undergraduate catalog

the metropolitan advantage

2000 - 2001
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**Note:** The above text is a list of contents from a university catalog, detailing various sections and their respective page numbers.
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

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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 will 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 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—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 your 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 Endowment Association 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 2000-2001

Fall Semester 2000
August 14-19 .......................... Fall semester registration
August 21 .............................. Weekday and evening classes begin
September 4 ........................... Labor Day, holiday
October 13 ............................. Midterm point
October 27 ............................. Final date for withdrawal with nonpenalty grades
November 18-January 9 ......... Telephone registration period for spring semester
                                   (exact dates published in the Schedule of Courses)
November 22-26 ........................ Thanksgiving recess
December 7 ............................. Last day of classes
December 8 ............................. Study Day
December 9-15 ......................... Final examinations
December 18 ............................ Fall semester ends

Spring Semester 2001
January 8-13 ......................... Spring semester registration
January 15 ............................. Martin Luther King, Jr. Day, holiday
January 16 ............................. Classes begin
March 9 ................................. Midterm point
March 19-25 ........................... Spring recess
March 30 ................................. Final date for withdrawal with nonpenalty grades
April 17-August 5 ........................ Telephone registration period for fall semester
                                   (exact dates published in the Schedule of Courses)
May 7 ................................. Last day of classes
May 8 ................................. Study Day
May 9-15 ............................... Final examinations
May 14 ................................. Commencement
May 17 ................................. Spring semester ends

Summer Semester 2001
May 21-June 1 .......................... Preession and workshops
May 28 ................................. Memorial Day, holiday
May 29-June 2 .......................... Summer Session registration
June 4 ................................. Classes begin, first four-week term and
                                   eight-week term
June 29 ................................. Last day of first four-week term
                                   Registration for second four-week term
July 2 ................................. Classes begin, second four-week term
July 4 ................................. Independence Day holiday
July 27 ................................. Summer Session ends

Notice of Nondiscrimination
Wichita State University does not discriminate in its programs and activities on the basis of race, religion, color, national origin, gender, veteran status, age, or disability. The following person has been designated to handle inquiries regarding nondiscrimination policies: Director, Office of Equal Employment Opportunity, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0145; telephone (316) 978-3001.

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General Information

2000-2001 University and Academic Officers
Donald L. Begg, President
Ted D. Ayres, General Counsel and Associate to the President
James J. Rhatigan, Senior Vice President
Frederick Sudermann, Senior Advisor to the President
Robert L. Kindrick, Vice President for Academic Affairs and Research
Elizabeth H. King, Vice President for University Advancement
Roger D. Lowe, Vice President for Administration and Finance
Ronald L. Kopita, Vice President for Student Affairs
Susan Kovar, Interim Dean of the Graduate School
John M. Beehler, Dean of the W. Frank Barton School of Business
Jon M. Engelhardt, Dean of the College of Education
Dennis A. Siginer, Dean of the College of Engineering
Walter J. Myers, Dean of the College of Fine Arts
Peter A. Cohen, Dean of the College of Health Professions
David C. Glenn-Lewin, Dean of Fairmount College of Liberal Arts and Sciences
Ruth Jackson, Dean of Libraries
Jim Schaus, Director of Intercollegiate Athletic Association, Inc.

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Fred A. Kerr, Pratt
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Kim A. Wilcox, Executive Director, Topeka

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 79 degree programs that range from the associate to the doctoral level; nondegree 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 28. 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; Raytheon Aircraft; Cessna Aircraft; Coleman, Inc.; Bank of America; Bombardier Aerospace-Learjet; Via Christi 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 150 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 42 master's degrees which offer study in more than 100 areas; specialist in education degrees; and doctoral degrees in applied mathematics; chemistry; communicative disorders and sciences; human factors psychology and community/criminal 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, an increasing number of courses are offered on 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 105-year heritage. More than 60 pieces of sculpture by internationally known artists adorn the campus. Personnages Oiseaux, a colorful mural created by the great Spanish artist Joan Miró, 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 460 full-time faculty and 41 part-time faculty. Of the total, 78 percent have earned the highest degree in their field. Of all undergraduate credit hours, 69 percent are taught by full-time faculty. The average age of our faculty is 49; 63 percent are males and 37 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 38 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 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 Spring Open House, 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 WuShock 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 Alumni Center, 4205 East 21st Street, just east of Eck Stadium/Tyler Field.

**Endowment Association**

The Endowment Association, the private fund-raising organization of the University, advances the University’s mission by identifying, cultivating and soliciting private support from individuals, corporations, and foundations. Private contributions are necessary to support the programs and vision of the University beyond current funding from fees, tuition, and government funding.

Gifts of cash, securities, stock, real estate, and in-kind gifts are coordinated through the Endowment Association. Planned gifts, most commonly established through a donor’s estate, also are set up through the Endowment Association.

For fiscal year 2001, $3.83 million is allocated to the University from endowed funds of the Endowment Association and Board of Trustees. Of that, $1.7 million is in the form of scholarships to undergraduate students. The remainder funds projects like faculty support, research, Aboriginal Library, and the Ulrich Museum of Art.

For more information, contact 978-3040 or www.twsu.edu/-endowment.
Admission to Wichita State

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

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

The procedures outlined in the box are for degree-bound domestic students. Information for nondegree-bound students is below. Information for international students is on page 10.

Admission Categories

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

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

Nondegree-bound undergraduate is a category of admission for students who wish to pursue their education with no immediate degree plans. Students in this category are not eligible for financial aid. Copies of official college or high school transcripts should be sent to the Office of Admissions. Nondegree students can be admitted as either open admission or guest students.

Open Admission. An open admission student is one who:
- Has graduated from an accredited high school, or has a score of 50 on the GED, and has not attended any school for two years; or
- Has not graduated from high school or completed a GED, is at least 21 years of age, and has not attended any school for at least two years; or
- Is on active military duty; or
- Holds a bachelor's or higher degree.

Students admitted as open admission students will be considered nondegree for their first 15 semester hours. Beyond 15 credits, students must apply to continue as a regular nondegree student or as a degree-bound student.

Out-of-state freshmen (See residency requirements on page 39.)
For admission to WSU in Fall 2000, Spring 2001, or Summer 2001, you must have:
1. Rank in the upper half of your graduating class, or
2. Have earned a minimum 2.000 GPA (on a 4.00 scale), or
3. Have achieved a minimum ACT composite score of 21 or equivalent SAT-I of 990, or
4. Have passed the GED exam and received a diploma.

