy of ancient cultures and the Spanish encounter in areas such as literature, the arts, music, and film industry. Prerequisite: SPAN 300 or departmental consent.

SPAN 650. South America: Its People and Cultures (3). Study of the cultural development of South America, exploring the legacy of Indian cultures and the Spanish encounter in areas such as literature, the arts, music, and the film industry. Prerequisite: SPAN 300 or departmental consent.

SPAN 750. Workshop in Spanish (2-4). Repeatable for credit.
Courses for Graduate Students Only

SPAN 801. Spanish Linguistics (3). Historical and structural study of the Spanish language.

SPAN 805. Directed Readings in Spanish (1-4). Readings vary according to the student's preparation. Includes preparation of reports, literary critiques, and special projects.

SPAN 826. Spanish Grammar and Stylistics (3). Intensive study of advanced grammar and stylistic usage.

SPAN 827. Latin American Civilization and Culture (3). Introduction to historical and cultural development in Latin America, exploring the legacy of the Spanish encounter/conquest. Emphasizes Spanish colonization. Prerequisite: graduate standing.

SPAN 831. Seminar in Spanish Literature (3). (a) Middle Ages; (b) Renaissance; (c) Golden Age theater; (d) Cervantes, (e) modern novel; (f) Generation of '98, (g) romanticism; (h) 20th century poetry; (i) criticism; (j) literature; (m) 20th century theatre; and (n) contemporary Spanish novel.

SPAN 832. Seminar in Latin-American Literature (3). (a) colonial period; (b) contemporary novel; (c) short story; (d) poetry; (e) modernism; (f) essay; (i) theater; (k) Latin-American literature.

Philosophy (PHIL)

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, and sales. The philosophy department reflects the breadth and diversity of the philosophical enterprise and offers a wide variety of courses.

Major. A major requires a minimum of 27 hours of philosophy courses, at least 15 of which must be in courses numbered 500 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 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.

Minor. A minor consists of 15 hours of philosophy courses, selected in consultation with a departmental advisor, that orient students to the philosophic aspects of their major fields.

Lower-Division Courses

> PHIL 100. The Meaning of Philosophy (3). General education introductory course. An 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, course 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 125. Introductory Logic (3). General education introductory 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 129. University Experience (3). An examination of the structure, process, and problems of university education in the contemporary setting. Attends especially to the personal, moral, and spiritual problems and opportunities presented by the modern university experience. Provides clarification and guidance in understanding the university and in choosing one's own future.

> PHIL 144. Moral Issues (3). General education introductory course. An introduction to philosophically thought about ethics. Discusses a number of contemporary moral issues and considers various philosophic approaches to their solutions.

PHIL 150. Workshop in Philosophy (1-2). Short-term courses with special philosophical emphasis.

Upper-Division Courses

> PHIL 300. Science and the Modern World (3). General education issues and perspectives course. Develops an understanding of the contemporary methods and accomplishments of science and how these 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 analytic 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.

> PHIL 301. Language and Philosophy (3). General education further study course. Cross-listed as LING 301. 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?

> PHIL 302. Values and the Modern World (3). General education issues and perspectives 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.

> PHIL 303. Nineteenth Century Philosophy (3). General education further study course. 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 further study course. Studies the rise of analytic philosophy in the 20th century emphasizing the themes uniting 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 311. Philosophy of Law (3). General education further study course. An 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.

> PHIL 313. Political Philosophy (3). General education further study course. Examines various philosophical issues concerning political systems. Discusses issues such as the nature of political authority, the rights of individuals, constitutivism, and civil disobedience.

> PHIL 315. Late Modern Philosophy (3). General education further study course. A study of philosophical thought in the 18th century with selections from philosophers such as Berkeley, Hume, Reid, Adam Smith, Butler, Kettleson, Wolff, and Kant, and movements such as empiricism, rationalism, the Scottish common sense school, and idealism.

> PHIL 320. Philosophy of Science (3). General education further study course. A study of 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 322. Early Modern Philosophy (3). General education further study 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). Cross-listed as LING 325. Studies systems of formal logic including sentential and predicate logic. Emphasizes the uses of these systems in the analysis of arguments.
PHIL 327. Bioethics (3). General education further study course. Examines ethical issues related to health care such as truth telling to patients, confidentiality, euthanasia, abortion, prenatal obligations, and distribution of health care.

PHIL 331. Ancient Greek Philosophy (3). General education further study 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 further study course. Cross-listed as WOM 338. Explores philosophical issues raised by the feminist movement emphasizing conceptual and ethical questions.

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 further study course. Cross-listed as REL 346. 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 BCE. Includes major figures Confucius, Mencius, Mo-Tzu, Hsun-Tzu, Chuang-Tzu, Lao-Tzu, and Han-Fei-Tzu. Includes major positions Confucianism, Mohism, Legalism, Taoism, and Dialecticism.

PHIL 354. Ethics and Computers (3). General education further study 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. Prerequisite: Junior standing or departmental consent.

PHIL 360. Ethical Theory (3). General education further study course. A study of 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: one course in philosophy.

PHIL 375. Philosophy of the Arts (3). General education further study 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 385. Engineering Ethics (3). General education issues & perspectives course. An examination of 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.

PHIL 400. Honors Seminar (3). Cross-listed as HNRS 400. An honors course on a special topic, to be announced. Repeatable for credit up to 6 hours. Prerequisite: honors student or departmental consent.

PHIL 459. Truth and 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, Dewey, Wittgenstein, Russell, Tarski, Quine, Davidson, Austin, Strawson, Field, Hacking, and Horwich.

PHIL 421. Philosophy of Mind (3). Critically examines Courses for Graduate/Undergraduate Credit.

PHIL 518. Recent British-American Philosophy (3). Examination of philosophical ideas and movements in recent British and American philosophy. Discusses movements such as logical positivism, pragmatism, ordinary language philosophy, and analytic philosophy. Readings are selected from figures such as Russell, Wittgenstein, Peirce, Dewey, and Quine.

PHIL 519. Empiricism (3). A study of the philosophical views that emphasize sensory experience rather than reasoning as a source of knowledge with particular attention to the philosophies of Hobbes, Locke, Berkeley, Hume, and Mill.

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: 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: one course in philosophy.

PHIL 555. Philosophy of the Social Sciences (3). Studies such topics as the relations of social science with natural science and philosophy; methodological problems peculiar to social science, the nature of sound explanation concepts, and constructs and the roles of mathematics and formal theories in social science.

PHIL 557. Contemporary European Philosophy (3). An exploration of a theme, issue, philosopher, or movement in contemporary European philosophy. Includes philosophers such as Husserl, Heidegger, Jaspers, Gadamer, 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 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: instructor's consent.

PHIL 590. Special Studies (3). Topic for study announced by instructor. Repeatable for credit. Prerequisite: instructor's consent.

PHIL 699. Directed Reading (2-3). For the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite: departmental consent.

Courses for Graduate Students Only

PHIL 805. Business and Morality (3). Critically examines moral issues particularly germane to business. Includes theories of distributive justice, theories of property rights, the role of business as a social institution, employment rights and obligations, environmental issues, and theories of socially responsible investment practices. Readings from classical and contemporary authors.

PHIL 816. Ethics and Psychology (3). Cross-listed as PSY 816. An in-depth analysis of moral issues that arise in the professions of psychology. Provides a detailed familiarization with current moral controversies and develops ethical reasoning skills that will enable one to address new issues as they arise. Representative topics include informed and voluntary consent, rights of human research subjects, privacy and confidentiality, assessment, conflict of obligations, ownership of research results, multiple relationships in teaching, research and practice, conflicts between therapeutic and forensics roles, objectivity in research, the nature and boundaries of teaching psychology, etc.

PHIL 850. Directed Reading (3). For the graduate student desiring independent study and research in an area of special interest. May be repeated for credit. Prerequisite: departmental consent.
Physics (PHYS)

Physics is the fundamental science—it is the study of matter and energy and their interactions. Physics is the basis for all science and for all applied science and engineering. Physicists study everything from elementary particles to galaxies, from semiconductors to 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 or in 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.

Major. The following courses are required for a physics major: PHYS 213-214 or 313-314, 315-316, 511, 512, 611, 611, 611, 614, and 615; MATH 555 and 545, 547, 747; and 5 hours in chemistry.

For the Bachelor of Arts (BA) degree, 2 additional hours of PHYS 516, 517, or 616 plus 6 hours of upper-division physics electives are required.

For the Bachelor of Science (BS) degree, three semesters chosen from PHYS 516, 517, and 616; 8 additional upper-division hours in physics; and 5 additional hours in chemistry are required. Two semesters of foreign language, or equivalent, are also required.

Chemical Physics Option. A student majoring in physics may select a chemical physics option. This option requires four courses in chemistry, beyond the 111-112 sequence, in place of upper-division physics electives. With department approval, the chemistry courses could substitute for required courses covering similar topics.

Engineering Physics Option. A student majoring in physics may select an engineering physics option. This option requires four courses approved by the physics department from a given engineering department in place of upper-division physics electives. With department approval, the engineering courses could substitute for required courses covering similar topics.

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.

Minor. A minor in physics consists of PHYS 213-214 or 313-314-315-316 and at least 6 additional hours of physics courses numbered above 500.

Lower-Division Courses

>PHYS 111. Introductory Physics (4). 3R; 3L. General education introductory 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: two years of high school algebra or one each of algebra and geometry or equivalent.

>PHYS 131. Physics for the Health Sciences (3). General education introductory course. A 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. Prerequisites: two years of high school algebra or one year each of algebra and geometry or equivalent.

>PHYS 195. Introduction to Modern Astronomy (3). General education introductory course. A survey of 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). 3L. The application of the techniques and analysis of the data of modern astronomy. For the student with some background in the physical sciences. When 196 is completed, 195 and 196 count as a laboratory science. Requires field trips. Prerequisites: two semesters of high school algebra or the equivalent, or instructor's consent, and PHYS 195, which may be taken concurrently.

>PHYS 198. Discovery in Astronomy (3). Discusses a selected topic in astronomy to develop an understanding of the discoveries and problems of modern astronomy. Primarily for general students with little or no background in science or math. See course schedule for topic each semester.

>PHYS 213. General College Physics I (4). 4R; 3L. General education introductory course. Mechanics, heat, and wave motion. For students with a working knowledge of algebra and trigometry but who have had no calculus. Prerequisite: high school trigometry or MATH 112.

>PHYS 214. General College Physics II (5). 4R; 3L. General education further study course. A continuation of PHYS 213. Electricity, light, and modern physics. Prerequisite: PHYS 213 or 313.

Upper-Division Courses

>PHYS 313. University Physics I (4). General education introductory course. The first semester of a calculus-based physics sequence. Studies mechanics, heat, and wave motion. High school physics or PHYS 151 is assumed as prerequisite for this course. Natural science majors are required to take the lab, PHYS 315, that accompanies this course. Credit is not given for both PHYS 213 and 313. Co-requisite: MATH 233.

>PHYS 314. University Physics II (4). General education further study course. The second semester of a calculus-based physics sequence. Studies electricity, magnetism, and light. Natural science majors are required to take the lab, PHYS 316, that accompanies this course. Credit is not given for both PHYS 214 and 314. Prerequisites: Math 243 with a grade of C or better and PHYS 213 with a B or better or PHYS 313.


>PHYS 320. Scientific Thinking (3). General education issues and perspective course. How science, particularly physics, is done. How do we know what we know? What do we mean when we say, as scientists, that we understand a phenomenon? How do we approach a problem? Emphasizes the nature of science rather than particular theories. Gives an appreciation of science as a human intellectual activity and of the picture that modern physics gives us of the universe. No prerequisites.

>PHYS 395. Solar System Astronomy (3). General education further study 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 course work 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. Offered on a pass/fail only. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

>PHYS 501. Special Studies in Physics for Educators (1-3). 3L. A series of courses covering basic physical concepts which provide physical science background for teachers. Repeatable for a maximum of 5 hours. Prerequisite: in-service or pre-service teacher.

PHYS 516. Advanced Physics Laboratory (2). 4L. Experiments in classical and modern physics to stress scientific methods and experimental techniques. The experiments are open-ended projects requiring individual study. Repeatable up to a maximum of 8 credit hours. Co-requisite: PHYS 551.

PHYS 517. Electronics Laboratory (2). 1R; 3L. Experiments in electronics that treat some of the applications of electronics in scientific research. Experiments cover the uses of vacuum tubes, transistors, IC, and digital circuits. Prerequisite: 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: PHYS 214 or 314 or departmental consent. Co-requisite: 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. Prerequisites: PHYS 214 or 314 and MATH 344.

PHYS 600. Individual Readings in Physics (1-3). Repeatable but total credit may not exceed 6 hours for physics majors. Prerequisite: 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. May be repeated up to 6 hours. Prerequisite: instructor's consent.

PHYS 616. Computational Physics Laboratory (2). Prerequisite: PHYS 621 and 651 or departmental consent and MATH 555.

PHYS 621. Elementary Mechanics (3). Motion of a particle in one and several dimensions, central forces, the harmonic oscillator, and the Lagrangian formulation of mechanics. Prerequisites: PHYS 214 or 314 and MATH 344 with grades of C or better.

PHYS 631. Electricity and Magnetism (3). Direct and alternating currents; electric and magnetic field theory, including an introduction to Maxwell's electromagnetic wave theory. Prerequisites: PHYS 214 or 314 and MATH 344 with grades of C or better.

PHYS 641. Thermodynamics (3). The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations, and an introduction to statistical mechanics. Prerequisites: PHYS 214 or 314 and MATH 344.

PHYS 651. Quantum Mechanics (3). Introduction to quantum mechanics, the Schrodinger equation, elementary perturbation theory, and the hydrogen atom. Prerequisite: PHYS 551.

PHYS 661. 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: PHYS 551.

PHYS 809. Research (1-3). Repeatable for credit up to 6 hours.

PHYS 811. Quantum Mechanics (3). The Schrodinger and Heisenberg formulations of quantum mechanics. Applications include rectangular potentials, central forces, and the harmonic oscillator. Also includes spin, time independent and time dependent perturbation theory. Prerequisites: PHYS 621 and 651 or departmental consent and MATH 555.

PHYS 821. Classical Mechanics (3). The Lagrangian, Hamiltonian, and Hamilton-Jacobi methods of mechanics and an introduction to variational calculus. Applications selected from central forces, rigid bodies, relativity, small oscillations, and continuous media. Prerequisites: PHYS 621 and MATH 555.

PHYS 831. Classical Electricity and Magnetism (3). Maxwell's equations with application to static electricity and magnetism. Also may include electromagnetic fields, vector potentials, Green's functions, relativity, optics, and magnetohydrodynamics. Prerequisites: PHYS 631 and MATH 555.

PHYS 871. Statistical Mechanics (3). An introduction to the basic concepts and methods of statistical mechanics with applications to simple physical systems. Prerequisites: MATH 555 and PHYS 621.

PHYS 881. Solid State Physics (3). A second course in solid state physics for students who have had an introduction to the subject. Transport, dielectric and optical properties, magnetic properties, superconductivity, and applications to semiconductor devices. Prerequisites: MATH 555, PHYS 631 and 681, or departmental consent.

Political Science (POL S)

Politics—a means of managing conflict and distributing the materials of society to its members—affects everyone because everyone lives in society and conflict exists in every society. This fact led the Greek philosopher Aristotle to observe centuries ago that “man by nature is a political animal.” While contemporary political scientists approach the study of politics in a variety of ways, all agree that politics is a central characteristic of human activity.