Beginning with Fall 2001, you must:
1. Have achieved a composite ACT score of 21 or equivalent SAT-I of 990, or
2. Rank in the top third of your high school class upon completion of seven or eight semesters, or
3. Have completed a pre-college curriculum with a minimum GPA of 2.00 on a 4.00 scale.

The pre-college curriculum prescribed by the Kansas Board of Regents includes four units of English, three units of mathematics, three units of natural sciences, three units of social sciences, and one unit of computer technology.
4. Have achieved a composite ACT score of 21 if you graduated from a nonaccredited high school.
5. Have a passing score of at least 50 on the GED exam if you graduated from a nonaccredited high school.
6. Have completed at least 18 on the ACT or 870 on the SAT-I if you graduated from a nonaccredited high school.

Beginning with Fall 2001, you must:
1. Have achieved a composite ACT score of 21 or equivalent SAT-I of 990, or
2. Rank in the top third of your high school class upon completion of seven or eight semesters, or
3. Have completed a pre-college curriculum with a minimum GPA of 2.00 on a 4.00 scale.
4. Have a minimum GED score of 50 of 21 or older.

Transfer students
- Must have a minimum cumulative GPA of 2.000 (on 4.00 scale) on all previous college work. See admission process on page 10.

Transfer students are encouraged to bring copies of their academic transcript and meet with an academic advisor prior to enrolling. The advisor can provide information about degree requirements and the eligibility of the student's prior course work towards their degree of choice. Contact an academic advisor through the dean's office. See page 11.

WSU participates in the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Colleges and Universities. See page 17.
Students transferring from a two-year college must complete at least 60 hours of four-year college work and 40 hours of upper-division work in order to qualify for graduation. In no case will work done in a two-year college be credited as junior- or senior-level work at Wichita State. See requirements for graduation, page 35.

Students who are unable to meet these requirements because of unusual circumstances may be considered for special admission through the University's Exceptions Committee. Contact the Office of Admissions, 978-3085, for details.

Guest admission is limited to 15 hours. Students previously enrolled as college guests who wish to become degree-bound students at WSU must re-apply with the Office of Admissions and have official transcripts of all college work sent directly to WSU. See above box for admission requirements and procedures based on the number of transfer credit hours.

Guest Students—High School. Students who attend Wichita State before graduation from high school are considered guest students.
Admission Process—Undergraduate; Domestic

To apply for admission, students who meet admission requirements 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.wichita.edu/online/admissions/apply.asp

High School Students or College Transfers with 1-23 hours of college credit

- Submit a completed and signed application.
- Have your official high school transcript (minimum of six semesters) and college transcript(s) 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 $20 application fee. (The proposed fee for fall 2001 entrants is $25.)

College Transfers with 24 or more hours of college credit

- Submit 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 $20 application fee. (The proposed fee for fall 2001 entrants is $25.)

Admission requirements

- Completed their junior year of high school. Younger students will be considered on an exceptional basis.
- Submit an application and $20 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 adaptation, 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 undergraduate applicants for admission without proof of English proficiency. English proficiency may be demonstrated in the following ways:

1. Obtain a TOEFL score* of 530 or higher on the paper-based TOEFL.
2. Obtain a TOEFL score* of 197 or higher on the computer-based TOEFL.
3. Obtain an IELTS overall band score of 6.5 or higher.
4. Obtain a satisfactory score on the WCU English Proficiency Examination.
5. 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-degree status. Some students wish to study for one or more semesters without earning a degree. Nondegree applicants must submit all of the required application materials and will receive the same consideration as degree candidates.

Other requirements. All international students are required to have a medical insurance policy before enrollment. If needed, medical insurance may be purchased at the University. All new students are required to have a tuberculosis skin test after their arrival in Wichita.

Graduate Student Admission

Specific requirements for either degree or nondegree admission and for all graduate programs are listed in the Wichita State University 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, Wichita, Kansas 67260-0004, (316) 978-3095, or order online at gradin@twsuvrn.uc.twsu.edu.

Orientation

Orientation and educational planning programs help new students become a part of the learning community and teach the requirements, expectations, and procedures of that community. At orientation, students meet with academic advisors, register for classes, obtain a student ID card, learn about campus life opportunities, obtain information regarding career development and cooperative education, and make important connections with WSU faculty, staff, current students, and other new students.

Specially selected student orientation leaders and faculty members are carefully trained to work with new students in small groups during orientation.

Degree-bound Students: Because orientation and educational planning are not preludes to education, but rather are 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 attend orientation. Orientation programs specifically designed for each student population are scheduled in advance of the fall and spring semesters.
and summer session. Information about orientation and registration is sent by the Office of Admissions to all students who have been admitted to the University.

**Nondegree-bound Students:** Orientation programs are available, and recommended, for nondegree-bound students. LAS I 100A, Returning Adult Seminar, a class designed for adults who have been out of school for one year or more, is also available as an enrollment option. Parts of the course serve as an ongoing orientation and the class is offered fall and spring semesters. Contact the LAS Advising Center for more information.

In addition to the one day orientation, 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 below.

For more information about orientation, contact the Office of Admissions-Orientation, (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 development of ongoing relationships, students are challenged and encouraged by advisors to develop academic and career plans that will optimize their unique abilities, goals, and aspirations.

Students may expect their advisors to listen and respond to their interests and concerns; to accept them as unique persons; to be reasonably accessible; to know policies, procedures, and information sources; and to be a personal resource for academic, career, and life goals.

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.

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**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) nondegree-bound students who are enrolled in classes for purposes other than completing a degree; and (4) graduate students.

**Degree-Bound—Major Decided**

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

**Education**
- College of Education
- 107 Corbin Education Center
- (316) WSU-3300
- education.twsu.edu/

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

**Degree-Bound—Exploratory or Nondegree-Bound**

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

**Fine Arts**
- College of Fine Arts
- 415 Jardine Hall
- (316) WSU-3389
- finearts.twsu.edu/

**Health**
- College of Health Professions
- 402 Ahlberg Hall
- (316) WSU-3600
- www.visit.com/-wsucohp/

**Liberal Arts and Sciences**
- LAS Advising Center
- 115 Grace Wilkie Hall
- (316) WSU-3700
- advising.twsu.edu

**Graduate Students**
- Graduate School
- 107 Jardine Hall
- (316) WSU-3095
- www.twsu.edu/-admgsww/

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**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.

**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.

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**Housing and Residence Life**

On-campus housing is available for more than 1,000 students in Fairmount Towers, Brennan Hall, and Wheatshocker 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 cam-
pus. 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 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, www.twsu.edu/housing.

For housing and residence life fees, see page 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. New students register during Orientation. All other students may register either in person or through Touch 'n Roll (phone) registration 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 Wichita State University Endowment Association and from appropriations from the State of Kansas. Kansas Residency requirements are described on page 39 of this Catalog.

Financial Assistance

Wichita State offers financial assistance through scholarships, federally 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 family 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 three hours may be eligible for part-time employment at the University. Federal work study employment is based on enrollment in at least six 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 Wilkie Hall.

Scholarships

Wichita State University has been fortunate to receive donations from past graduates, faculty, friends, and administrators of the University who wish to assist future graduates in financing their years at Wichita State 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 are 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.

For a complete list of all scholarships available to WSU students or to apply for scholarships, contact the Office of Financial Aid. Once a scholarship application is received, students are considered for all scholarships for which they qualify.

Comprehensive Fee Schedule

Fees given in this Catalog were proposed for 2000-2001 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>Undergraduate tuition*</td>
<td>$69.65</td>
<td>$290.15</td>
</tr>
<tr>
<td>Technology fee per credit hour</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Library fee per credit hour</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Total tuition per credit hour</td>
<td>$71.65</td>
<td>$292.15</td>
</tr>
<tr>
<td>Student fee—all students</td>
<td>$19.15</td>
<td>$19.15</td>
</tr>
<tr>
<td>Per credit hour</td>
<td>$17.00</td>
<td>$17.00</td>
</tr>
<tr>
<td>Registration fee—all students</td>
<td>$17.00</td>
<td>$17.00</td>
</tr>
<tr>
<td>Per semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate tuition*</td>
<td>$102.90</td>
<td>$338.50</td>
</tr>
<tr>
<td>Technology fee per credit hour</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Library fee per credit hour</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Total tuition per credit hour</td>
<td>$104.90</td>
<td>$340.50</td>
</tr>
</tbody>
</table>

*Tuition and fees are for the Fall and Spring semesters and Summer Session. Tuition includes $1 per credit hour for technology equipment.

No tuition is charged to students enrolled in instructional programs for which the entire cost is financed by governmental or private agencies. Students enrolled in such programs must pay all required student fees.
The student fee, required of all students enrolled at Wichita State University, supports the Educational Opportunity Fund ($4.00 per credit hour), student union, athletics, Hewett Center, bowling program, Student Health Services, forensics, Student Government Association, student publications, and other student activities.

**Workshop and Off-Campus Fees**
On-campus credit workshops cost $71.65 per semester hour and $9.50 overhead. In addition, there is a $17 registration fee per semester and a parking fee of $5.50 per semester hour. A specific course fee of $92 (undergraduate) or $134 (graduate) per semester hour is assessed for off-campus regular enrollment and continuing education credit courses or workshops. Non-credit workshop fees are based on costs.

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

**Departmental or College Fees**
Special departmental fees are charged as summarized below:
1. Students are required to reimburse the University for the cost of excess breakage, wastage of materials, and materials used in excess of those required for completion of course work.
2. Dance program fee (Dance 201, 210, 301, 310, 401, 410, 501, and 510)—$12 per semester for course.
3. Engineering equipment and maintenance fee—$14 per credit hour for engineering courses.
4. Geology Field School—actual cost per semester.
5. Kinesiology and sport studies (bowling)—$45 per semester.
6. Kinesiology and sport studies (bowling), KSS 201B—$10 per course.
7. Kinesiology and sport studies (horsemanship)—$110 per semester.
8. Kinesiology and sport studies (scuba diving)—$55 per semester.
9. Kinesiology and sport studies (scuba trip)—$770 per student.
10. Kinesiology and sport studies (advanced open water diving fee)—$59 per student.
11. Kinesiology and sport studies (pool/billiards)—$25 per semester.
12. Kinesiology and sport studies (ice skating)—$78 per semester.
13. Kinesiology and sport studies (water sports)—$125 per semester.
14. Kinesiology and sport studies (golf Westside)—$45 per semester.
15. Kinesiology and sport studies (safety and marksmanship)—$125 per semester.
16. Kinesiology and sport studies (CPR and first aid certification)—$10 per certification.
17. College of Health Professions.
   a. Nursing entrance test fee—$14/person.
   b. Application fees:
      - Dental hygiene—$15/person.
      - Physical therapist assistant—$20/person.
      - Medical technology—$100/person.
      - Physician assistant—$100/person.
   c. Acceptance fees:
      - Dental hygiene—$100/person.
      - Medical technology—$100/person.
      - Physician assistant—$100/person.

**Special Fees, Deposits, and Waivers**
Certain other fees are assessed as indicated below:
- Math placement test fee—$4 per student.
- Scholarship search fee—$10/person.
- Non-WSU student—$15/person.
- Undergraduate admission application fee—$20/person.
- Graduate admission application fee—$25/person.
- Media course fee—$12/credit hour.
- English composition placement fee—$4/person.
- Installment payment administration fee—$30/person.
- Diploma replacement fee—$20/copy.
- International undergraduate student application fee—$50/person.
- International graduate student application fee—$25/person.
- Transcript/certification fee—$40/person.
- Departmental examination fee—$8/credit hour.
- Late registration fee (after end of regular registration through 20th day of classes)—$25/person.
- Music instrument use fee—$15/semester.
- Equivalency examination fee—$10/credit hour.
- Career services:
  - Registration fee—$20/6 mos.; $25/year.
  - Nonstudents—$35/6 mos.; $50/year.
- Counseling:
  - WSU students and alumni—$20/hour.
  - Non-enrolled persons—$35/hour.
- Community people—$40/hour.
- Credential mailings—$3/mailing.
- Testing:
  - Campbell Interest:
    - Skill Survey—$10/test.
    - Strong Interest Inventory—$10/test.
    - Self-Directed Search—$10/test.
    - Missouri Card Sort—$25/test.
    - Myers-Briggs Type Indicator—$10/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.

**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.

**Period of Payment**
All semester fees, including laboratory fees, must be paid in full at registration.

**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.

**Assessment and Collection**
The University Controller is responsible for the assessment and collection of fees.

The assessment and collection procedure is the same for both resident and non-resident students. It is the responsibility of students to ensure that all fees and charges are paid in a timely manner.

**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 non-continuous contact. Payments must be made 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. Wheatshocker Apartments have monthly payments. A $10 late fee will be charged if an installment or monthly payment is not received by the fifth day of the due date. Rates include all utilities (water, gas, electricity), local telephone service, basic cable TV service, and an activity fee. All facilities are air conditioned.

Students who cancel their contracts after July 1 (December 1 for spring semester only contracts) by the fifth day after the due date. Rates include all utilities (water, gas, electricity), local telephone service, basic cable TV service, and an activity fee. All facilities are air conditioned.