Political science students at Wichita State University take courses in at least four of five subject areas: (1) American politics and institutions, (2) comparative politics, (3) international politics, (4) political theory and philosophy, and (5) public administration. Most political science majors supplement their curriculum by taking elective hours in the humanities—history, philosophy, and literature, for example—and in other social sciences, such as economics, anthropology, sociology, and psychology. The department also recommends that students take courses in statistics and computer applications.

Students with political science degrees may become practicing politicians or they may pursue careers in public administration, government service, law, journalism, business, or teaching at the secondary or college level.

The political science degree program at Wichita State is designed to accommodate these career interests as well as others. The requirements for the major are flexible enough to permit students to concentrate in one or two areas.

Major. A major consists of POL S 121 and 30 additional hours, including at least one course in four of the five groups below.

Group 1. Political Theory and Philosophy—POL S 232, 345, 444, or 547


Group 3. Comparative Politics—POL S 226, 320, 330, 523, 524, or 525

Group 4. International Politics—POL S 335, 336, 338, or 534

Group 5. Public Policy and Administration—POL S 321, 305, 306, 553, 564, 580, or 587

Related Fields. Because of the changing nature of the social sciences and because of their increasing applicability in both the public and private sectors, political science majors should take appropriate courses in other social sciences, particularly ECON 201-202, statistics, and computer science.

Public Administration Emphasis in Political Science. The goal of this emphasis is to provide students an educational foundation for jobs at basic levels of public service and for graduate study in public administration. Students should note that an undergraduate degree is usually not considered sufficient educational preparation for a professional career in this field.

Political Science (33 hours)—POL S 121, 232, 319, 321, and 580; students must also elect two of the following courses—POL S 315, 316, 317, and 351; elect one course from POL S 226, 320, 330, 523, and 524; elect one course from POL S 335, 336, 337, 533, and 534; earn a minimum of 3 hours of internship, POL S 490; and complete the 33-hour requirement with political science electives.

Other social sciences (12 hours)—ECON 201 and 202; one course from AMTH 102 and ETH S 100 or 210; either PSY 111 or SOC 111.

Other requirements (15-16 hours)—one of the following courses—ECON 231, SOC 501, STAT 370, or SUPA 301; one of the following courses—SOC 312 or SUPA 307; both ACCT 210 and 220; and one of the following courses—CS 105, DS 495, or PADM 625.

Electives (12 hours)—ENGL 210, HIST 131 and 132, PHL 144, SOC 334; ACCT 250; FIN 340 and 612; HRM 466, 664; and 666; MGMT 360, 362, 430, and 462; POLS 560; SUPA 501.

Lower-Division Courses

POL S 103. Games Nations Play: Problems in International Relations (3). Familiarizes students with a number of international problems to develop a sensitivity to international problems that will be a part of their lives and to create
framework in which the students can analyze the international problems they encounter in the future.

**POL S 110. Russian Studies (3).** Cross-listed as RUS 110 and HIST 110. Team-taught by faculty from history, political science, and modern and classical languages and literatures. Prepares students wishing to pursue additional courses and/or programs in Russian history, Russian language and literature, Russian government and politics, and/or international relations, including business. Covers medieval, czarist, Soviet, and present day (post-Soviet) Russia.

**POL S 121. American Politics (3).** General education introductory course. An analysis of the basic patterns and structure of the American political system emphasizing policies and problems of American politics.

**POL S 150. Political Science Workshop (1-3).** Prerequisite: instructor's consent.

**POL S 153. Model United Nations (2-4).** A workshop to prepare students to participate effectively in various model United Nations, especially the Midwest Model U.N. in St. Louis.

**POL S 210. Introduction to International Relations (3).** General education further study course. Examines approaches to the study of international relations. Includes foreign policy, international conflict and conflict management, international organizations and law, development, and globalization. Either POL S 220 or 336, but not both, may be accepted toward a major in history.

**POL S 226. Comparative Politics (3).** General education introductory course. Analyzes the basic patterns and structures of Western democratic and political systems, transitional systems, and dictatorial or totalitarian systems.

**POL S 232. Basic Ideas in Political Theory (3).** General education issues and perspectives 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.

**Upper-Division Courses**

**POL S 317. Urban Politics (3).** General education further study course. 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.

**POL S 318. Political Parties (3).** General education further study course. The role of political parties in the American political decision-making process at the national, state, and local levels.

**POL S 319. State Government (3).** General education further study course. Examines the role of the states in the federal system and compares state politics and their political institutions.

**POL S 320. Politics of Developing Areas (3).** General education further study course. Surveys the political systems in Latin America, Africa, the Middle East, and south and southeastern Asia. Special attention to colonialism as a system, the effects of colonialism, and patterns of emerging nations.

**POL S 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; public personnel administration; political, judicial, and other controls over the administration.

**POL S 325. Women in the Political System (3).** Cross-listed as WOM S 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. Prerequisite: 6 hours of social science or instructor's consent.

**POL S 330. Post-Communist Europe (3).** Systematically studies contemporary political developments in the former Soviet Union and East Europe. Examines major policy-making institutions and processes and considers the fundamental principles on which the political system is based. Includes selection of leaders and their roles in policy-making; legislative bodies; organization and representation of interest groups; political parties and elections; political aspects of the educational system, the media, religious institutions, and ethnicity.

**POL S 336. International Organizations (3).** General education further study course. Focuses on the role of international organizations in the international system. Emphasizes the United Nations. Also covers some regional organizations. Either POL S 220 or 336, but not both, may be accepted toward a major in history.

**POL S 337. Causes of War and Peace (3).** General education further study course. This course explores the cause of war on three different levels of analysis: international, domestic, and individual. It examines historical conflicts as well as more recent wars, and the diplomatic efforts that have been made to achieve lasting peace settlements.

**POL S 345. Classical Medieval Political Theory (3).** General education further study course. Examines the beginnings of Western political philosophy through works of Plato and Aristotle. This original body of political ideas dominated the Western world for more than 2,000 years. Traces the changes in emphasis that occurred in this tradition through the Roman Stoics and the religious philosophers of the Middle Ages. Familiarity with these early political ideas is a major contribution to understanding subsequent political philosophies.

**POL S 353. Model United Nations (2-4).** A workshop to prepare students to participate effectively in various model United Nations, especially the Midwest Model U.N. in St. Louis.

**POL S 358. American Political Thought (3).** General education further study course. Considers selected topics in the development of political ideas in the United States.

**POL S 390. Special Topics in Political Science (1-3).** General education further study course. An analysis of selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit.

**POL S 398. Directed Readings (1-3).** For exceptional students to meet their needs and deficiencies. Repeatable for credit. Prerequisites: senior standing and departmental consent.

**POL S 444. Modern Political Theory (3).** General education further study course. Continues the study of Western political philosophy beginning with the decisive break with the classical tradition made by Machiavelli early in the 16th century. Studies major philosophers Hobbes, Locke, and Rousseau, known as philosophers of the social contract who exercised a great influence on the creation of the American political system. Also studies Marx, a political thinker who moves strongly in the direction of 20th century political philosophy. Philosophers of this period have collectively had a profound impact on political life in this century.

**POL S 481. Cooperative Education in Political Science (1-3).** Provides practical experience to complement the student’s more formal political science curriculum. Student programs must be approved by the department. Offered On/Cr only.

**POL S 490. Internship in Government/Politics. (3-6).** (Washington, 6; Topeka, 3). Credit for an approved work experience in a public, quasi-public, or governmental agency, including an academic component. Washington intern participates in the program co-sponsored with the University of Kansas for which an on-site coordinator is provided. Kansas legislative intern spends two days per week in Topeka while the legislature is in session. Both internships offered each spring semester. Prerequisite: sophomore or upper-class standing; Pol S. 121 or equivalent, and instructor’s consent.

**Courses for Graduate/Undergraduate Credit**

**POL S 523. Government and Politics of Latin America (3).** General education further study course. An examination of the
POL S 524. Politics of Modern China (3). General education further study course. Studies China's political system since 1949 in terms of non-Western goals and ideas of social organization. Uses themes of political integration and political development to minimize distortion or cultural bias. Examines the roots of the political system, the system as it is now, and the goals China is striving to realize. Some assessment about the future development of communism in China. Includes concepts of communism and the ideological heritage; political culture; political leadership; political succession; political participation; the Chinese Communist Party; political communications and socialization; legal development; policy choices; and major events, such as the Hundred Flowers Campaign, Great Leap Forward, and the Proletarian Cultural Revolution.

POL S 533. U.S. Foreign Policy (3). General education further study course. This course explores the dynamic decision making process in the development of U.S. foreign policy. It 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.

POL S 534. Problems in Foreign Policy (3). General education further study course. Examines domestic and international problems associated with U.S. foreign policy.

POL S 547. Contemporary Political Theory (3). General education further study course. Introduces the radically new ideas that emerged in the last century as a result of Darwin's theory of evolution, the doctrine of socialism, and the growth of modern science and explores their impact upon political thought. Although the multiplicity of philosophies makes generalization difficult, most of them draw strength from common sources. Studies philosophers such as Hans Kelsen, William Barrett, Friedrich Nietzsche, and John Dewey. Covers the importance of these new philosophies upon political structures and issues.

POL S 551. Public Law (3). General education further study course. An analysis of the role of appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasizes judicial review of state and federal legislation, the separation of powers, federalism, the taxing power, and the commerce clause.

POL S 552. Civil Liberties (3). General education further study course. An analysis of the role of the appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasizes the guarantees of the Bill of Rights and the 14th Amendment.


POL S 600. Senior Seminar (3). Required of all political science majors. Includes segments on each of the four major fields of the discipline: American politics, comparative politics, international relations, and political theory; so students can integrate their prior learning experiences within the discipline. Prerequisite: senior status; 18 hours of POL S courses.

POL S 700. Advanced Directed Readings (3). Repeatable for credit. Prerequisite: departmental consent.

POL S 701. Method and Scope of Political Science (3). Emphasizes philosophy of science and methodology (as distinguished from method and technique) and exposes students to recent works of methodological importance in the various subfields within the discipline. Prerequisite: departmental consent.

POL S 703. Professional Seminar in Political Science (3). Introduces entering graduate students to the various subfields of the discipline. Should be taken in the first or second semester of graduate study.

POL S 710. Public Sector Organizational Theory and Behavior (3). Cross-listed as P ADM 710. Reviews the scope of the field of public administration including a survey of key concepts and schools of thought underlying the field and identification of issues shaping the future development of the field.

POL S 725. Public Management of Human Resources (3). Cross-listed as P ADM 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 nature, equal employment opportunity, productivity, unionization, and collective bargaining problems found in the public sector.

POL S 750. Workshop (2-4). Prerequisite: instructor's consent.

Courses for Graduate Students Only

POL S 810. Seminar in Comparative Government (3). The comparative study of selected aspects of the politics and institutions of foreign governments. Prerequisite: departmental consent.

POL S 835. Seminar in International Relations (3). Analysis of special problems in, and approaches to, the study of international relations. Prerequisite: departmental consent.

POL S 856. Seminar in American Politics and Institutions (3). Analytical study of selected topics in American political behavior emphasizing individual research. Repeatable for credit when content differs substantially. Prerequisite: departmental consent.

POL S 865. State and Local Government Finance (3). Cross-listed as ECON 865, HBST 865, and P ADM 865. An analysis of state and local government expenditure and revenue systems with an introduction to state and local financial administration. Prerequisite: P ADM 765 or instructor's consent.

POL S 867. State and Local Government Budgeting (3). Cross-listed as P ADM 867. Analysis of the development and utilization of the budgetary process in government administration emphasizing the budget in relation to its role in policy formulation and management. Prerequisite: P ADM 865 or instructor's consent.


POL S 873. Seminar Paper Option (3). Requires students to extensively revise a seminar paper they wrote within their area of emphasis. Paper is written under the direction of a faculty member and orally defended before a committee of three or more faculty including a chairperson. Prerequisite: departmental approval.

POL S 874. Internship (3-6). S/U grade only. An intensive applied learning experience supervised by a University department or committee. To receive credit, the student must secure approval of a written report from his/her own department. Prerequisite: departmental consent.

POL S 875. Research Design (3). S/U grade only. Requires the development of a research design for the thesis. The design must be submitted to a departmental committee for evaluation and approval. Prerequisite: departmental consent.

POL S 876. Thesis (1-3).

Psychology (PSY)

The course of study is designed to provide a broad knowledge of the fields of psychology. Accordingly, the major requires students to choose courses from foundation areas (Group 1); traditional human oriented areas (Group 2); and applied areas (Group 3).

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.

Major. The major for the Bachelor of Arts (BA) degree consists of a minimum of 30 hours in psychology, at least nine of which are earned at Wichita State. PSY 111 is prerequisite for all higher number psychology courses. All BA majors are required to take PSY 111, 401, 411, and 601. In addition, 6 hours must be taken from each of the groups listed below.

Group 1: PSY 302, 322, 333, 342, 402, 502, 512, 522, 532, or 622

Group 2: PSY 304, 324, 334, 404, 414, 514, 524, 534, or 544

Group 3: PSY 306, 316, 326, 336, 406, 416, 426, 516, 526, 536, 546, 556, 566, or 720

Minor. The minor consists of a minimum of 15 hours selected in consultation with the student’s major advisor.
Certification by the State of Kansas as a substance abuse counselor is awarded through the Kansas Association of Addiction Professionals (KAAP), to students who have obtained a minimum of an Associate degree with 27 hours of specific substance abuse course work. Contact the Psychology Department for current coursework offerings in this area.

Lower-Division Courses

PSY 108. Stress and Stress Management (3, 2R; 2L). Introduces the theories of stress and surveys major stress management techniques. Discussion emphasizes the conceptualization of stress and its social impact complemented by stress reduction techniques. Does not satisfy the University's social science requirement nor does it count for a psychology major.

PSY 111. General Psychology (3). General education introductory 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 118. Assessment Planning, Case and Records Management (2). An introduction to differential criteria for evaluating alcohol and other types of substance abuse and dependence, in relation to other mental health issues. Includes types of documentation, record keeping, and case management required of substance abuse counselors. Does not satisfy WSU's social science requirement, nor does it count toward a psychology major.

PSY 128. Pharmacology for Substance Abuse Counselors (1). Covers states of intoxication, withdrawal, and side effects associated with alcohol and substance abuse. Includes cross addictions and effects of combining psychoactive drugs with prescribed and over-the-counter medication. Does not satisfy WSU's social science requirement, nor does it count toward a psychology major.

PSY 138. Ethics and Confidentiality in Substance Abuse Counseling (1). Covers substance abuse client rights, state and federal regulations concerning client confidentiality, and professional code of ethics and credentialing requirements of substance abuse counselors. Does not satisfy WSU's social science requirement, nor does it count toward a psychology major.

PSY 148. Field Experience in Substance Abuse Counseling (2). This course is solely for students completing the Substance Abuse Counseling Training Curriculum. Students will locate a placement in an agency that provides substance abuse counseling services. Their field work will provide students with experience in the tasks required of a substance abuse counselor. Class sessions will focus on integrating treatment agency experiences with classroom instruction. Does not satisfy WSU's social science requirement, nor does it count toward a psychology major. Offered Cr/NC only.

PSY 150. Workshop in Psychology (1-4).