Students who cancel their contracts after July 1 (December 1 for spring semester only contracts) forfeit their prepaid/deposit. Students who cancel their contracts after occupancy are assessed a cancellation fee of $150 plus 50% of the remaining balance of the contract. The cancellation fee is subject to appeal. See the contract for details.

Rates are for fiscal year 2001. 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 bill 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>Meal Plan</th>
<th>Double</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-max meal plan</td>
<td>$4,120</td>
<td>$5,120</td>
</tr>
<tr>
<td>15-max meal plan</td>
<td>$4,024</td>
<td>$5,024</td>
</tr>
<tr>
<td>10-max meal plan</td>
<td>$3,924</td>
<td>$4,924</td>
</tr>
<tr>
<td>19-basic meal plan</td>
<td>$4,020</td>
<td>$5,020</td>
</tr>
<tr>
<td>15-basic meal plan</td>
<td>$3,924</td>
<td>$4,924</td>
</tr>
</tbody>
</table>

*A $100 prepayment is due upon signing the contract. The prepayment is part of the contract amount; it guarantees the reservation of the room and is included in the rates. Fairmount Towers rooms are furnished. A Fine Arts specialty housing floor is offered on Fairmount Towers-Second Floor. Max meal plans include $100 in Shockers Dollars for the year, $50 per semester. Shockers Dollars continue after the semester/session for which they were purchased.

**Brennan Hall**

<table>
<thead>
<tr>
<th>Meal Plan</th>
<th>Double</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-max meal plan, S</td>
<td>$3,720</td>
<td>$4,720</td>
</tr>
<tr>
<td>19-max meal plan, L</td>
<td>$3,920</td>
<td>$4,920</td>
</tr>
<tr>
<td>15-max meal plan, S</td>
<td>$3,624</td>
<td>$4,624</td>
</tr>
<tr>
<td>15-max meal plan, L</td>
<td>$3,824</td>
<td>$4,824</td>
</tr>
<tr>
<td>10-max meal plan, S</td>
<td>$3,524</td>
<td>$4,524</td>
</tr>
<tr>
<td>10-max meal plan, L</td>
<td>$3,724</td>
<td>$4,724</td>
</tr>
<tr>
<td>15-basical meal plan, S</td>
<td>$3,620</td>
<td>$4,620</td>
</tr>
<tr>
<td>15-basical meal plan, L</td>
<td>$3,820</td>
<td>$4,820</td>
</tr>
<tr>
<td>15-basical meal plan, S</td>
<td>$3,524</td>
<td>$4,524</td>
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<tr>
<td>15-basical meal plan, L</td>
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<td>$4,724</td>
</tr>
<tr>
<td>5-basical meal plan, S</td>
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<td>$3,624</td>
</tr>
<tr>
<td>5-basical meal plan, L</td>
<td>$2,824</td>
<td>$3,824</td>
</tr>
<tr>
<td>120-block meal plan, S</td>
<td>$2,420</td>
<td>$3,420</td>
</tr>
<tr>
<td>120-block meal plan, L</td>
<td>$2,620</td>
<td>$3,620</td>
</tr>
<tr>
<td>Shockers Dollar meal plan, S</td>
<td>$2,400</td>
<td>$3,400</td>
</tr>
<tr>
<td>Shockers Dollar meal plan, L</td>
<td>$2,600</td>
<td>$3,600</td>
</tr>
</tbody>
</table>

*A $100 prepayment is due upon signing the contract. The prepayment is part of the contract amount; it guarantees the reservation of the room and is included in the rates. Brennan students are required to choose one of the board plans above. Brennan Hall is reserved as specialty housing for students in the

Emory Lindquist Honors Program. Shockers Dollars continue after the semester/session for which they were purchased. S (Standard) rooms are 398-449 sq. ft.; L (Large) rooms are 501-554 sq. ft. All rooms are designed and furnished for two students.

**Wheatshocker Apartments**

<table>
<thead>
<tr>
<th>Room Style</th>
<th>Per Month</th>
<th>Per Acad. Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio, two bedrooms, one bath (1)</td>
<td>$400</td>
<td>$4,000</td>
</tr>
<tr>
<td>Studio, one bedroom, one bath (1A)</td>
<td>$400</td>
<td>$4,000</td>
</tr>
<tr>
<td>Large corner, four bedrooms, one bath (2)</td>
<td>$855</td>
<td>$8,550</td>
</tr>
<tr>
<td>Large 1/2 suite (one apt.)</td>
<td>$480</td>
<td>$4,800</td>
</tr>
<tr>
<td>1/4 unit of large apt.</td>
<td>$240</td>
<td>$2,400</td>
</tr>
<tr>
<td>Small 1/2 suite (one apt.)</td>
<td>$375</td>
<td>$3,750</td>
</tr>
<tr>
<td>1/4 unit (with or without window)</td>
<td>$200</td>
<td>$2,000</td>
</tr>
<tr>
<td>Four bedrooms, one bath (3)</td>
<td>$750</td>
<td>$7,500</td>
</tr>
<tr>
<td>1/2 suite (one apt.)</td>
<td>$375</td>
<td>$3,750</td>
</tr>
<tr>
<td>1/4 unit (with or without window)</td>
<td>$200</td>
<td>$2,000</td>
</tr>
<tr>
<td>Two bedrooms, two baths (4)</td>
<td>$948</td>
<td>$9,480</td>
</tr>
<tr>
<td>Two bedrooms, one bath (5)</td>
<td>$760</td>
<td>$7,600</td>
</tr>
</tbody>
</table>

Accessible units—medical documentation may be required.

One bedroom, one bath (2A) | $560 | $5,600 |
| One bedroom, one bath (3A) | $540 | $5,400 |
| One bedroom, one bath (4A) | $540 | $5,400 |

*A $100 deposit is due upon signing the contract. The deposit is not part of the contract amount, but it guarantees the reservation of the room. The deposit is refundable, subject to damage assessments after proper check-out. Numbers correspond to room layout. Food plan includes $100 in Shockers Dollars (per person) for the year, $50 per semester. Shockers Dollars continue after the semester/session for which they were purchased.

**Summer Session Housing**

All freshmen live in Brennan Hall for the summer because Fairmount Towers is not available. If you are not a freshman, you may live in either Brennan or Wheatshocker. Rates are quoted for double-occupancy and for single-occupancy. Single rooms will be granted only if space is available. In Brennan Hall, a summer board plan of $25 in Shockers Dollars (per week) is required. You may contract for summer housing for varying periods of time, including pre-session only, pre-session and first-four-week session, second-four-week session, eight-week session, and pre-session and eight-week session. For 2001 summer rates, call Housing and Residence Life, (316) 978-3693.

**Contracts and Compensatory Charges**
The schedule of fees reported here does not limit the charges that may be collected under arrangements with other governmental 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.

Refund Policy—Complete and Partial Withdrawal
To withdraw completely from the University, students must process drop cards for all classes in which they are enrolled and surrender their Certificate of Registration.

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.

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 one 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) receive(s) a loan under Title IV on behalf of the students who withdraw fully from the University will be subject to a different refund policy. Contact the Controller’s Office for details.

Tuition Waiver for Kansas Teachers of the Year
Kansas Teacher of the Year recipients are allowed to enroll tuition free in up to nine 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.

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 nonmilitary refund policy. Room and board charges will be prorated to the extent that services have been provided.

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.

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 (noncredit) 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 $20 application fee before registering.
### General Education Program Requirements • Worksheet

<table>
<thead>
<tr>
<th>Basic Skills*</th>
<th>English 100 or 101</th>
<th>English 102</th>
<th>Communication 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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#### Division

<table>
<thead>
<tr>
<th>Fine Arts</th>
<th>Humanities</th>
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<tbody>
<tr>
<td>Art History</td>
<td>Communication***</td>
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<tr>
<td>Dance (History)</td>
<td>English***</td>
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<tr>
<td>Musicology-Composition</td>
<td>History</td>
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<tr>
<td>Theatre</td>
<td>Linguistics</td>
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<tr>
<td>Modern and Classical Languages and Literatures</td>
<td>Philosophy</td>
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<td>Religion</td>
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<td>Women's Studies</td>
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#### Introductory Course

<table>
<thead>
<tr>
<th>Further Study/I&amp;P+ Course</th>
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<tbody>
<tr>
<td>Fine Arts (1)</td>
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<tr>
<td>Humanities (2)</td>
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<table>
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<tr>
<th>Social and Behavioral Sciences</th>
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<tbody>
<tr>
<td>Anthropology</td>
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<td>Criminal Justice</td>
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<td>Economics</td>
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<td>Entrepreneurship</td>
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<td>Geography</td>
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<table>
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<tr>
<th>Natural Sciences and Mathematics</th>
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<tbody>
<tr>
<td>One class must be from biology, chemistry, geology, or physics</td>
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<tr>
<td>Biology</td>
</tr>
<tr>
<td>Biological</td>
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<tr>
<td>Anthropology</td>
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<tr>
<td>Chemistry</td>
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<tr>
<td>Computer Science</td>
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</tbody>
</table>

* Placement into math and English Basic Skills courses is determined by ACT score, high school background, or departmental placement exam.
** 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.

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### 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 242Q and Economics 201Q and 202Q. Math. 111 or 112 meets the prerequisite for Math. 144.

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

**Engineering students** are required to take Math. 242Q, Physics 313Q, and Chemistry 111Q. 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 Psychology 111Q. 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)
- History 131, 132 (Humanities) or Political Science 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.

Exploratory 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.
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 three 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 website advising.twu.edu/_vtil_script/uac_uacsearch.html?idq.

Introductory Courses

Fine Arts Courses
Art H. 121G, Survey of Western Art: Ancient
Art H. 122G, Survey of Western Art: Renaissance and Baroque
Art H. 124, Survey of Western Art: Modern
Dance 140, Art of the Dance
Hrsns. 104, Seminar I: Fine Arts
Hrsns. 104A, Listening to Jazz
Mus. C. 160G, Heritage of Western Music
Mus. C. 162G, World Music
Thea. 143G, Art of the Theater
Thea. 260, History of Musical Theater

Humanities Courses
Comm. 190G, Introduction to Human Communication
Engl. 230G, Exploring Literature
Engl. 232G, Themes in American Literature
Fren. 210Q, Intermediate French (P)
Germ. 220Q, Continuing German (P)
Greek 223, Intermediate Greek (P)
Hist. 100G, World Civilization since 1500
Hist. 101G, Western Civilization to 1648
Hist. 102G, Western Civilization from 1648
Hist. 131Q, History of the USA: Colonial Period to 1877
Hist. 132Q, History of the USA: 1877 to Present
Hrsns. 105, Seminar I: Humanities
Hrsns. 105A, Plato and the Republic
Hrsns. 105B, City in Cinema

Latin 223, Intermediate Latin (P)
Ling. 151G, The Nature of Language
Phil. 100G, Meaning of Philosophy
Phil. 125Q, Introductory Logic
Phil. 144Q, Moral Issues
Rel. 110Q, Old Testament
Rel. 115Q, New Testament
Russ. 210Q, Intermediate Russian (P)
Span. 210Q, Intermediate Spanish (P)
Wom. S. 190G, The American Woman
Wom. S. 287Q, Women in Society:

Social and Behavioral Sciences Courses
Anthr. 100G, Anthropology of Modern (American) Life
Anthr. 101Q, Biological Anthropology
Anthr. 102Q, Introduction to Cultural Anthropology
Anthr. 103, Introduction to Archaeology
CJ 191Q, Introduction to Criminal Justice
Econ. 201Q, Principles of Macroeconomics
Geog. 125Q, Principles of Human Geography
Geog. 210Q, World Geography
Hrsns. 106, Seminar I: Social and Behavioral Sciences
Hrsns. 106A, City Politics
Hrsns. 106B, Architecture of the Ancient City
Min. S. 100Q, Introduction to Minority Studies
Min. S. 210Q, Fundamentals of Cross-Cultural Communication
Pol. S. 121Q, American Politics
Pol. S. 226Q, Comparative Politics
Psy. 111Q, General Psychology
Soc. 111Q, Introduction to Sociology

Mathematics and Natural Sciences Courses
Biol. 104Q, Introducing Biology
Biol. 106G, The Human Organism
Biol. 107G, The Human Organism Laboratory
Biol. 203Q, Introduction to Organismal Biology
Chem. 103Q, General Chemistry
Chem. 111Q, General Chemistry
CS 105, Introduction to Computers
CS 210, Introduction to Computer Science
Geog. 201, Physical Geography
Geol. 102, Earth Science and the Environment
Geol. 111Q, General Geology
Hrsns. 107Q, Seminar I: Mathematics and Natural Sciences
Hrsns. 107Q, Frontiers in Biomedical Sciences
Math. 144, Business Calculus (P)
Math. 242Q, Calculus I (P)
Phys. 111Q, Introductory Physics
Further Study Courses