PSY 158. Medical High Risk Issues in Substance Abuse (1). Covers sexually transmitted diseases, fetal alcohol syndrome, and other physiological and neurological consequences associated with alcohol and substance abuse. Does not satisfy WSU's social science requirement, nor does it count toward a psychology major.

PSY 168. Multicultural Issues in Substance Abuse (2). Covers how cultural, ethnic, racial, and other special population differences affect the use and abuse of addictive substances. Also includes discussion of culturally appropriate counseling techniques. Does not satisfy WSU's social science requirement, nor does it count toward a psychology major.

Upper-Division Courses

PSY 302. Psychology of Learning (3). General education further course. This course explores basic principles of how organisms learn and highlights key concepts such as reinforcement and punishment, generalization of behavior across contexts and extinction of specific behaviors. Important research, theoretical issues and current trends are discussed. Prerequisite: PSY 111.

PSY 304. Social Psychology (3). General education further course. The study of perception, affiliation, 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: PSY 111.

PSY 306. 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: PSY 111.

PSY 316. Industrial Psychology (3). General education further course. Introduces the many roles of scientific psychology in the selection, training, evaluation, and general welfare of workers in the workplace. Includes employee morale, job satisfaction, leader behavior, fair employment practices, and sources of worker stress. Prerequisite: PSY 111.

PSY 322. Cognitive Psychology (3). General education further 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: PSY 111.

PSY 324. Psychology of Personality (3). General education further course. An examination of psychoanalytic, behavioral, trait, and other contemporary theories of human personality. Covers 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: PSY 111.

PSY 326. Introduction to Group Counseling (3). Surveys contemporary theories and techniques of group counseling. Includes a comparison of varying group leader roles and styles and discussion of different types of counseling groups and their functions. Emphasizes therapeutic factors and processes in group counseling. Prerequisite: PSY 111.

PSY 332. Psychology of Perception (3). General education further course. An exploration of 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: PSY 111.

PSY 334. Developmental Psychology (3). General education further 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: PSY 111.

PSY 336. Alcohol Use and Abuse (3). General education further course. Study of the individual, social and cultural aspects of alcohol use. Investigates both non-problem and problem drinking, treatment of alcoholism, prevention of alcoholism and alcohol-related problems, and the needs of special populations. Also includes investigation of the use and abuse of drugs other than alcohol. Prerequisite: PSY 111.

PSY 342. Psychology of Motivation (3). General education further course. Examines the psychological and biological forces leading to goal-directed acts to understand the complexity of influences upon behavior. Motivational topics include reward and punishment, stress, aggression, achievement, and the role of the brain structures in influencing organized behavior. Prerequisite: PSY 111.

PSY 386. 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. Course 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: PSY 111.

PSY 401. 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. Prerequisites: PSY 111 Q and MATH 111 or 112.

PSY 402. Psychology of Consciousness (3). General education further course. Examines consciousness from two perspectives: as a psychological state ranging from comas to...
"peak experiences" and as a framework for knowledge. Covers research on split-brains and dissociated personalities from the second perspective. Prerequisite: PSY 111.

>PSY 404. Psychology of Aging (3). General education further study course. Cross-listed as GERON 404. An examination of 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. Special emphasis on the strengths of the elderly and prevention of psychological problems of the elderly. Prerequisite: PSY 111.

>PSY 462. Psycholinguistics (3). General education further study course. Cross-listed as LING 545. Survey of psychological, linguistic, and informational analyses of language. Includes the performance-competence distinction, child development of speech, animal communication systems, and the relation of language to thought. Prerequisite: PSY 111.

>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. Offered Cr/NC only. Prerequisite: PSY 111.

>PSY 505. Psychotherapy (3). General education further study course. A study of the philosophical, historical, and personal aspects of psychotherapy. Field trips supplement lectures. Prerequisite: one course from Group I.

>PSY 508. Psychology Tutorial (3). Selected topics in psychology. Repeatable for a maximum of 6 hours credit. Instructive consent may be required. Check Schedule of Courses. Prerequisite: PSY 111.

>PSY 514. Psychology of Health and Illness (3). A survey of the relationships between psychology and physical health and illness. Includes stress and coping, health habits, symptom perception, health care provider-client relationships, and prevention. May include a self-study of life style and behavior in relation to health and illness. Prerequisite: PSY 111.

>PSY 516. Drugs and Human Behavior (3). General education further study course. A survey of the actions and effects of use of legal and illegal psychoactive drugs and of the use of prescription drugs in the treatment of psychological disorders. Details social-cultural, personal, and situational determinants and consequences of drug use and abuse. Prerequisite: PSY 111.

>PSY 522. Biological Psychology (3). General education further study course. A review of the biological foundations of behavior. Includes the evolutionary basis of behavior, behavior genetics, a critical analysis of brain-behavior relationships, and the role of hormones in behavior, and neurochemical correlates of behavior. Prerequisite: PSY 111.

>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: PSY 324.

>PSY 566. Perspectives on Self-Help Groups (3). Cross-listed as NURS 566 and SOC W 566. Provides an interactive format that constitutes a community resource for health and human service professionals and promotes an interdisciplinary understanding of the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and research explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experiences with self-help groups on such topics as addiction, cancer, and other illnesses, eating disorders, bereavement, mental illness, and parenting.

>PSY 601. 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: 15 hours of psychology including PSY 411 or instructor's consent.

>PSY 608. Special Investigation (1-3). Upon consultation with instructor, advanced students with adequate prepara-
PSY 720. Aerospace Psychology (3). Exploration of the many roles of scientific psychology in aviation and aerospace science. Surveys the research and literature in areas such as psychophysiological aspects of flight, environmental effects on human performance in aviation, aircrew skill requirements and training, pilot workload, cockpit control and display systems, and aviation safety. Prerequisite: 15 hours of psychology or instructor's consent.

PSY 750. Psychology Workshop (1-3). Specialized instruction, using various formats in selected topics and areas of psychology. Graded S/U.

Courses for Graduate Students Only

PSY 810. Advanced Research Methods I (4). 3R; 3L. Part one of a two-course sequence aimed at advanced treatment of statistical and research design issues. Statistical methods included are analysis of variance, analysis of covariance, multiple comparisons, and multiple regression. Design issues include research planning, validity, quasi-experimental designs, prediction vs. explanation, and modeling. The associated lab provides basic computer skills for access to the mainframe and some basic training for EXCEL and SPSS for Windows. Prerequisite: instructor's consent.

PSY 811. Advanced Research Methods II (4). 3R; 3L. Continuation of PSY 810. Statistical techniques emphasized are a continuation of multiple regression, structural analyses including AMOS, factor analysis, canonical correlation, and discriminant analysis. Includes advanced design issues. The associated lab provides additional computer skills for EXCEL and SPSS for Windows. Prerequisites: PSY 810 and instructor's consent.

PSY 812. Biological and Philosophical Foundations of Psychology (3). Develops the idea that psychology is a biocultural science. Accordingly, course examines the philosophical foundations of science itself before exploring the biological foundations and contextual nature of psychological science. Readings cover biological factors as they pertain to psychology: evolution, genetics, maturation, functional neuroanatomy, and physiology. Includes critical reviews of genetic determinism, neural localization, and hemispheric specialization. Prerequisite: instructor's consent.

PSY 813. Cognitive/Learning Foundations of Behavior (3). Focuses on how human beings learn, maintain, and modify behavior, and how cognitive knowledge is acquired, maintained, represented, and used. The course serves as an integrated resource of the main issues and the theoretical questions investigated in the psychology of learning and cognition. A basic understanding of classical and instrumental conditioning, and the cognitive processes of memory, language, speech, thought, decision making, and problem solving are provided. Prerequisite: instructor's consent.

PSY 814. Assessment of Personality and Individual Differences (3). Reviews psychometric principles underlying assessment of individual differences in cognition and personality. Major approaches to assessment of normal personality variables are examined. Students self-administer several personality instruments and assess a client under supervision. Prerequisite: instructor's consent.

PSY 815. Social and Developmental Foundations of Behavior (3). Examines basic assumptions, theories and methods in social and developmental psychology. Describes and analyzes research concerning the functional significance of social relationships for development and the embeddedness of behavior in social, ecological and cultural contexts, focusing on a number of substantive issues such as personal perception and social cognition, affiliation and attachment, socialization and interpersonal interaction, social support and social roles and contexts over the life span. Considers the applications of theories of attribution, attitude change, group functioning and attachment to current social problems. Prerequisite: instructor's consent.

PSY 816. Ethics and Psychology (3). Cross listed as PHIL 816. An in-depth analysis of moral issues that arise in the profession of psychology. Provides a detailed familiarization with current moral controversies and ethical reasoning skills that will enable one to address new issues as they arise. Representative topics include informed and voluntary consent, rights of human research subjects, privacy and confidentiality, assessment, conflicting obligations, ownership of research results, multiple relationships in teaching, research and practice, conflicts between therapeutic and forensic roles, objectivity in research, the nature and boundaries of teaching psychology, etc.

PSY 820. Seminar in Human Factors (3). Focuses on a sample of contemporary human factors problems through review of current literature and theory. Content changes as new topics gain prominence internationally. A variety of human factors in the aging population, human factors in airport security and baggage marking, human factors in the workplace, human factors in third-world industrialization. Prerequisites: completion of 9 hours of Foundations of Psychology doctoral courses; for doctoral students from other disciplines, instructor's consent after an interview.

PSY 830. Seminar in Community-Clinical Psychology (3). Introduces basic historical, conceptual, research, methodological, and ethical issues in community-clinical psychology. Examines the responsibilities and roles of psychologists in the promotion of human functioning. Reviews models and determinants of human behavior from individual, developmental, and ecological-contextual perspectives. Details the reciprocal relationship between research and practical applications of psychological knowledge and the application of that knowledge to human psychosocial problems. Prerequisite: instructor's consent.

PSY 840. Seminar in Environmental Psychology (3). Explores contemporary models of environmental psychology including the ecological, social, community, and human factors perspectives along with a historical review of the field. Could include behavior-environment congruence, person-environment fit, social impact assessment, social policy, and the prevention of psychosocial problems through environmental intervention. Prerequisite: PSY 815.

PSY 841. Seminar in Motivation and Emotion (3). Intensive study of theory and research in motivational and emotional processes. Prerequisite: instructor's consent.

PSY 842. Seminar in Psychology of Learning (3). Intensive study of theory and research in learning processes. The study of principles of individual behavior and some of the variables of which it is a function as illustrated by student and performance conditioning, along with some areas of application are included. Prerequisites: PSY 302 and instructor's consent.

PSY 843. Seminar in Psychotherapy (3). Provides an in-depth description and critical analysis of various theories and methods of psychotherapy, an examination of the efficacy of these therapeutic approaches, and a survey of common issues in psychotherapy, such as process and outcome, and client and therapist variables in the therapeutic process. Prerequisites: PSY 311 and instructor's consent.

PSY 910. Doctoral Dissertation (1-3). Graded S/U only. Repeatable for credit. Prerequisite: admission to candidacy and instructor's consent.

PSY 911. Graduate Research (1-3). Individual research. Graded S/U. Prerequisite: advisor's consent and graduate standing.

PSY 920. Internship in Human Factors Psychology (1-3). Repeatable up to 6 hours. A planned placement experience in an off-campus setting, giving the doctoral student an opportunity to apply the principles of human factors psychology. Prerequisite: advisor's consent.

PSY 921. Psychological Principles of Human Factors (3). Focuses on the interaction of people with machines and technology in a variety of environments. Provides depth to the topics surveyed in PSY 366 and serves as a means of integrating cognitive, biological, and perceptual psychology in applied settings. Prerequisite: completion of undergraduate course in cognitive psychology or PSY 813; and instructor's consent after interview for doctoral students from other disciplines.

PSY 922. Seminar in Software Psychology (3). Intensive study of principles and methods of engineering psychology (human factors) applies to the design and evaluation of computer software. Includes research methods, programming as human performance, programming style, software quality evaluation, organizing the programming team, interactive interface issues, and the design of interactive computer systems. Prerequisite: instructor's consent.

PSY 930. Advanced Psychopathology (3). An overview of major categories of psychopathology consistent with the most
PSY 931. Applied Research Methods in Community Settings (3) An examination of research methods which are used in community settings to develop and evaluate programs. Regarding program development, there is discussion of different data collection strategies used to assess community needs. Explores a variety of topics related to program evaluation including research design issues, developing criteria of merit, and the politicization of program evaluation. Prerequisite: instructor’s consent.

PSY 932. Internship in Clinical Psychology (1-3). Graded SU only. A planned one year supervised clinical internship at an off-campus site approved by APPIC for training in clinical psychology. Gives the clinical student an opportunity to further develop and employ clinical skills in an applied supervised training setting. Prerequisite: advisor’s consent.

PSY 933. Practicum in Clinical Psychology (1-3). Provides supervised practice working in community-based organizations on such tasks as needs assessment, program development, and program evaluation. Organizational settings may be in the areas of mental health, health, and education. Services may be prevention-oriented. Repeatable for credit. Graded SU only. Prerequisite: instructor’s consent.

PSY 934. Practicum in Community Psychology (1-3). Provides supervised practice working in community-based organizations on such tasks as needs assessment, program development, and program evaluation. Organizational settings may be in the areas of mental health, health, and education. Services may be prevention-oriented. Repeatable for credit. Graded SU only. Prerequisite: instructor’s consent.

PSY 935. Seminar in Cognitive-Behavioral Assessment (4). Surveys issues of reliability and validity; provides description, critical analysis, and practice in clinical use of such psychological assessment methods as interviewing, observation, self-report, and standardized intelligence and personality tests. Focuses upon comprehensive clinical assessment, including integration and reporting of assessment data for treatment planning. Prerequisite: instructor’s consent.

PSY 936. Seminar in Cognitive-Behavior Therapy (4). 3R; 3L. Reviews the theoretical and empirical support for specific behavior therapeutic practices. Approaches may include systematic desensitization, flooding, contingency management techniques and cognitive therapies. Also discusses the interface between behavioral assessment and clinical practice. Prerequisite: instructor’s consent.

PSY 937. Seminar in Community and Organizational Intervention (4). 3R; 3L. Focuses on the development and/or change of community-based programs and organizations and the implementation and funding of community-based programs. Explores theoretical and conceptual basis of these interventions, drawing on material from community psychology, public health, and applied social psychology. Helps prepare students to become involved as professionals in community-based health or mental health interventions in a variety of roles as program developers, proposal writers, program implementers, and program managers. Prerequisite: instructor’s consent.

PSY 938. Seminar in Prevention (3). Reviews the historical, theoretical, and empirical bases of prevention psychology. Presents contemporary models of prevention psychology including the ecological, social, and community mental health perspectives. Could include primary prevention, empowerment, community-based prevention, self-help, social policy, and the prevention of psychosocial problems through environmental intervention. Prerequisite: instructor’s consent.

PSY 940. Development of Abnormal Behavior (3). Considers the descriptive characteristics of abnormal behavior; a developmental perspective. Considers the ecological, social-environmental, personal, and genetic-behavioral contexts and causes of such behavior. Discusses implications for preventative and clinical interventions. Prerequisite: instructor’s consent.

PSY 941. Measurement of Human Performance (3). Develops the logic of fundamental measurement and applies it to human performance from detection to decision. Covers Signal Detection Theory (SDT) and compares it with threshold theory. Demonstrates procedures for assessing both detection and discrimination under both SDT and threshold theory. Develops information measurement and utility theory and applies it to the transmission and coding of information and to decision making respectively. Examines measures of work reliability and well-being. Prerequisite: instructor’s consent.