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. 421Q, Art of Ancient Greece
Art H. 422, Roman Art and Architecture
Art H. 521Q, Italian Renaissance
Art H. 522, Southern Baroque
Art H. 523, 18th and 19th Century European Art
Art H. 524, 20th Century Art before 1945
Art H. 526, Art since 1945
Dance 225Q, Dance History I
Dance 315, Music for Dance (P)
Fine Arts 130, Arts and Technology
Fine Arts 301, Introduction to Entrepreneurship in the Fine Arts
Mus. C. 346Q, Styles of Jazz
Mus. C. 493Q, American Popular Music
Thea. 221Q, Oral Interpretation
Thea. 241, Improvisation and Theatre Games
Thea. 243Q, Acting I
Thea. 450, Contemporary Theater and Drama (P)
Thea. 516, Playwriting I (P)
Thea. 517, Playwriting II (P)
Thea. 623Q, Development of the Theater I
Thea. 624Q, Development of the Theater II

Engl. 272Q, Origins of Western Literature
Engl. 275Q, Studies in Popular Literature
Engl. 290Q, The Bible as Literature
Engl. 315, Introduction to English Linguistics
Engl. 320Q, The Nature of Drama
Engl. 330Q, The Nature of Fiction
Engl. 340Q, Major Plays of Shakespeare
Engl. 345, Studies in Comparative Literature
Engl. 360, Major British Writers I
Engl. 361, Major British Writers II
Engl. 362Q, American Writers of the 19th Century
Engl. 365, African-American Literature
Engl. 400Q, The Literary Imagination
Fren. 223, Intermediate French Readings I (P)
Fren. 300, Intermediate French Readings II (P)
Germ. 223, Intermediate German I (P)
Germ. 344Q, Intermediate German II (P)
Greek 224, Intermediate Greek (P)
Hist. 311, History of Latin America I
Hist. 312, History of Latin America II
Hist. 313, English History I
Hist. 314, English History II
Hist. 315, Modern German History
Hist. 317, The Holocaust
Hist. 320, Russian History Survey
Hist. 321, The Viet Nam Conflict
Hist. 340, World War II
Hist. 357, Women in the Ancient World
Hist. 362, The World of Women
Hist. 501, The American Colonies
Hist. 502, The American Revolution and Early Republic
Hist. 504, Civil War and Reconstruction
Hist. 507, U.S. History: 1900 to 1945
Hist. 508, U.S. History: 1945 to present
Hist. 516, History of American Business
Hist. 517, U.S. Constitutional History I
Hist. 518, U.S. Constitutional History II
Hist. 521, U.S. Diplomatic History I
Hist. 522, U.S. Diplomatic History II
Hist. 525, American Military History
Hist. 531, American Environmental History
Hist. 534, History of the Old South
Hist. 535Q, History of Kansas
Hist. 536, Survey of American Indian History
Hist. 538, The American West in the 20th Century
Hist. 541, Modern France
Hist. 553, History of Mexico
Hist. 558, The Ancient Near East
Hist. 559Q, Greek History I
Hist. 560, Greek History II
Hist. 562, Roman History I
Hist. 563, Roman History II
Hist. 566, Medieval History I
Hist. 567, Medieval History II

Hist. 575Q, The Italian Renaissance
Hist. 576, The Reformation
Hist. 581, Europe 1815-1870
Hist. 582, Europe 1870-1945
Hist. 583, Europe 1914-1945
Hist. 588, History of Early Russia
Hist. 589, History of Imperial Russia
Hist. 592, History of the Soviet Union
Hist. 593, The Former Soviet Union
Hist. 613, European Diplomatic History
Latin 224, Intermediate Latin (P)
Phil. 301, Language and Philosophy
Phil. 303Q, 19th Century Philosophy
Phil. 308, Philosophy of Economics
Phil. 311Q, Philosophy of Law
Phil. 313Q, Political Philosophy
Phil. 315, Late Modern Philosophy
Phil. 320, Philosophy of Science
Phil. 322Q, Early Modern Philosophy
Phil. 327, Philosophy of Health Care
Phil. 331Q, Ancient Greek Philosophy
Phil. 338, Philosophy of Feminism
Phil. 346Q, Philosophy of Religion
Phil. 354, Ethics and Computers
Phil. 360, Ethical Theory (P)
Phil. 375, Philosophy of the Arts
Russ. 224, Intermediate Russian (P)
Russ. 300, Intermediate Russian Readings (P)
Span. 223, Selected Spanish Readings (P)
Span. 300, Intermediate Spanish Readings (P)
Wom. S. 361, Women and Work
Wom. S. 387Q, Women in Society: Cultural Images
Wom. S. 391, Women's Global Issues
Wom. S. 511, Women in Early America, 1600-1830
Wom. S. 512, Women and Reform in America, 1830 to present

Social and Behavioral Sciences Courses
Anthr. 200, Intercultural Relations
Anthr. 303Q, World Cultures (P)
Anthr. 305Q, World Archaeology
Anthr. 307, Peoples of Africa
Anthr. 312, Asia Pacific Cultures
Anthr. 313, Archaeology of East Asia
Anthr. 318, Psychological Anthropology
Anthr. 327, Magic, Witchcraft, and Religion
Anthr. 335, Archaeology of North America
Anthr. 344, Ecological Anthropology
Anthr. 356, Human Variability and Adaptation (P)
Anthr. 361, Law, Politics, and Society
Anthr. 388, Cognitive Anthropology
Anthr. 506, Peoples of the Pacific
Anthr. 508Q, Ancient Civilizations of the Americas (P)
Anthr. 511, The Indians of North America (P)
Anthr. 514, Anthropology of Aging (P)
Anthr. 515Q, China
Anthr. 516Q, Japan: People and Culture
Anthr. 519, Applying Anthropology (P)
Anthr. 522Q, Art and Culture (P)
Anthr. 528, Medical Anthropology
Anthr. 542, Women in Other Cultures
Anthr. 611, Southwestern Archaeology (P)
Anthr. 613, Archaeology of the Great Plains (P)

Cas. 351Q, The Victim in Criminal Justice
Cas. 355, Special Populations in the Criminal Justice System
Cas. 394, Courts and Judicial Systems
Cas. 453, Crime Prevention
Cas. 593, Criminal Causal and Criminal Justice