PSY 942. Seminar in Behavioral Development (3). A critical analysis of the concept of development and of theories of behavioral development. Prerequisite: instructor’s consent.

PSY 944. Seminar in Consultation (3). Examines theories and techniques of psychological consultation as applied to individuals, organizations, and systems. Prerequisite: instructor’s consent.

PSY 945. Seminar in Current Developments (3). Intensive study of current issues, techniques, research, and application. Repeatable for different topics for a maximum of 6 hours. Prerequisite: instructor’s consent.

PSY 946. Seminar in Motor and Sensory Processes (3). Focuses on the perceptual control of action. Reviews how the sensory systems operate with emphasis on vision. Covers anatomy and physiology of the motor system. Selected examples on how these concepts relate to human factors psychology.

PSY 947. Seminar in Perception (3). Intensive study in the theory and research in perceptual processes. Prerequisites: PSY 332 or equivalent, and instructor’s consent.

Public Administration
See Urban and Public Affairs, Hugo Wall School of.

Religion (REL)
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 in religious studies offers an additional option.

Minor. A minor in religion requires a minimum of 15 hours. A maximum of 6 may be taken at the 100 level.

Lower-Division Courses


REL 150. Workshop in Religion (4).

Upper-Division Courses

REL 311. Old Testament Topics (3). An in-depth study of a major facet of the history of the Hebrew Bible, such as prophecy, law, covenant, historiography, and wisdom, or a genre of biblical literature, such as poetry or narrative.


REL 327. Magic, Witchcraft, and Religion (3). Cross-listed as ANTH 327. An examination of 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.

REL 339. Religion in America (3). Cross-listed as HIST 339. Surveys various religious traditions in American history from colonial times to the present. Discusses how religious 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; tensions between liberal and traditional religious forms; the prophetic and apocalyptic traditions in America; and the recent edition of the Diagnostic and Statistical Manual of Mental Disorders. Reviews descriptive features of each diagnostic category and information on the clinical course and etiology. Examines the important features of psychopathology and padeutic approaches to the study of psychopathology. Pre-requisite: instructor’s consent.
Lower-Division Courses

SC WK 201. Introduction to Social Work and Social Welfare (3). Introduction to the profession of social work. Includes history of social work and social welfare; introduction to the helping process; examination of social problems, policies, and services, and current trends in social services and programs. Community service activities are required. Prerequisites: SOC 111 and PSY 111.

Upper-Division Courses

SC WK 300. Perspectives on Social Welfare (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.


SC WK 481. Cooperative Education in Social Work (1-4). A practical experience with public and private sector agencies which address 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 as elective credit not to exceed 12 hours. Graded Cr/NC.

Courses for Graduate/Undergraduate Credit

SC WK 500. Social Welfare Development and Policy Analysis (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. Prerequisites: POL S 121 or HIST 132, SC WK 300.

SC WK 502. Social Work Interviewing: Strategies and Techniques (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 experimental learning. Required for social work majors.

SC WK 512. Social Work Research I (3). This course provides an introduction to methods of social work research. Examines both qualitative and quantitative methodologies. Students study these methods to social work practice. Both qualitative and quantitative methodologies are examined and the foundation for advanced social work research.

SC WK 541. Women, Children, and Poverty (3). General education issues and perspectives course. Cross-listed as WOM S 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. Prerequisite: 6 hours of social science.

SC WK 551. Independent Studies (1-3). Individual projects for social work students who are capable of independent work in areas of special interest. Repeatable for credit not to exceed 6 hours. Prerequisite: Instructor's consent.

SC WK 560. Person in Society I (3). Provides a beginning theoretical framework within which the integration of prior knowledge can be made regarding physical, mental, and social development of the human being, perspectives on American culture and subcultural variations and their effect on human adaptability in the social environment, and the relationship of those entities to beginning professional social work practice. Prerequisite: School approved human diversity course (3 cr).

SC WK 561. Person in Society II (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, majority/minority relations, organizational dynamics, community structures, and the effects of discriminatory practices and policies on minority groups and communities in our society. Prerequisite: SC WK 560.

SC WK 566. Perspectives on Self-Help Groups (3). Cross-listed as NURS 566 and PSY 566. Provides an interactive format that constitutes a community resource for health and human service professionals and promotes an interdisciplinary understanding of the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and research, explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experiences with self-help groups on such topics as addiction, cancer and other illnesses, eating disorders, bereavement, mental illness, and parenting.

SC WK 602. Practicum I (4). Placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing performance of basic practice skills and understanding of the social welfare agency and its role in the community service network. To be taken concurrently with SC WK 601 except by program consent. Prerequisites: SC WK 502 and program consent.

SC WK 603. Generalist Practice II (3). Focuses on developing generalist social work practice knowledge and skills at the group, organizational, and community levels. Presents macro practice roles and skills and links to group and individual practice skills for beginning-level social work interventions with systems of all sizes. Must be taken concurrently with SC WK 605. Prerequisite: SC WK 601.

SC WK 604. Advanced Social Work Research (3). A critical look at practice, services, and professional issues, using social work research. Analyzes current social work practice as well as future directions. Prerequisite: SC WK 512 and an approved research methods course.

SC WK 605. Practicum II (5). Placement in community social welfare 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 welfare field. Prerequisite: SC WK 602.

SC WK 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. Prerequisite: instructor or program consent.

SC WK 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. Co-requisite: SC WK 720.

SC WK 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: SC WK 700 or instructor’s consent.

SC WK 710. Micro Human Behavior and the Social Environment (3). Provides theories and knowledge of human biopsychosocial development and functioning of individuals and families, and of the transaction between individuals and family members 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.

SC WK 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 on understanding change and improvement strategies which further social justice in communities and organizations. Prerequisite: SC WK 710 or instructor’s consent.

SC WK 716. Social Welfare Development (3). Critical examination of the history of American social welfare institutions, policies, and the social work profession as a context for understanding contemporary social policy issues. Provides the knowledge and skills needed to effectively enact policy in practice with clients, and develop social policy both within their agencies and in the larger political arena. Students develop an appreciation for the profession’s ethical commitment to promote social justice and the general welfare of society and to improve social institutions to meet basic human needs. Prerequisite: program approval.

SC WK 717. Social Welfare Policy and Analysis (3). Surveys social welfare institutions, emphasizing the strengths and weaknesses of programs within the context of the social problems they address. The assessment of these structures and provisions enables the development and use of frameworks for analyzing social policies and evaluating social 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 use of professional roles in shaping the processes of policy formulation in agency and governmental areas. Prerequisite: SC WK 716.

SC WK 720. Field Practicum I (3). Placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Includes developing understanding of the social welfare agency and its role in the community service network. Co-requisite: SC WK 700.

SC WK 721. Field Practicum II (3). Requires placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Promotes an understanding of the social welfare agency and its role in the community service network. Co-requisite: SC WK 702.

SC WK 730. Graduate Topics in Social Work (1-3). Specialized instruction using a variable format in a social welfare relevant subject. Course may be offered together with SC WK 150. Prerequisite: instructor’s consent.

SC WK 731. Social Work and the Law (3). Students will develop and integrated, advanced generalist framework for interdisciplinary, advanced generalist practice within a legal setting. Students will develop a basic knowledge of the law, the roles social workers play within the legal system and the issue of crime and social justice with respect to race and ethnicity. Students will develop an understanding of the law and regulations of social work practice and the actions of social workers and their clients alike. As legal and social problems are often interdependent, students will develop skills in communicating with attorneys to enhance their effectiveness in resolving clients’ problems.

SC WK 750. Social Work Workshops (1-5). 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 up to a total of 6 hours of credit.

SC WK 751. Fundamentals of Social Work Research (3). Provides an introduction to the components of quantitative research design and 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 methods employed in current social work research and the potential benefits of applying these research findings to social work practice. Prerequisite: program approval.

SC WK 760. Advanced Standing Seminar (3). Builds upon the advanced standing student’s knowledge, experience, and skills by integrating social work theory, values, ethics, methodology, and literature. Based in the generalist perspective. Prepares students for the advanced generalist practice course work in the MSW program.

SC WK 799. Directed Study (1-3). Individual study with a focus developed in collaboration with a departmental faculty member. Allows students to pursue and area of special interest. Repeatable for up to 6 credit hours. Prerequisite: departmental consent.

Courses for Graduate Students Only

SC WK 810. Cultural Competency for Advanced Generalist Practice (3). Examines the impact of culture, race, and ethnicity on client/worker interactions. Presents practice theories and interventions for culturally competent advanced generalist practice with different populations. Emphasizes experiential learning of cultural competence.
skills to provide services cross-culturally. Prerequisite: program consent.

SC WK 816. Advanced Generalist Practice with Multiple Systems (3). Provides a critical examination of theories of practice relevant for advanced generalist practice across systems. Theories included address the biological, psychological, social, and spiritual dimensions of human behavior. Emphasizes theories applying to social work intervention with individuals, family systems, and small groups. Prerequisite: program consent.

SC WK 817. Community Impersonal and Social Administration (3). Provides students with advanced generalist knowledge and skills for organizing and empowering communities and managing community-based organizations. Examines the history, strategies, and approaches relevant to community organizing. Focuses upon intervention and administrative skills to meet organizational and community needs. Emphasizes understanding the particular needs of minority communities. Prerequisite: program consent.

SC WK 822. Field Practicum III (4). Placement in community social welfare agencies for supervised periods applying direct and indirect practice. Provides students the opportunity to integrate and apply advanced generalist practice theory within their field experience. Students are required to demonstrate increased knowledge and skills in practice, research, and evaluation across multiple-level systems. Requires 350 hours of agency service. Prerequisite: program consent.

SC WK 823. Field Practicum IV (4). Continuation of SC WK 822. Requires 350 hours of agency service. Prerequisite: program consent.

SC WK 832. Social Work Practice in the Schools (3). Conveys an understanding of systematic intervention in schools using various intervention modalities. Focuses on the roles of social workers in schools, including provision of direct service, consultation, advocacy, program development, and evaluation, as well as liaison functions with families and community systems. Students integrate an understanding of child development, familial, and school crises that affect child development and the importance of the social worker/parent relationship.

SC WK 833. Family Therapy (3). Examines theoretical approaches to social work assessment and intervention with families. Reviews and evaluates various approaches to family therapy, and focuses on assessment and intervention with different types of families (e.g., differing levels of functioning, ethnicity, vulnerability, and oppression). Examines theoretical constructs, strategies for change, and use in actual social work intervention for such models of family therapy as structural, Bowenian, strategic, experiential, cognitive/behavioral, psychodynamic, and solution-focused.

SC WK 851. Directed Project (1-3). A project conducted under the supervision of an academic advisor for the nonthesis option. Requires the completion of a written report and an oral presentation of the research to the faculty. Prerequisite: consent of academic advisor.

SC WK 860. Integrative Seminar for Advanced Generalist Practice (3). Integrates social work theories, knowledge, and skills to develop each student's framework for advanced generalist practice. Emphasizes applying social work theories in practice, the prevention of violence. Develops skills in applying a wide array of social work roles within a multi-level practice environment. Prerequisite: SC WK 816.

SC WK 870. Clinical Assessment for Advanced Generalist Practice (3). Uses a biopsychosocial perspective to understand problematic patterns of functioning identified as diagnoses in the DSM-IV. Students critically examine the DSM-IV as a basis for social work assessment and learn its use within an advanced generalist practice perspective. Prerequisite: program consent.

Sociology (SOC)

Sociology—the scientific study of society and human interaction—is an opportunity to learn a great deal about yourself and the society around you. A major in sociology provides students with an understanding of human behavior in personal relations such as the family and friendships and how human behavior is affected by larger societal influences such as the economy, bureaucracies, and social problems. This understanding is useful in such fields as human services, business, and law.

Major. The study of sociology mandates specific skills for interpreting information and observations. Therefore, students majoring in sociology are required to enroll in the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>SOC 111, Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 312, Introduction to Social Research</td>
<td>3</td>
</tr>
<tr>
<td>SOC 501, Sociological Statistics</td>
<td>3</td>
</tr>
<tr>
<td>SOC 512, Measurement and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>SOC 545, Sociological Theory</td>
<td>3</td>
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</tbody>
</table>

In addition to the five courses listed above, majors also must enroll in 15 hours of electives to complete the 30-hour major. With this flexibility, students can select specific areas of concentration such as deviant behavior, family, gender, gerontology, social organization, intimate relations, and urban sociology—or some combination of these specialties. Depending on your interests and goals, certain courses in related departments that meet your particular needs and are approved by your advisors may be counted toward a sociology major. No more than 6 hours of such courses may be included.

Minor. A minor in sociology consists of at least 15 hours, including SOC 111, Introduction to Sociology (3 hours) and at least 6 hours of courses, 300+.

Lower-Division Course

>SCC 111. Introduction to Sociology (3). General education introductory 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.

Upper-Division Courses

SOC 301. Computers and Society (3). General education further study course. Examines the interactions between humans and microcomputers and studies the effect of microcomputers upon social interaction and stratification within society. Focuses upon the work setting and the family. Includes new social roles (programmer, hacker, the cyberphobic, the cyberphile); the computer as a family member; the computer as a power vendor in the work setting; computer deviance; and the computer and the disadvantaged. Utilizes a cross-cultural and historical perspective where appropriate.

SOC 312. Introduction to Social Research (3). Generally offered fall semester only. A survey of the many research techniques found in sociology and related fields. Stresses conceptual understanding of all phases of the research process. Prerequisite: SOC 111.

SOC 315. Marriage and Families (3). General education further study course. Emphasizes dating and marriage processes as they exist in the United States today. Examines the different family forms that exist in the U.S. and around the world and considers historical change. Aids students in the acquisition of a sociological perspective of the marriage process through an examination of social class, ethnicity, sex roles, dating cohabitation, and human sexuality. Emphasizes marital interaction, parenthood, family violence, marital dissolution, and the future of marriage.

SOC 316. The American Male (3). General education issues and perspectives course. Cross-listed as WOM 316. Examines the male role in America from a variety of sociological perspectives and within particular settings, for example, work, family, and leisure. Other relevant topics include socialization, ethnicity, and young developmental stages and crises. Discusses changing male roles produced by strains and conflicts in contemporary America.

SOC 318. Environmental Sociology (3). Explores relationships between humans and their environment. Emphasizes social variations in environmental usage, other species and population, resource utilization, pollution, and possible solutions to environmental problems.

SOC 320. Contemporary Social Problems (3). General education further study course. Examines the theoretical frameworks and research methods used to examine contemporary social problems and applies these frameworks to issues of concern within contemporary society. Includes deviance, social inequality, and discrimination. Prerequisite: SOC 111.

SOC 322. Deviant Behavior (3). General education further study 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: SOC 111.
>SOC 325. Parenting (3). General education further study 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 330. Social Inequality (3). General education further study course. An analysis of status, class, and caste in various societies, especially in American society. Also includes the relationship of social inequality to various social institutions. Prerequisite: SOC III.

> SOC 336. Work in Modern Society (3). General education issues and perspectives 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 338. Health and Lifestyle (3). General education further study course. Views health as a social characteristic which is defined and influenced by social processes. Studies the social resources for health which exist in social norms, relationships, and networks. Identifies variations in personal health practices according to characteristics such as social class and marital status. Considers changing social standards for health and the stigma given to poor health. Examines socially created risks to health and organized efforts to change unhealthy environments. Investigates the medicalization of society. Prerequisite: SOC III or departmental consent.

> SOC 350. Social Interaction (3). General education further study course. Studies the effects groups have on individuals. Primary focus on the symbiotic interactional 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: SOC III.

> SOC 398. Travel Seminar (1-4). An 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: departmental consent.

> SOC 481. Cooperative Education in Sociology (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. Cr/Nr or equivalent. Prerequisite: instructor's consent.

Courses for Graduate/Undergraduate Credit

SOC 501. Sociological Statistics (3). Generally offered fall semester only. Application of descriptive and inferential statistics to sociological problems. Includes measures of central tendency, dispersion and association, simple linear regression, hypothesis testing, and analysis of variance. Prerequisites: SOC III, SOC 312, MATH 311 or 331 or equivalent.

SOC 512. Measurement and Analysis (4). Generally offered spring semester only. An applied study of the conceptual tools and methodological skills needed to conduct quantitative sociological research. Prerequisites: SOC III, 312, 501.

> SOC 513. Sociology of Aging (3). General education further study course. Cross-listed as GERON 513. Analyzes the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: SOC III.

> SOC 515. Sociology of the Family (3). General education further study course. Analyzes American family behavior, including the selection of marriage partners, the husband-wife and parent-child relationships, and the relation of these patterns of behavior to other aspects of American society. Prerequisite: SOC III.

> SOC 516. Sociology of Gender Roles (3). General education further study course. Cross-listed as WOM S 516. Analyzes the institutional sources of male and female roles, the source of changes in these roles, the resultant ambiguities and conflicts. Prerequisite: SOC III.

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. Prerequisite: SOC III.

SOC 520. Family and Aging (3). Cross-listed as GERON 520. Analyzes the families and family systems of older people. Emphasizes demographic and historical changes, caregiving, and intergenerational exchanges and relationships. Prerequisites: SOC III or GERON 100 or equivalent.

SOC 523. Sociology of Law (3). Considers the impact of law on society, the role of law in effecting social change, various methods of dispute resolution, and recent research on judicial, legislative, and administrative processes, all with the aim of comparing and evaluating strengths and weaknesses of legal systems, with partial, but not exclusive, emphasis on those societies utilizing the common law. Prerequisite: SOC III.

SOC 534. Urban Sociology (3). General education further study 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. Prerequisite: SOC III.

SOC 537. The Social Consequences of Disability (3). Cross-listed as GERON 537. 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. Prerequisite: SOC III.

SOC 538. Medical Sociology (3). 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. Prerequisite: SOC III.

SOC 539. Juvenile Delinquency (3). General education further study course. The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: SOC III.

SOC 540. Criminology (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: SOC III.

SOC 541. Contemporary Corrections (3). Historical and contemporary programs for the treatment of offenders viewed as societal reactions to criminal behavior. Prerequisite: SOC 539 or 540.

SOC 545. Sociological Theory (3). Generally offered fall semester only. A comprehensive survey of sociological theory, spanning both classical and contemporary theorists relevant to the development of sociology. Prerequisite: 9 hours of sociology.

SOC 598. Internship (1-6). Supervises persons involved in internships or placements in the community where credit can be earned. Prerequisite: departmental consent.

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 maximum of 6 hours credit. Prerequisites: SOC III, instructor's consent, and substantive area course.

SOC 651. Directed Research (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. Prerequisites: 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: 15 hours of sociology and instructor's consent.

SOC 781. Cooperative Education in Sociology (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. Graded Cr/NC only.

Prerequisite may be waived with departmental consent.

Courses for Graduate Students Only

SOC 801. Application of Advanced Statistical Techniques (3). Usually offered fall semester only. Seminar demonstrates the application of statistical packages via mainframe and personal computers to statistical and contemporary readings. Graduate students only. Prerequisite: SOC 501 or departmental consent.

SOC 812. Advanced Research Methods (3). Through classical and contemporary readings, graduate students deepen their understanding of the methodological steps of the research process. Students address methodological issues while conducting a research project using design methodologies, sampling techniques, and measurement strategies. Prerequisite: SOC 512 or departmental consent.

SOC 815. Seminar on the Family (3). Review of recent research on the family and the theoretical implications thereof. Prerequisite: SOC 515 or departmental consent.

SOC 820. Seminar in Social Movements (3). Analyzes the elements in social movements as factors in social and cultural change. Prerequisite: departmental consent.

SOC 825. Seminar in Organizational Analysis (3). Explores selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisite: departmental consent.

SOC 826. Seminar in Stratification and Power Structure (3). Examines different theoretical and methodological approaches to understanding stratification and class analysis. Prerequisite: departmental consent.

SOC 834. Seminar in Urban Sociology (3). Through classical and contemporary readings, course examines issues and concerns of countries in the process of urbanization. Prerequisite: SOC 534 or departmental consent.

SOC 845. Seminar in Sociological Theory (3). Usually offered spring semester only. Examines classical and contemporary sociological theories and focuses on the application of such theories in students' thesis and non-thesis projects. Prerequisite: SOC 545 or departmental consent.

SOC 847. Seminar in Recent Developments in Sociology (3). Major issues, new theories, new techniques of research, new areas of research, and new applications. Repeatable for credit but not to exceed 6 hours. Prerequisites: 15 hours of sociology and departmental consent.

SOC 851. Directed Project (1-3). A project conducted under the supervision of an academic advisor for the non-thesis option. Requires the completion of a written report and an oral presentation of the research to the faculty. Prerequisite: consent of academic advisor.

SOC 860. Proseminar—Teaching Sociology (1). Usually offered fall semester only. Examines the academic roles of sociologists. Prerequisite: departmental consent.

SOC 870. Independent Reading (2-3). Advanced systematic reading in a topical area under the tutelage of a member of the graduate faculty. Repeatable for credit not to exceed 6 hours. Prerequisite: departmental consent.

SOC 875-876. Thesis (3-6).

Spanish
See Modern and Classical Languages and Literatures.

Urban and Public Affairs,
Hugo Wall School of
The Hugo Wall School of Urban and Public Affairs is committed to enhancing the quality of public life through high-quality graduate instruction, excellence in applied research, and responsive community service. This focus results not only in excellent graduate education for students, but also allows a special connection with the community's needs through research and service. By integrating teaching, research, and service, the school makes a distinctive contribution to Wichita State University's long-standing commitment of service to Wichita, the surrounding communities, and the region.

The school serves as the academic home for the Master of Public Administration degree, the Center for Urban Studies, and the Kansas Public Finance Center. Through these units, faculty, staff, and students blend teaching, research, and service in the interdisciplinary field of urban and public affairs. The Hugo Wall School offers special opportunities for students interested in urban and public affairs. Students completing the Master of Public Administration degree gain experience through hands-on research and network with practitioners in the field of public administration.

Financial Assistance
The school has two forms of financial aid available to provide students with financial assistance, as well as an opportunity to be directly involved with research and service projects. Financial aid in the form of graduate assistantships and fellowships is awarded competitively on the recommendation of the faculty in the Hugo Wall School of Urban and Public Affairs.

Graduate assistants aid faculty in the Hugo Wall School in instruction, as well as work directly with faculty and professional staff on research and community service projects through the Center for Urban Studies and the Kansas Public Finance Center. Graduate assistants work 20 hours per week with faculty and staff in the school's teaching, research, and public service activities.

The Hugo Wall School has four endowed fellowships available for financial assistance to qualifying graduate students enrolled in the Master of Public Administration degree. These fellowships—the Hugo Wall, George Pyle, Mike Hill, and George Van Riper—are awarded on a competitive basis to students with exemplary records and specific career interests in the field of public administration.

Master of Public Administration
The Master of Public Administration (MPA) degree program, with instruction in public management, public finance, and public policy, prepares students for positions of leadership in public and nonprofit organizations. The degree is structured to respond to the unique student body of an urban university. The Master of Public Administration program is accredited by the National Association of Schools of Public Affairs and Administration (NASPAA).

The Master of Public Administration (MPA) degree draws upon the methods and perspectives of the social and behavioral sciences, economics, and the humanities. The link between these disciplines and the challenges of public management are emphasized through the use of practitioners in the classroom, policy-relevant research assignments, public affairs seminars, and internships. Teaching faculty, with significant professional experience in state and local government, are engaged in cutting-edge research relevant to public and nonprofit organizations in Kansas. This experience allows faculty to bring relevant perspectives on public management into the classroom.

Graduates of the MPA degree program now hold positions of responsibility in state and local government and in nonprofit agencies throughout the United States and in other countries. Graduates serve as city managers and department heads, program managers, finance directors, budget analysts, management analysts, and agency planners. Although the majority are employed in public service, some graduates of the program have taken positions in the private sector, while still others have pursued additional study in law, doctoral education, or other specializations.

Admission Requirements
Applicants for the degree program must meet the requirements for admission to the Graduate School, including a bachelor's degree from a regionally accredited institution, a grade point average of at least 2.750 based upon the last 60 hours of course work (or nearest semester or term break to this) including any post-bachelor's graduate work. In addition, students should be familiar with basic microcomputer applications such as word processing and spreadsheets.

International students must attain a minimum score of 600 on the Test of English as a Foreign Language (TOEFL).
Degree Requirements
The Master of Public Administration degree consists of 39 graduate hours, taken over at least three semesters of study.

Core Curriculum. All degree candidates are required to complete the eight core courses:

- P ADM 702, Research Methods in Public Administration
- P ADM 710, Public Sector Organizational Theory and Behavior
- P ADM 725, Public Management of Human Resources
- P ADM 745, The Environment of Public Administration
- P ADM 765, Public Sector Economics
- P ADM 802, Quantitative Methods for Public Sector Professionals
- P ADM 865, State and Local Government Finance
- P ADM 895, Public Decision Making

Areas of Emphasis. In addition to the core, students develop an area of emphasis approved by an advisor. Students may select areas that fit their career interests. Common areas include state and local government management, financial management, and policy analysis.

Internships
Internships are an important part of the MPA program. Pre-service students are encouraged to take an internship which must last at least nine months. Internship (P ADM 890) carries 3 hours of credit and includes attendance at periodic seminars. Intern positions are remunerative and are awarded on a competitive basis. Although placement cannot be guaranteed, the public administration program has an excellent placement record.

Graduate Certificates
Graduate Certificate in Economic Development
This graduate certificate program offers advanced study in economic development by state and local governments. The program enhances students' career opportunities and provides state and local practitioners in economic development an avenue to improve their skills. The four-course sequence includes:

- P ADM 650: Planning Process
- RE 619 Urban Land Development
- P ADM 688 or ECON 688 Urban Economics
- P ADM 760 State and Local Economic Development

Graduate Certificate in Public Finance
This graduate certificate program offers advanced study in public finance. The program enhances students' career opportunities and provides public finance practitioners an avenue to improve their skills. The four-course sequence includes:

- P ADM 765: Public Sector Economics
- P ADM 865: State and Local Government Finance
- P ADM 866: Public Financial Management
- P ADM 867: State and Local Government Budgeting

Successful completion of a certificate requirement is noted on the student's University transcript, and a Graduate Certificate is awarded by Wichita State University. Application for the certification programs requires completion of a bachelor's degree, course prerequisites and admission to the Graduate School.

Upper-Division Courses

P ADM 400. Issues and Perspectives on the City (3)
- General education issues and perspectives course. An interdisciplinary introduction to issues facing the city. Includes trends in urbanization, market forces and the development of cities, social aspects of urban life, how cities are governed, how city government works, how it is funded, and the roles of state and federal governments.

P ADM 564. Comparative Public Administration (3)
- Cross-listed as POL 564. Studies the administrative system of selected developed and developing countries, emphasizing the various methods and approaches of comparative analysis and the relationships between administrative institutions and local community settings.

P ADM 585. Management in the Nonprofit Sector (3)
- Cross-listed as POL 585. Studies the management of nonprofit organizations. Includes strategic planning, fund-raising, management of financial and human resources (including volunteers), governing structures, and the role of boards.

P ADM 587. Administrative Theory and Behavior (3)
- Cross-listed as POL 587. A study of organization theory and the various approaches to the study of organization.

P ADM 597. Applied Research Methods (3)
- Cross-listed as CJ 597, GERON 597, and ETHS 597. Studies research methods including questionnaire construction, survey methods, experimental design, and report preparation. Emphasizes completion of an applied research project. Prerequisite: either CJ 407, GERON 407, ETHS 407, or P ADM 407.

P ADM 621. Environmental Law (3)
- Cross-listed as CJ 621 and ETHS 621. A study of federal, state, and local legislation; judicial decisions; and administrative policies in environmental protection. Explores the roles of a variety of governmental agencies and nongovernmental organizations as related to prevention and enforcement processes of environmental protection. Includes issues in the development and implementation of environmental policy. Prerequisite: an approved methods class.

P ADM 625. Computer Applications for Public Policy (3)
- Cross-listed as CJ 625, ETHS 625, and GERON 625. Familiarizes students with major types of software applications for microcomputers and their use in public policy analysis.

P ADM 651. Dispute Resolution (3)
- Cross-listed as CJ 651, ETHS 651, and GERON 651. Studies the mediation, arbitration, and other dispute resolution techniques. Includes criminal and victim mediation in both peer and intergroup and inter-organization relations and dispute resolution techniques. Analyzes case studies.

P ADM 668. Urban Economics (3)
- Cross-listed as ECON 668. A survey of 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. Prerequisites: ECON 201 and 202, or ECON 800, and junior standing.

P ADM 700. Urban Affairs (3)
- A study of the policy issues faced by local government in an urban setting from a multidisciplinary point of view.
P ADM 702. Research Methods (3). Cross-listed as CJ 702, ETH S 702, GERON 702. Acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising, and utilizing both primary and secondary sources of data of the type used in policy, planning, and administrative research. Students must complete several short research projects.

P ADM 710. Public Sector Organizational Theory and Behavior (3). Cross-listed as POL S 710. Reviews the scope of the field of public administration, including a survey of key concepts and schools of thought underlying the field, and examines issues shaping the future development of the field.

P ADM 725. Public Management of Human Resources (3). Cross-listed as POL S 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 on the unique merit, equal employment opportunity, productivity, unionization, and collective bargaining problems found in the public sector.

P ADM 745. The Environment of Public Administration (3). Surveys the political and governmental institutions that underlie the practice of public administration. Includes political systems, constitutional authority, legislative process, intergovernmental relations, and government regulation.

P ADM 750. Public Administration Workshops (1-3). Specialized instruction using variable format in a public administration or urban affairs relevant subject. Repeatable for credit.

P ADM 755. Special Topics in Urban and Public Affairs (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. May be repeated if topics are different. Prerequisite: instructor's consent.

P ADM 760. State and Local Economic Development (3). Explores the role 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.

P ADM 765. Public Sector Economics (3). Cross-listed as ECON 765. An analysis of fiscal institutions and decision making in the public sector of the American economy, budget planning and execution, taxation, debt, and fiscal policy. Prerequisites: ECON 201 and 202 or instructor's consent.

P ADM 775. State and Local Government Law (3). Exposes students to the legal principles which underlie the foundation of governmental operation and administration.

P ADM 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.