Cas. 652, Juvenile Justice and Social Policy
Econ. 202Q, Principles of Microeconomics
Geog. 235, Meteorology (P)
Geog. 330, Geography of Latin America
Geog. 342, Geography of Europe
Min. S. 240Q, Minority Women in America
Min. S. 251Q, Women and Minorities in the Criminal Justice System
Min. S. 260, Prominent Minorities in the Making of America
Min. S. 330, Ethnic America, ca. 1500-1924
Min. S. 331, The Black Family
Min. S. 332, The Native American
Min. S. 333, Issues in the Chicano Community
Min. S. 334, Ethnic America in the 20th Century
Min. S. 360, Dealing with Diversity
Min. S. 350F, Black America in Film
Min. S. 350L, Osage Cultural Workshop
Min. S. 390, Asian-American Contemporary Issues
Min. S. 410, The African American Male
Min. S. 512, Issues in Minority Aging
Min. S. 532, Women in Ethnic America
Pol. S. 315, The Presidency
Pol. S. 316Q, The Congress
Pol. S. 317, Urban Politics
Pol. S. 318, Political Parties
Pol. S. 319, State Government
Pol. S. 320, Politics of Developing Areas
Pol. S. 335Q, International Politics and Institutions
Pol. S. 336, International Politics and Institutions
Pol. S. 337, Force and Intervention
Pol. S. 345, Classical Medieval Political Theory
Pol. S. 358Q, American Political Thought
Pol. S. 390, Special Topics in Political Science
Pol. S. 444, Modern Political Theory
Pol. S. 523Q, Government and Politics in Latin America
Pol. S. 524, Politics of Modern China
Pol. S. 533, Police Development in Foreign Relations
Pol. S. 534, Problems in Foreign Policy

Pol. S. 547, Contemporary Political Theory
Pol. S. 551, Public Law
Pol. S. 552Q, Civil Liberties
Psy. 302, Psychology of Learning (P)
Psy. 304Q, Social Psychology (P)
Psy. 316, Industrial Psychology (P)
Psy. 322, Cognitive Psychology (P)
Psy. 324Q, Psychology of Personality (P)
Psy. 332, Psychology of Perception (P)
Psy. 334Q, Developmental Psychology (P)
Psy. 336, Alcohol use and Abuse (P)
Psy. 342Q, Psychology of Motivation (P)
Psy. 402, Psychology of Consciousness (P)
Psy. 404, Psychology of Aging (P)
Psy. 406, Introduction to Community Psychology (P)
Psy. 414, Child Psychology (P)
Psy. 516, Drugs and Human Behavior (P)
Psy. 522, Biological Psychology (P)
Psy. 552, Psycholinguistics (P)
Soc. 301, Computers and Society
Soc. 315Q, Courtship and Marriage
Soc. 320Q, Contemporary Social Problems (P)
Soc. 322, Deviant Behavior (P)
Soc. 325, Parenting
Soc. 330Q, Social Inequality (P)
Soc. 334, Sociology of the Community (P)
Soc. 338Q, Health and Lifestyle (P)
Soc. 350, Social Interaction (P)
Soc. 513, Sociology of Aging (P)
Soc. 519, Sociology of the Family (P)
Soc. 516, Sociology of Sex Roles (P)
Soc. 534, Urban Sociology (P)
Soc. 539, Juvenile Delinquency (P)

Mathematics and Natural Sciences Courses
Biol. 509Q, Foundations of Human Heredity
Chem. 112Q, General and Inorganic Chemistry (P)
Chem. 514, Inorganic Chemistry (P)
Chem. 523, Analytical Chemistry (P)
Chem. 531, Organic Chemistry (P)
Chem. 533, Elementary Organic Chemistry (P)
Chem. 545, Physical Chemistry (P)
Chem. 661, Introductory Biochemistry (P)
CS 300, Data Structures and Algorithms
Geol. 302Q, Earth and Space Sciences
Geol. 310, Oceanography
Geol. 312, Historical Geology and Stratigraphy (P)
Geol. 320, Mineralogy (P)
Geol. 430, Tropical Marine Environments
Geol. 541, Plate Tectonics (P)
Geol. 560, Geomorphology and Land Use (P)
Geol. 570, Paleontology (P)
Geol. 574, Special Studies in Paleontology (P)
Math. 243Q, Calculus II (P)
Phys. 214Q, General College Physics II (P)

Phys. 314Q, University Physics II (P)
Phys. 395G, Solar System Astronomy
Stat. 360, 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
Fine Arts/Humanities Courses
Art H. 326, Architecture
Germ. 341, Germany in the European Context
Hist. 308, Lost Civilizations
Hnrs. 420Q, Seminar in Humanities
LAS-I 222Q, East Asia
LAS-I 300G, Global Issues
Mus. C. 310, Interrelated Arts (P)
Phil. 300G, Science and the Modern World
Phil. 302, Values and the Modern World
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
IB 333, International Business Issues and Perspectives
LAS-I 222Q, East Asia
LAS-I 300G, Peace and War
Pol. S. 232Q, Basic Ideas in Political Theory
Psy. 416Q, Psychology and Problems of Society (P)
Psy. 534, Psychology of Women (P)
Soc. 316, The American Male
Soc. 336, Work in Modern Society

Mathematics and Natural Sciences Courses
Biol. 310, Human Reproduction: Issues and Perspectives (P)
Biol. 370Q, Populations, Resources, and the Environment (P)
Geol. 300G, Energy, Resources, and the Environment
Hist. 531, Introduction to the History of Mathematics (P)
PHS 330, Cancer: Perspectives and Controversies
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 classes, experienced, highly committed faculty, and an approach to study that emphasizes participatory 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 their composite score on the Enhanced American College Test (ACT) is 26 or higher, or if their high school grade point average is 3.50 or higher as certified by the University. Transfer and continuing students may enter 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. A student will be removed from probation if grade point requirements are satisfied for work taken during the next semester of enrollment.

In the semester following that, the student’s overall and honors grade point averages need to 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 approved by the major department after achieving senior status.

Graduation Requirements

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

- 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.

Freshman/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 studies 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 six-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

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

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

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

>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.

>150. Seminar II: Fine Arts. (3-4). General education introductory course. Topics vary. Prerequisites: Hrns. 104 and six additional credit hours, or permission of honors director.

>151. Seminar II: Humanities. (3-4). General education introductory course. Topics vary. Prerequisites: Hnrs. 105 and six additional credit hours, or permission of honors director.

>152. Seminar II: Social and Behavioral Sciences. (3-4). General education introductory course. Topics vary. Prerequisites: Hnrs. 106 and six additional credit hours, or permission of honors director.

>153. Seminar II: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education introductory course. Topics vary. Prerequisites: Hnrs. 107 and six additional credit hours, or permission of honors director.

Upper-Division Courses

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

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

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

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

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

>400. Honors Seminar. (1-4). General education further study course.