P ADM 798. Independent Study (1-3). For graduate students to pursue research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Courses for Graduate Students Only

P ADM 802. Quantitative Methods for Public Sector Professionals (3). Cross-listed as CJ 802 and GERON 802. Uses standard middle computer statistical software and analysis to introduce statistics and quantitative analysis for organizational and policy decision making. Emphasizes the application of statistics and writing with quantitative evidence to real public sector policy questions. Assumes little or no background in statistics and software applications. Prerequisite: either CJ 702, GERON 702, or P ADM 702.

P ADM 825. State and Local Government Administration (3). Examines administrative leadership in state and local government through case study and field experience. Draws on the experience of professional public managers. Designed for students nearing completion of the Master of Public Administration degree and planning careers in public management. Prerequisite: instructor's consent.

P ADM 842. Administration in Local Government (3). Cross-listed as POL S 842. Examines administrative processes and problems in local government, including the role of the professional chief executive. Examines problems from the following: labor-management relations, program evaluation, county government reform, governmental decentralization, citizen participation, grant-in-aid programs, interlocal cooperation, affirmative action requirements, and service contracting. Prerequisite: POL S 317.

P ADM 845. Public Policy Analysis and Program Evaluation (3). Cross-listed as CJ 797. An 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. Focuses on methodologies for collection of data and their use in the assessment of programs and program impacts. Prerequisites: an approved statistics class and an approved methods class.

P ADM 865. State and Local Government Finance (3). Cross-listed as ECON 865, HIST 865, and POL S 865. Analyzes state and local government expenditure and revenue systems; introduces state and local financial administration. Prerequisites: P ADM 765 or instructor's consent.

P ADM 866. Public Financial Management (3). Deals with selected aspects of state and local government financial management. Introduces fund accounting, costing of government services, capital budgeting, debt management, and asset management. Prerequisite: P ADM 865 or instructor's consent.

P ADM 867. State and Local Government Budgeting (3). Cross-listed as POL S 867. Analyzes the development and utilization of the budgetary process in government administration emphasizing the budget in relation to its role in policy formulation and management. Prerequisite: P ADM 865 or instructor's consent.


P ADM 890. Internship (3). Integrates academic pursuits and practical experience. Students admitted to the internship are assigned to work in an approved government, community, or private organization for a minimum of nine months. Prerequisites: completion of all P ADM core courses and 6 hours of additional graduate credit courses.

P ADM 895. Public Decision Making (3). Focuses on decision making by public managers through case study method. Reviews models of public decision making. Explores public management from the perspective of public purposes, politics, organizational processes, and ethics. Prerequisites: successful completion of all other core courses in the MPA or instructor's consent.

P ADM 897. Advanced Research Methods (3). Cross-listed as CJ 897 and GERON 897. Advanced research course; studies the selection and formulation of research problems, research design, hypothesis generation, scale construction, sampling procedures, and data analysis and interpretation. Prerequisite: either CJ 597, GERON 597, ETH S 597, P ADM 597, or equivalent, and P ADM 702 and 802.

P ADM 898. Applied Research Paper (3). Original research project under a faculty member's direction. Project requires conceptualization, execution, preparation of a written report, and defense of that report before a faculty committee. Intended to be a major project or capstone activity completed at the end of a student's program of study. It must be an individual effort, not a group project. Prerequisite: graduate-level research methods class.

Women's Studies (WOM S)

The Center for Women's Studies is a resource and research center for scholarship concerning women. The center offers courses and administers a major and a minor in women's studies, a discipline which presents an analysis of gender in society through the use of a variety of approaches, including feminist theory. Students investigate such areas as changing gender role expectations, American and global social
and cultural concerns, and the professional and domestic contributions of women to the culture, especially concerning the role of women in the arts and sciences. Women's studies may also be pursued as part of a dual major by students whose intellectual or vocational interests are best served by a focus on women's studies in conjunction with another academic field.

Major. Within the major in women's studies, students may focus on either humanities or social science women's studies courses, supplementing each track with interdisciplinary courses that apply to either focus. The major requires a minimum of 30 hours of course work with no more than 3 hours in courses numbered 140 to 149. Other 100-level courses and workshops may not be counted for the major, except for 190, which may be counted.

In addition to women's studies courses, appropriate cross-listed courses for the major may be selected from such fields as philosophy, sociology, social work, history, English, anthropology, religion, ethnic studies, psychology, communication, political science, and criminal justice. Students considering the major in women's studies should be advised by a women's studies faculty member regarding their academic programs, their vocational goals, and the selection of a humanities or social science track in the women's studies major.

To pursue the Humanities focus, the following combinations of courses are possible:
- 12 hours of required courses, WOM S 287, 387, 388, and one of the following: WOM S 391, 482, or 586
- 15 hours of Humanities women's studies courses (group 2 below) or combination of Humanities and Interdisciplinary courses (group 1 below)
- 3 hours of Social Science women's studies courses (group 3 below)

To pursue the Social Science focus, the following combinations of courses are possible:
- 12 hours of required courses, WOM S 287, 387, 388, and one of the following: WOM S 391, 482, or 586
- 15 hours of Social Science women's studies courses (group 3 below) or a combination of Social Science and Interdisciplinary courses (group 1 below)
- 3 hours of Humanities women's studies courses (group 2 below)

Group 1: Interdisciplinary women's studies courses:
WOM 190, 287, 388, 387, 391, 482, 570, 586, 587, 639

Group 2: Humanities women's studies courses:
WOM 140, 330, 331, 332, 333, 338, 511, 512, 521, 522, 523, 533, 536, 537

Group 3: Social Science women's studies courses:
WOM 141, 142, 240, 316, 325, 340, 342, 345, 361, 516, 533, 534, 541, 542, 543

Minor. The minor in women's studies consists of a minimum of 15 hours of women's studies courses, including WOM S 287 and 387. Restrictions on 100-level courses in the major (see above) also apply to the minor.

Certificate in Women's Studies. The Certificate in Women's Studies requires 12 hours of courses in women's studies, including either WOM S 287 or 387. At least 6 credit hours must be at the 300-level or above, and may include 387.

Lower-Division Courses

WOM S 140. Journal Writing (1). Workshop acquaints students with the concept and practice of journal writing. Readings deal with specific themes (work, family, relationships) and students are required to keep a daily journal. Course provides an intense journal writing experience for these enrolled and encourages students to continue the practice on their own. Graded SU/.

WOM S 141. Women's Sexuality (1). Presents information on women's sexuality from physiological, psychological, and socio-cultural perspectives. This integrated view focuses on women's body images and perceptions of self as sexual beings, as well as on socialization and gender-role expectations, choices of sexual behavior, sexual dysfunction, and communications in sexual relationships.

WOM S 142. Domestic Violence (1). 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 violence. Includes discussion of literature and films.

WOM S 150, Workshops (1-2). Topics vary by semester. Past topics have included assertion training (introductory and advanced) and rape information and prevention.

WOM S 150C. Assertion Training for Women (1). Workshop: teaches women to develop assertion skills. Considers some of the changing roles and values of women in our society today and how these create a need for women to be assertive in their professional and personal choices. Examines barriers that exist to assertive behavior and ways to overcome them. Graded SU/.

WOM S 150J. Rape Information and Prevention (1). Workshop: explores the cultural myths and stereotypes about rape, the legal system, methods of self-protection, community resources providing help for victims, and other related issues. Primary focus on prevention of rape itself.

WOM S 150M. Advanced Assertion Training (1). For students who have taken WOM S 150C. Applies assertion principles and behaviors to specific topics such as employment, male-female relations, sexuality, parent-child relations, and organized group activity. Prerequisite: WOM S 150C.

WOM S 180. Special Topics (1-3). Topics vary by semester.

Upper-Division Courses

WOM S 216. The American Male (3). Cross-listed as SOC 316.

WOM S 225. Women in the Political System (3). Cross-listed as POL S 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. Prerequisite: 6 hours of social science or instructor's consent.

WOM S 230. Women's Personal Narratives (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. Prerequisites: ENGL 101 and 102.

WOM S 332. Goddesses in Myth (3). Traces the development of the characteristics, powers, and ideas about classical Greek and Roman as well as ancient Northern European goddesses from a pre-historic, world-wide worship of female deities. Examines the female-dominated cultures and religions of the paleolithic and neolithic and then follows the transition from this ancient worship to the classical and Northern European conception of goddesses.

WOM S 333. Women and Religion (3). Cross-listed as REL 333.

WOM S 338. Philosophy of Feminism (3). Cross-listed as PHIL 338.


WOM S 345. Women and Dependencies (3). Provides information about women's dependencies and their rela-
Courses for Graduate/Undergraduate Credit

> WOM S 511. Women in Early America, 1600-1830 (3). General education further study course. Traces women's contributions and experiences in building the U.S., 1600-1830. Includes both conventional and newly developed methodologies in women's history research.

> WOM S 512. Women and Reform in America, 1830-Present (3). General education further study course. Examines the history of women in the U.S., 1830-present. Focuses especially on women's involvement in various social reform activities, efforts which eventually led to work toward equal rights and improved conditions for women.

> WOM S 516. Sociology of Gender Roles (3). General education further study course. Cross-listed as SOC 516. Analyzes the institutional sources of male and female roles, the source of changes in these roles, the consequent ambiguities and conflicts. Prerequisite: SOC 111.

> WOM S 522. Contemporary Women's Art (3). Examines art by women in the contemporary world. Emphasizes the impact of the women's movement on the creative energies and on the career directions and opportunities of these women in the arts.

> WOM S 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. Prerequisite: 3 hours of upper-level humanities or 3 hours of upper-level women's studies.

> WOM S 532. Women in Ethnic America (3). Cross-listed as ETH S 532 and HIST 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Emphasizing a female-centered framework of analysis, course probes the intersections of race, class, gender, and sexuality in women's lives.

> WOM S 533. Women and the Law (3). Introduces the legal aspects of women's rights, including the equal rights amendment to the U.S. Constitution; right to choose a name; sex discrimination in employment, education, and credit; welfare; and criminal justice. Also considers women in the field of law, such as lawyers and legislators.

> WOM S 534. Psychology of Women (3). Cross-listed as PSY 534.

> WOM S 535. Literary Images of Women: Diverse Voices (3). Cross-listed as ENGL 535. Explores literature written in English by women of diverse ethnic, racial, class, and other backgrounds as well as of varying sexual orientations, ages, and degrees of physical ability. Analyzes materials as literary works and as expressions of women's differences from one another. Works are selected based on their specific attention to the question of gender as it intersects with other elements of culture. Prerequisites: ENGL 101, 102, and one course in literature.

> WOM S 536. Writing by Women (3). Cross-listed as ENGL 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.

> WOM S 541. Women, Children, and Poverty (3). General education issues and perspectives course. Cross-listed as SOC Wk 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 Kansan families. Prerequisite: 6 hours of social science.

> WOM S 543. Women and Health (3). Cross-listed as NURS 543. Examines the historical development of the women's health movement, focuses on current issues relevant to women's health care, and explores the role of women in the health care system and as consumers of health care. Examines self-care practices of women and studies ways to promote positive health practices. Open to non-nursing majors.

> WOM S 570. Directed Readings (1-3). For students who wish to pursue special reading or research projects not covered in course work. Prerequisite: instructor's consent.

> WOM S 580. Special Topics (1-3). Focuses on advanced topics of interest to women's studies.

> WOM S 586. Gender, Race, and Knowledge (3). General education issues and perspectives course. Examines the impact of gender and race on knowledge (understanding of objects, people, events, and activities). Assumes that gender, race, and knowledge are socially constructed categories. Concerned with science as a practice of representation. Focuses on the "white masculinist" ideas or beliefs that motivate and affect the practice of academic disciplines. Explores the relationship between the making of masculinity and femininity and science? How are gender and race woven into scientific and social science and what results? Does the entrance of white men and people of color into the sciences and humanities change how they are practiced? Do they produce significantly different understandings about the world? Central premise is that all knowledge emerges from some type of love or passion. What types of passion produce knowers, knowing, and the known?

> WOM S 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. Prerequisites: WOM S 287 and 387, or 6 hours of women’s studies courses, or instructor’s consent.

**WOM S 635. Leadership Techniques for Women (3).** Cross-listed as COMM 635. Provides the female student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

### Courses for Graduate Students Only

**WOM S 870. Directed Readings. (2-3).** For graduate students to pursue research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: instructor’s consent.

**WOM S 880. Seminar in Women’s Studies (3).** Intensive study of selected women’s studies topics. Seminar discussion, reports, and research project. Previous topics include Advanced Theories of Feminism and Contemporary Women’s Fiction. Repeatable for credit with departmental consent. Prerequisite: instructor’s consent.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L means 4 hours of lecture and 2 hours of lab.
Bahr, Behnam, Professor and Graduate Coordinator, Mechanical Engineering (1988); BS, University of Wisconsin, 1980; MS, 1983; PhD, 1988.

Baker, Danette M., Visiting Assistant Professor, Performing Arts (2001); BA, Wichita State University, 1988; MFA, Ohio University, 1992.

Baker, Heather, Instructor, Clinical Educator, and Nurse Practitioner Site Coordinator, School of Nursing (1993); BSN, University of Colorado, 1967; MSN, 1970.

Bakken, Linda, Professor, Administration, Counseling, Educational, and School Psychology (1985); BA, Northern Michigan University, 1969; MS, Utah State University, 1979; EdD, Boston University, 1983.

Baldridge, Wilson R., Associate Professor, Modern and Classical Languages and Literatures (1984); BA, Denison University, 1973; PhD, State University of New York, 1982.

Bannister, Andrea, Associate Professor, School of Community Affairs, Criminal Justice Program, and Director, Regional Community Policing Training Institute (1998); BS, University of Illinois, Chicago, 1989; MA, Indiana University; Bloomington, 1990; PhD, Michigan State University, 1995.

Barb, Dale, Assistant Professor, Clinical Coordinator, Physical Therapy (1980); BS, University of Kansas, 1977; MHS, Wichita State University, 1991.

Barut, Mehmet, Assistant Professor, Finance, Real Estate, and Decision Sciences (2000); BS, Istanbul Technical University, 1988; MS, 1991; PhD, Clemson University, 1999.

Bates, Rodney, Assistant Professor and Graduate Coordinator, Computer Science (2003); BS, Kansas State University, 1967; MS, 1968; PhD, 1971.

Baxter, Deborah E., Associate Professor, School of Music (1984); BM, University of Kansas, 1974; MM, University of Missouri-Kansas City, 1981; DMA, 1988.

Beachy, Jonathan, Instructor, Mathematics and Statistics (2001); BA, Goshen College, 1980; MS, Wichita State University, 1998.

Beehler, John M., Professor, School of Accountancy, and Dean, W. Frank Barton School of Business (2000); BS, Pennsylvania State University, 1977; MBA, Indiana University, 1982; PhD, 1985.

Beehler, Pamela, Associate Professor, Kinesiology and Sport Studies (2000); BS, Pennsylvania State University, 1977; MEd, East Stroudsburg University, 1980; PhD, Indiana University, 1986.

Beez, Julie L., Professor, School of Music (1986); BM, Peabody Conservatory, 1974; DMA, University of Colorado-Boulder, 1982.

Beggs, Donald L., President and Professor of Education (1999); BS, Southern Illinois University, 1963; MEd, 1964; PhD, University of Iowa, 1966.

Behrman, Elizabeth, Associate Professor, Physics (1980); SC, Brown University, 1979; MS, University of Illinois, 1981; PhD, 1985.

Beldona, Siriram (Sam), Assistant Professor, Management, and Assistant Director, Center for International Business (2001); BS, Karnataka University, 1983; MBA, 1985; MS, Temple University, 1992; PhD, 1994.

Bennett-Kastor, Tina L., Professor, English (1978); BFA, California Institute of the Arts, 1973; MA, University of Southern California, 1974; PhD, 1978.

Bereman, Nancy, Associate Professor, Management (1980); BA, Wichita State University, 1969; MBA, 1974; PhD, University of Minnesota, 1983.

Bergen, Wesley, Visiting Assistant Professor, Religion (1997); BA, University of Manitoba, 1983; MDiv, Lutheran Theological Seminary, 1985; STM, St Andrew's College, 1989; PhD, Emmanuel College, University of Toronto, 1996.

Bernstorff, Elaine D., Interim Dean, College of Fine Arts (1992); BME, Wichita State University, 1976; MME, 1978; PhD, 1993.

Bevis, Laura, Assistant Professor, School of Nursing (2001); BS, University of New Hampshire, 1984; MSN, Catholic University of America, 1992.


Billings, Dorothy K., Associate Professor, Anthropology (1965); BA, University of Wisconsin, 1955; PhD, University of Sydney, 1972.

Bischoff, William, Professor, Geology, and Dean, Liberal Arts and Sciences (1984); BA, DePauw University, 1979; MS, Northwestern University, 1982; PhD, 1985.

Black, Phillip C., Assistant Professor, School of Music (1986); BM, Ball State University, 1977; MM, University of New Mexico, 1989.

Blakeslee, Donald J., Professor, Anthropology (1976); BA, University of Nebraska, 1969; MA, 1971; PhD, University of Wisconsin-Milwaukee, 1975.

Blocher, Larry R., Professor, School of Music (1995); BME, Morehead State University, 1975; MME, 1977; PhD, Florida State University, 1986.

Blynn, Therese, Instructor, Mathematics and Statistics (1999); BS, Wichita State University, 1968; MA, Fort Hays State University, 1988.

Bohan, Michael, Research Assistant Professor, Psychology (2002); BA, University of South Florida, 1993; MS, Florida Institute of Technology, 1996; PhD, Wichita State University, 2001.

Bohiken, Ruth M., Instructor, Kinesiology and Sport Studies (1989); BA, Wichita State University, 1996; MEd, 1998.

Bolin, Brian L., Assistant Professor and Graduate Coordinator, School of Social Work (1999); BS, Oklahoma State University, 1985; MS, 1988; MSW, Walla Walla College, 1998; PhD, Oklahoma State University, 1994.

Bolton, Beverly, Instructor, Mathematics and Statistics (2000); BS, Abilene Christian University, 1970; MS, Wichita State University, 1998.

Bontrager, Sonja, Instructor, Modern and Classical Languages and Literatures, and Interim Assistant Director, Intensive English Language Center (1994); AA, Hesston College, 1985; BA, Goshen College, 1987; MA, Wichita State University, 1995.
Bourd, John D., Jr. Associate Professor, History (1969). BA, University of Texas, 1952; MA, University of Houston, 1958; PhD, University of New Mexico, 1963.


Bousfield, George R., Associate Professor, Biological Sciences (1991). BS, Saginaw Valley State University, 1974; MA, Indiana University, 1976, PhD, 1981.


Brady, Stephen W., Associate Professor, Mathematics and Statistics, and College Algebra Program Director (1967). AB, Indiana University 1963; AM, 1965; PhD, 1968.

Bravo-Elizondo, Pedro, Professor, Modern and Classical Languages and Literatures (1975). Universidad Tecnica del Estado, Chile, 1957; MA, Education, Catholic University, Chile, 1964; MA, University of Iowa, 1971; PhD, 1974.


Brooks, Christopher K., Associate Professor, English (1986). BA, Indiana University 1977; MA, Indiana State University, 1979; PhD, Purdue University, 1987.

Brown, Alison McKenney, Assistant Professor, School of Community Affairs, Criminal Justice Program (1998). BS, Kansas State University, 1986; MPA, Wichita State University, 1993; JD, University of Kansas, 1993.

Brown, Janet B., Associate Professor, Library, and Educational Librarian (1980). BA, Wichita State University, 1974; MLS, Emporia State University, 1975.

Brown, Karen L., Associate Professor, Biological Sciences (1982). BA, Miami University-Ohio, 1974; MS, 1976; PhD, University of Georgia, 1981.

Brown, Randy, Senior Fellow, Elliott School of Communication (2002). BS, University of North Texas.

Bryant, Jeffrey J., Associate Professor and Barton Fellow, School of Accountancy, 1995. BBA, Wichita State University, 1979; MHA, Washburn University School of Law, 1980; PhD, Texas Tech University, 1994; CPA-Kansas.

Buhp, Robert, Assistant Professor, School of Art & Design (2002). BFA, University of Georgia, 1993; MFA, Georgia State University, 2002.

Buell, Gregory J., Assistant Professor, Associate Director, Counseling, and Director, Clinical Services (1975). BS, University of Iowa, 1968; MA, Southern Illinois University, 1972; PhD, 1975.


Busija, Edith, Assistant Professor, Management (2001). BA, University of Illinois, 1979; MS, Northern Illinois University, 1985.


Carroll, Anne, Assistant Professor, English (1998). BME, University of Michigan, 1989; MA, University of Maryland, 1994; PhD, 1999.


Carter, John W., Professor, Physical Therapy (1990). BS, Southern Nazarene University, 1968; MS, Trinity University, 1972; PhD, University of Texas Medical School-San Antonio, 1975.

Cavarozzi, Joyce P., Professor, School of Performing Arts (1965). BSE, Ohio University, 1953; MA, Ohio State University, 1956.


Celinkaya, Coskun, Assistant Professor, Electrical and Computer Engineering (2002). BSEE, Eskisehir-Turkey, 1994; MSEE, University of Southern California, 1998; PhD, Rice University, 2002.


Chang, Chin-Chih, Assistant Professor, Computer Science (2001). BS, Tamkang University, 1986; MS, National Cheng Kung University, 1990; PhD, Oklahoma State University, 2000.

Chang, Doris, Assistant Professor, Women's Studies/Religion (2002). BA, University of North Carolina, 1992; MA, Bowling Green State University, 1994; PhD, The Ohio State University, 2002.

Chaparro, Alex, Associate Professor, Psychology (1996). BS, Florida Institute of Technology, Melbourne, 1984; PhD, Texas Tech University, 1990.

Chaparro, Barbara, Director of SURL, Psychology (1998). BS, University of Richmond, Virginia, 1985; PhD, Texas Tech University, 1990.


Cheng, Jen-Chi, Associate Professor and Chairperson, Economics (1989). BA, National Chengchi University, 1978; MA, National Taiwan University, 1982; PhD, Vanderbilt University, 1989.

Cheraghi, Seyed B., Associate Professor and Bombardier-Leary Fellow, Industrial and Manufacturing Engineering (1995). BA, Tehran University, Iran, 1978; MS, University of Arizona, 1987; PhD, Pennsylvania State University, 1992.


Chopra, Dharam V., Professor, Mathematics and Statistics (1967). BA, Punjab University, India, 1950; MA, 1953; MA, University of Michigan, 1961; AM, 1963; PhD, University of Nebraska, 1968.


Christ, Ronald, Professor, School of Art and Design (1976). BFA, Kansas City Art Institute, 1972; MFA, Indiana University, 1974.


Ciboski, Kenneth N., Associate Professor, Political Science (1965). BA, University of Kansas, 1961; MA, 1965; PhD, University of Washington, 1971.

Clark, Frances L., Associate Professor, Curriculum and Instruction (1992). BA, Southwestern College, 1966; MS, University of Kansas, 1971; PhD, 1981.

Clark, James E., Associate Professor, Economics, Associate Director, Center for Economic Education and Associate Dean, W. Frank Barton School of Business (1978). BA, Michigan State University, 1969; MA, Northwestern University, 1971; PhD, 1976.


Claycomb, Vincentia (Cindy) A., Associate Professor, Marketing and Entrepreneurship (1994). BBA, Wichita State University, 1979; MBA, 1991; PhD, Oklahoma State University, 1995.

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Cohen, Peter A., Professor, Psychology, and Dean, College of Health Professions (1999). AB, University of California-Berkeley, 1973; MA, San Diego State University, 1976; PhD, University of Michigan, 1980.


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Consiglio, Catherine A., Associate Professor, School of Music (1990). BA, Wichita State University, 1979; MA, New England Conservatory, 1983.


Cromwell, Paul, Professor, Criminal Justice Program, and Director, School of Community Affairs (1996). BS, Sam Houston State University, 1967; MA, 1968; MPA, Texas Christian University, 1979; PhD, Florida State University, 1986.

Crum, Dorothy E., Professor, School of Music (1973). BA, Barrington College, 1966; MM, Western Kentucky University, 1969; DMA, University of Colorado, 1977.

D’Souza, Francis, Associate Professor, Chemistry (1994). BS, University of Mumbai, India, 1982; MS, 1984; PhD, Indian Institute of Science, India, 1991.


Datteri, Darcee, Assistant Professor, Psychology (2000). BS, St. Ambrose University, 1995; MS, Texas Christian University, 1998; PhD, 2000.


Dawson, Margaret, Associate Professor and Chairperson, English (1993). BA, University of Virginia, 1979; MS, Northwestern University, Evanston, 1980; MFA, City University of New York, Brooklyn College, 1989.

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Distler, Donald A., Associate Professor, Biological Sciences (1963). BA, University of Louisville, 1952; MS, 1958; PhD, University of Kansas, 1966.

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Duram, James C., Professor, History (1968). BA, Western Michigan University, 1963; MA, 1963; PhD, Wayne State University, 1968.


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Emery, Sandra L., Assistant Professor, Curriculum and Instruction (1999). BSEd, State University of New York, 1980; MSED, University of Kansas, 1987; PhD, 1997.


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Hays, William C., Associate Professor, School of Community Affairs, Gerontology Program (1973). BS, Ball State University, 1967; MA, 1968; PhD, University of Missouri, 1973.


Headley, Dean, Associate Professor and Chairperson, Marketing and Entrepreneurship (1988). BS, Emporia State University, 1970; MPH, University of Oklahoma, 1974; MBA, Wichita State University, 1982; PhD, Oklahoma State University, 1989.


Herrick, Susan, Assistant Professor, School of Art and Design (1989). BA, Wichita State University, 1972; MA, 1975; MFA, Kansas State University, 1986.

Hemans, Frederick P., Associate Professor, School of Art and Design (1994). BA, Cornell University, 1976; MA, Indiana University, 1980; PhD, Boston University, 1986.

Hendry, William J. III, Professor, Biological Sciences (1992). BA, Northeastern University, 1974; MA, 1978; PhD, Clark University, 1982.


Hersch, Philip L., Professor, Economics (1983). BA, Queens College, 1974; MA, Ohio State University, 1978; PhD, 1982.


Herzog, Silvia, Associate Professor, Music History and Literature (1997). BA, Northeastern Illinois University, 1977; MA, University of Southern California, 1989; PhD, 1996.

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Hiltner, David, Assistant Professor, School of Art and Design (1999). BFA, Wichita State University, 1993; MFA, Syracuse University, 1997.

Hind, Emily, Assistant Professor, Modern and Classical Languages and Literatures (2001). BA, University of Kansas, 1995; MA, Pennsylvania State University, 1997; PhD, University of Virginia, 2001.


Ho, James C., Distinguished Trustees Professor, Physics, and Senior Fellow, National Institute for Aviation Research (1971). BS, National Taiwan University, 1959; MS, University of California-Berkeley, 1963; PhD, 1966.

Ho, Lop-Hing, Associate Professor, Mathematics and Statistics (1989). BA, Chinese University of Hong Kong, 1979; MA, Princeton University, 1982; PhD, 1984.


Hoffman, Klaus A., Professor and Doctoral Graduate Coordinator, Aerospace Engineering (1990). BS, University of Texas-Austin, 1972; MS, 1973; PhD, 1983.


Hogan, Linda, Assistant Professor, Medical Technology (1972). BA, Emporia State University, 1965; MT (ASCP), 1965; BS (ASCP), 1972; MEd, Wichita State University, 1977.

Hooper, Walter J., Professor and Chairperson, Aerospace Engineering and Interim Dean, College of Engineering (1994). BS, University of Alabama, 1967; MS, University of Texas-Austin, 1969; PhD, 1972. Licensed Professional Engineer-Texas.

Hrycak, Tomasz, Assistant Professor, Mathematics and Statistics (1994). BS, Jagiellonian University, 1982; PhD, University of Missouri-Columbia, 1993.


Huckstadt, Alicia A., Associate Professor and Director, Graduate Program, School of Nursing (1981). BS, Emporia State University, 1976; MS, 1978; PhD, Kansas State University, 1981; PhD, University of Colorado, 1981.


Hunter, Ann P., Assistant Professor, Dental Hygiene (1980). BS, Iowa State University, 1954; MS, 1955; PhD, Kansas State University, 1961.

Huntley, Diane E., Associate Professor, Dental Hygiene (1976). BA, University of Bridgeport, 1968; MA, State University of New York-Buffalo, 1971; PhD, Kansas State University, 1985.


Hutchinson, John J., Professor, Mathematics and Statistics and Associate Vice President, Academic Affairs & Research (1976). BS, St. Benedict's College, 1962; MA, University of Kansas, 1966; PhD, 1968.

Huxman, Susan M., Associate Professor and Interim Director, Elliott School of Communication (1990). BA, Bethel College, 1982; MA, University of Kansas, 1986; PhD, 1988.

Iacovetta, Ronald G., Associate Professor, School of Community Affairs, Criminal Justice Program (1973). BS, Colorado State University, 1965; MS, 1967; PhD, University of Connecticut, 1972.

Ilitch, Turi, Assistant Professor, Chemistry (2002). BS, Moscow State University, 1986; PhD, Moscow State University, 1990.

Iorio, Sharon H., Associate Professor, Elliott School of Communication, and Associate Dean, Liberal Arts and Sciences (1990). BA, University of Oklahoma, 1965; MS, Oklahoma State University, 1984; PhD, 1991.


Jacobs, Phyllis, Assistant Professor and Director, Undergraduate Program, School of Nursing (1990). BSN, University of Wisconsin, 1965; MSN, Washington University, 1967.


Jarman, Jeffrey, Associate Professor, Elliott School of Communication, and Director of Debate and Forensics (1996). BS, Southwest Missouri State University, 1993; MA, University of Kansas, 1995, PhD, 1998.

Jarnagin, Bill D., Professor, Allen, Gibbs, & Houlik Faculty Fellows in Accounting and Director, School of Accountancy (1987). BSBA, Arkansas Polytechnic University, 1969; MBA, University of Arkansas, 1970; PhD, 1978. CPA-Oklahoma.


Jewell, Ward T., Professor and Bombardier-Learjet Fellow, Electrical and Computer Engineering (1987). BSEE, Oklahoma State University, 1979; MSEE, Michigan State University, 1980; PhD, Oklahoma State University, 1986.


Johns, Buddy A., Jr., Associate Professor, Mathematics and Statistics (1964). BA, Friends University, 1957; MA, University of Kansas, 1960; PhD, 1964.

Johnson, C. Nicholas, Assistant Professor and Director of Dance, School of Performing Arts (1997). BS, University of Utah-Salt Lake City, 1980; MFA, University of Arizona, 1991.


Nagati, M. Gawad, Associate Professor, Aerospace Engineering (1984). BS, Cairo University, Egypt, 1966; MS, Wichita State University, 1975; PhD, Iowa State University, 1984.

Namuduri, Kameswara R., Assistant Professor, Electrical and Computer Engineering (2000). BS, Osmania University, 1984; MScs, Central University-Hyderabad, India, 1986; PhD, University of South Florida, 1992.

Nance, Donald W., Associate Professor and Director, Counseling Service (1968). BA, University of Redlands, 1964; MA, University of Iowa, 1967; PhD, 1968.


Nie, Xumin, Assistant Professor, Computer Science (1994). BS, Harbin Institute of Technology, China, 1982; MS, Temple University, 1986; PhD, University of North Carolina, 1989.


O'Flaherty Perez, Kathleen M., Associate Professor, Sociology (1983). BA, Clarke College, 1979; MA, Miami University, 1980; PhD, Purdue University, 1984.

Okafor, Chinere, Associate Professor, Women's Studies/Religion (2002). BA, University of Nigeria, 1975; PhD, University of Pennsylvania, 1981; MA, University of Sussex, 1979; PhD, University of Nigeria, 1989.


Palmer, Michael, Assistant Professor and Director of Orchestras, School of Music (1999). BM, Indiana University, 1966; MM, 1967.

Palmiotto, Michael, Professor, School of Community Affairs, Criminal Justice Program (1994). BS, Mercy College, 1971; MS, City University of New York, 1974; PhD, University of Pittsburgh, 1980.


Parcell, William C., Assistant Professor, Geology (2001). BS, University of the South, 1994; MS, University of Delaware, 1997; PhD, University of Alabama, 2000.


Pendae, Ravindra, Associate Professor, Electrical and Computer Engineering and Director, Center for Teaching and Research Excellence (1994). BSEE, Osmania University, India, 1982; MSEE, Wichita State University, 1985; PhD, 1994.


Pett, Timothy L., Assistant Professor, Management (1961). BA, Saint Leo College, 1989; MBA, University of Memphis, 1992; PhD, 1998.

Pfannestiel, Maurice, Associate Professor, Economics (1966). BA, Fort Hays State University, 1960; MS, Oklahoma State University, 1966; PhD, 1967.


Pickett, William A., Associate Professor, School of Music (1986). BM, Drake University, 1956; MM, 1957.

Reissig, Bradford D., Associate Professor, School of Performing Arts (1999). BS, Kansas State University, 1991; MFA, Illinois State University, 1996.


Richardson, William H., Associate Professor and Associate Chairperson, Mathematics and Statistics (1962). AB, California State University, Chico, 1959; MS, Iowa State University, 1961.


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Rogers, Ben F., Associate Professor, Philosophy
Rogers, Christopher M., Assistant Professor, Biological Sciences (2000). BS, University of Wisconsin-Milwaukee, 1978; MS, Michigan State University, 1982; PhD, Indiana University-Bloomington, 1988.

Rogers, Michael E., Associate Professor, Kinesiology and Sport Studies (1998). BS, Mount Union College, 1991; PhD, Kent State University, 1996.


Roming, Charles A., Professor and Chairperson, Administration, Counseling, Educational, and School Psychology (1985). BA, University of Illinois, 1977; MA, Trinity Evangelical Divinity School, 1979; PhD, Purdue University, 1982.


Roush, Dean, Associate Professor, School of Music (1988). BFA, Ohio University, 1973; MM, Bowling Green State University, 1975; DMA, Ohio State University, 1985.


Rozelle, Robert W., Assistant Professor and Director, University Advising Center (1978). BA, University of New York, Cortland, 1966; MEd, Ohio University, 1967.

Ruder, Judy K., Instructor, Department of Curriculum and Instruction (2001). BA, Fort Hays State University, 1983; MEd, Fort Hays State University, 1983.


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Sanders, Kathleen J., Associate Professor, Curriculum and Instruction (2000). BA, Stephens College, 1972; MS, Kansas State University, 1978; PhD, 1991.


Scherz, Julie, Associate Professor, Communicative Disorders and Sciences (1989). BA, Wichita State University, 1969; MA, 1971; PhD, 1989.

Schneider, Philip H., Professor and Director of Creative Writing, English (1967). BA, State University of New York-Cole, 1963; MFA, University of Iowa, 1967.


Shaw, Carolyn M., Assistant Professor, Political Science (2001). BA, Dickinson College, 1991; PhD, University of Texas-Austin, 2000.

Shawver, Martha M., Assistant Professor, School of Nursing, and Associate Vice President, Academic Affairs and Research (1975). BS, Eastern Mennonite College, 1965; MS, School of Nursing, University of Iowa, 1974; PhD, University of Kansas, 1985.

Sheffield, James E., Associate Professor, Chairperson, Political Science (1974). BA, Mississippi State University, 1969; MS, Florida State University, 1970; PhD, 1973.


Sigler, Dennis A., Professor, Mechanical Engineering. BS, Technical University of Istanbul, 1966; MS, 1969; S&D, 1971; PhD, University of Minnesota, 1982.

Singhal, Ram Prasad, Professor, Chemistry (1974). BS, University of Lucknow, India, 1958; MS, 1960; DEA, Universite de Lille, France 1964; PhD, 1967.


Smith, Bert L., Professor, Aerospace Engineering (1966). BSME, University of Missouri-Rolla, 1953; MSME, 1960; PhD, Kansas State University, 1966.

Smith, Elizabeth, Assistant Professor and Engineering Librarian, University Libraries (1999). BA, Wichita State University, 1960; MLS, Emporia State University, 1999.

Smith, Larry D., Assistant Instructor and Associate Director, Research Administration (1978). BBA, Wichita State University, 1970.

Smith, Martha, Associate Professor, Criminal Justice (2002). AB, Brown University, 1978; JD, New York University School of Law, 1981; MA, Rutgers University, 1985; PhD, Rutgers University, 1986.

Smith, Martha J., Associate Professor, School of Community Affairs, Criminal Justice Program (2002). BA, Brown University, 1978; JD, New York University School of Law, 1981; MA, Rutgers University, 1985; PhD, 1986.


Smith-Campbell, Betty, Assistant Professor, School of Nursing (1998), Nursing Diploma, Hurley Medical Center School of Nursing, 1975; BSN, University of Michigan, 1980; MS, University of Kansas, 1987; PhD, University of Colorado, 1996.


Soles, David E., Professor and Chairperson, Philosophy (1974), 1982. BA, University of Pittsburgh, 1968; PhD, Johns Hopkins University, 1977.


Starkey, Linda, Assistant Professor, School of Music (1993). BME, University of Kansas, 1968; MM, Fort Hays State University, 1972; MA, Wichita State University, 1990.

Steele, James E., Associate Professor, Aerospace Engineering (1993). BS, University of Missouri-Rolla, 1980; MS, 1984; PhD, 1989.

Steinke, Elaine, Professor, School of Nursing (1990). BSN, Wichita State University, 1979; MS, 1982; PhD, Kansas State University, 1987.

Stevenson, William T.K., Professor, Chemistry

Wynne, Tor, Assistant Professor, Sociology (2000). BA, Oakland University, 1993; MA, University of Iowa, 1996; PhD, 2001.


Yang, C. Charles, Associate Professor, Mechanical Engineering (1997). BS, National Taiwan University, 1985; MS, 1987; PhD, Louisiana State University, 1993. Licensed Professional Engineer—Louisiana.

Yang, Wan, Assistant Professor and Graduate Coordinator, Geology (1999). BS, Northwestern University, China 1984; MS, California State University at Fresno, 1990; PhD, University of Texas at Austin, 1995.


Yeotis, Catherine G., Associate Professor, Curriculum and Instruction (1979). BS, Michigan State University, 1963; MS, Purdue University, 1973; PhD, 1978.

Yildirim, Mehmet B., Assistant Professor, Industrial and Manufacturing Engineering (2002). BS, Bogazici University, 1994; MS, Bilkent University, 1996; PhD, University of Florida, 2001.

York, Paul K., Professor, Electrical and Computer Engineering (1989). BSEE, Texas A&M University, 1961; MSEE, University of New Mexico, 1963; PhD, Texas A&M University, 1967.

Youngman, Arthur L., Assistant Professor, Biological Sciences (1965). BA, Montana State University, 1959; MS, Case Western Reserve University, 1961; PhD, University of Texas, 1965.

Zandler, Melvin E., Professor, Chemistry (1966). BA, Friends University, 1960; MS, Wichita State University, 1963; PhD, Arizona State University, 1965.

Zettle, Robert, Associate Professor and Graduate Coordinator, Psychology (1984). BA, Wilkes University, 1974; MA, Bucknell University, 1976; PhD, University of North Carolina-Greensboro, 1984.

Zhang, Sha Li, Associate Professor and Head of Technical Services, University Libraries (1999). BA, Lanzhou University, 1982; Librarian Certificate, Fudan University, 1983; Librarian Certificate, Peking University, 1984; MLS, University of Tennessee, 1988.


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Retired Faculty

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Adamson, Ginette
Alhberg, Clark D.
Allen, Anneke S.
Allen, June S.
Alley, Robert D.
Anderson, Robert E.
Armstrong, Warren B.
Arteaga, Lucio
Bair, Sue
Balb, Sue
Bajaj, Prem C.
Ballenger, Malcolm
Bateman, Morita C.
Bartel, Peter
Bellet, John R.
Benningfield, Lloyd M.
Berg, J. Robert
Bernard, David E.
Bernhart, Walter D.
Betz, D.R.
Bish, John T.
Bogner, Donna
Borresen, C. Robert
Boughton, Harrison C.
Bowman, Barbara E.
Bowyer, James M.
Brazeale, John B.
Brewer, Jeneva J.
Brinkman, Sidney
Britton, Clark V., Jr.
Brooks, Nancy A.
Burk, Kenneth W.
Bush, Martin H.
Carson, Doris M.
Cesar, James J.
Chaffee, Leonard M.
Chambers, Randall M.
Chang, Dae H.
Christensen, Donald
Collins, George
Comstock, George A.
Corbett, Donald L.
Craig, Andrew J.
Crown, Gary D.
Crowns, Arthur J., Jr.
Cuthbertson, K. Jean
Davis, Gayle R.
Decker, Jay C.
Deskins, James W.
Dey, Glen R.
Doig, J. Robert, Jr.
Douglas, Donald M.
Douglas, J. Rex
Duell, Dennis C.
Duell, Orpha K.
Dunning, Wayne W.
Edgington, Mary F.
Egbert, Robert I.
Ellis, Howard E.
Erickson, James
Fairl, Wesley L.
Farnsworth, David N.
Fateh-Sedeh Kamal
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# Key to Course Descriptions

## Symbols

When two course numbers are joined by a hyphen (-), the first semester is prerequisite to the second; when the numbers have an ampersand (&) between them, the two semesters may be taken in either order. Unless specifically noted otherwise, the first course listed is offered in the fall semester and the second in the spring.

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 symbols are used: R, lecture; L, laboratory; C, conference; D, demonstration; and P, practicum/clinical, with the hours of practicum/clinical per week given in front of the letter (6-8P means six to eight hours of practicum/clinical per week).

## Abbreviations

The following abbreviations of academic departments and areas are used in references to courses offered by those departments.

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Map Legend

Facilities are identified with a letter corresponding to their location on the map.

Buildings
- Ablah Library (D)
- Ahlberg Hall (C)
- Beech Wind Tunnel (D)
- Blake Hall (B)
- Brennan Hall I (C)
- Brennan Hall II (C)
- Brennan Hall III (C)
- CAC Theater (C)
- Central Energy Plant (D)
- Cessna Stadium (C)
- Child Development Center (A)
- Clinton Hall (C)
- Corbin Education Center (D)
- Credit Union (D)
- DeVlin Hall (C)
- DuKsken Fine Arts Center (B)
- Eck Stadium (E)
- Elliott Hall (C)
- Engineering Building (D)
- Fairmount Towers Commons (A)
- Fairmount Towers North (A)
- Fairmount Towers South (A)
- Fiske Hall (B)
- Gaddis Physical Plant Complex (D,E)
- Gardner Plaza (C)
- Garvey International Center (A)
- Geology Building (C)
- Golf Course Maintenance Building (E)
- Golf Pro Shop (F)

Wichita State has an ongoing program to provide people with disabilities full access to all buildings; however, some barriers still exist. For information regarding any campus building's accessibility to the disabled, call the Office of Disability Services, (316) 978-3309.

Visitors to the Wichita State campus should obtain temporary parking permits from the Police Department, open 24 hours a day.

Facilities
- Grace Memorial Chapel (C)
- Grace Wilkie Hall (D)
- Greenhouse (D)
- Henrion Hall (C)
- Heskett Center (D)
- Heskett Center Storage (D)
- Housing Maintenance Shop (A)
- Hubbard Hall (C)
- Human Resources Center (C)
- Intensive English Language Center (A)
- Jabara Hall (C)
- Jardine Hall (C)
- Koch Arena (B)
- Lindquist Hall (C)
- Lutheran Student Center (D)
- McKinley Hall (B)
- McKnight Art Center (B)
- Media Resources Center (D)
- Memorial 70 (B)
- Metropolitan Complex, Hughes (inset)
- Morrison Hall (C)
- National Institute for Aviation Research (E)
- Neff Hall (C)
- Newman Center (D)
- Original Pizza Hut (D)
- Plaza of Heroines (C)
- Police Department (D)
- President's Residence (B)
- Printing Services (D)
- Rhatigan Student Center (C)
- Sheldon Coleman Tennis Complex (C)
- Tyler Field (E)
- Ulrich Museum of Art (B)
- Visual Communications (D)
- Wallace Hall (D)
- Warehouse (E)
- Welcome Center (proposed) (E, F)
- Wheatshocker Apartments (E)
- Wiedemann Hall (B)
- Wilkins Stadium (D)
- Wilner Auditorium (B)
- Woodman Alumni Center (F)

Fraternities
- Beta Theta Pi (A)
- Delta Upsilon (C)
- Kappa Sigma (D)
- Phi Delta Theta (E)
- Sigma Alpha Epsilon (B)
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Academic Programs at Wichita State University Are Accredited by or Hold Membership in the Following Associations

North Central Association of Colleges and Schools
AACSB—International Association for Management Education
AACSB—International Association for Management—Accounting Accreditation Committee
Accreditation Board of Engineering and Technology
Accreditation Review Commission on Physician Assistant Education
American Chemical Society
American Dental Educators’ Association
American Speech-Language and Hearing Association
Association of Schools of Allied Health Professionals
Commission on Collegiate Nursing Education
Commission on Accreditation of Allied Health Education Programs
Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association
Commission on Dental Accreditation of the American Dental Association
Council on Education for Public Health
Council on Social Work Education
Human Factors and Ergonomics Society
Kansas Board of Emergency Medical Services
Kansas State Board of Nursing
Kansas State Department of Education
National Accrediting Agency for Clinical Laboratory Sciences
National Association of School Psychologists
National Association of Schools of Dance
National Association of Schools of Music
National Association of Schools of Public Affairs Administration
National Council for Accreditation of Teacher Education

*North Central Association of Colleges and Schools of Higher Learning Commission
30 North LaSalle Street, Suite 2400; Chicago, Illinois 60602-2594; (800) 621-7440
# Degrees and Academic Majors by College or Division

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A = Associate  B = Bachelor  M = Master  S = Specialist  D = Doctorate

* Master of Fine Arts, a terminal degree