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

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

>430Q. Seminar in Social and Behavioral Sciences. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: Hrs. 206 or permission of honors director.

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

>450Q. Seminar in Fine Arts. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: Hrs. 204 or permission of honors director.

Honors Mentor Program

Much of the excitement of college learning comes through informal discussions with faculty and other students. Honors 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.

Cooperative Education Internship Program

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 six 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 come to the Cooperative Education Office, 223 Grace Wilkie Hall or phone (316) 978-3688. Students are required to complete an application for admission, attend orientation, and schedule an interview with the appropriate co-op coordinator.
Exchange and Study Abroad Programs

National Student Exchange
The National Student Exchange (NSE) is an exciting opportunity to attend one of nearly 160 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. All financial aid and scholarships will still be applicable; your aid will be applied to your tuition bill at WSU and the balance will be sent to you 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 2.500 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 offers organized study abroad programs in Mexico and France, described below. Additionally, students can individually study abroad for up to four hours of credit. For more information, contact the Office of International Programs, 303 Grace Willie Hall.

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 Université d’Orleans. Orleans also offers a four-week summer program in which students may earn up to six 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 six 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.

Six hours of undergraduate or graduate credit may be earned by those who complete the six-week course. 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, and Nebraska 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 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 shawver@twsuv.m.uc.twsu.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. 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 and Kansas State universities present a joint 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 six hours of credit.

Applicants should have completed course work 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, 228 McKinley Hall.

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...
Computer Labs
UCATS maintains two open computer labs in Jabara Hall, Rooms 120 and 122. These labs contain modern equipment and an abundance of software applications used academically at the institution. There are lab assistants available to support the use of these applications and systems. The personal computers are housed in individual cubicles; each cubicle contains the PC as well as draft printers. The PCs have various configurations but most have sound, CD, zip drive, and 17” monitors. Other services that are available are scanning, laser printing, and color printing.

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-hr 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
A high-speed dial-up connection (56k) to the Internet is provided through Shocknet2. After your application and fee is processed, you will be given an ID and password that will unlock your access to the World Wide Web. This service is provided at a nominal fee and there is assistance available to support anyone who has problems getting a proper connection. Application, instructions, and other information about Shocknet2 are available either at the UCATS web site, www.wichita.edu/online/ucats, or at the Dispatch Window, Jabara 116.

E-mail
Every WSU student is eligible to receive an e-mail account on the University’s main computer system. 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 either on the UCATS web site or at the Dispatch Window, Jabara 116.

Math Lab
The Math Lab, 321 Jabara Hall, offers free mathematics tutoring for WSU students enrolled in the following courses: 007, Arithmetic; 011, Beginning Algebra; 012, Intermediate Algebra; 111, College Algebra; 112-Pre-Calculus Math; 123, College Trigonometry; 131, Contemporary Mathematics; 144, Business Calculus; 242Q, Calculus I; and 370, Elementary Statistics.

Language Labs
The Saviano-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 non-traditional students’ needs.

Math Lab
The Math Lab, 321 Jabara Hall, offers free mathematics tutoring for WSU students enrolled in the following courses: 007, Arithmetic; 011, Beginning Algebra; 012, Intermediate Algebra; 111, College Algebra; 112-Pre-Calculus Math; 123, College Trigonometry; 131, Contemporary Mathematics; 144, Business Calculus; 242Q, 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 website, www.math.twsu.edu.

Writing Center
Students enrolled in any course at WSU may come to the Writing Center to get assistance with their writing assignments, to obtain help in overcoming their grammar and writing problems, and to discuss their writing concerns with a tutor. The services are free, and no appointment is necessary; students may walk in whenever they need any assistance with a writing assignment. During the spring and fall semesters, the Writing Center is open 9 a.m.-3 p.m. Monday through Friday and 4:30-7 p.m. Monday through Thursday evenings. For summer hours, contact the English Department.

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 Student Handbook or bring their concerns about student life to 105 Grace Wilkite Hall. This office oversees many of the student services described in the following sections.

Career Services
The Career Services office provides services to students and alumni/alumnae seeking career advice or employment-related assistance.

Individual career counseling is available to assist students and alumni/alumnae 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, employer recruiting literature, annual salary survey reports and information on graduate and professional school opportunities are available in the Career Resource Center (CRC).

The CRC also houses a lab which provides computers for students to prepare job search documents such as resumes and cover letters. The computers also provide 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; on-campus interviews with employer representatives; and an employment listing bulletin.

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

Contact Career Services in 203 Grace Wilkite Hall, at (316) 978-3435, or online at wsucareer.twsu.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 are available in the Financial Aid Office.

For more information, call (316) 978-3109.

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 program and the National Testing Program are administered directly by the Counseling and Testing Center. The National Testing Program includes certification tests for community professionals, CLEP tests, and entrance exams for colleges and graduate schools.

Contact the Counseling and Testing Center in 320 Grace Wilkite Hall, at (316) 978-3440, or online at www.twsu.edu/~cnslst.

Disability Services
The Office of Disability Services provides academic accommodations for students who experience physical or mental disabilities. Students are required to provide appropriate documentation to the Director of Disability Services before classroom services are provided. For more information, contact: Office of Disability Services Wichita State University 1845 Fairmount Wichita, Kansas 67260-0132 (316) 978-3309, v-tty (316) 978-3114, fax www.twsu.edu/~disserv/ 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.

Office of International Programs
International Programs serves the special needs of approximately 1,400 international students from more than 90 countries enrolled at Wichita State. (For international student admission requirements, see page 10.) 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 Global Education Program, 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.
State is a member of the Missouri Valley Conference; WSU men compete in basketball, baseball, track, tennis, and golf, and WSU women compete in basketball, softball, track, tennis, golf, and volleyball. The University fields teams in bowling and crew as independent sports.

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

Men's basketball season tickets for students, student guests, and youths may be purchased at a reduced rate at the athletic ticket office in Levitt Arena. Students with a current Shocker ID card are admitted free to all other varsity athletic events.

Facilities
Sports and recreation facilities for WSU students include a regulation 18-hole golf course; the 10,429-seat Henry Levitt Arena which is used for intercollegiate basketball games, volleyball matches, and major entertainment events; Cessna Stadium; the 7,808-seat Eck Stadium-Tyler Field, home to the Shocker baseball program, which recently underwent a $7 million renovation and ranks among the finest college baseball facilities in the country; the Sheldon Coleman Tennis Complex with eight lighted courts, home to WSU's men's and women's intercollegiate tennis programs; and the new 802-seat C. Howard Wilkins Softball Complex 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 four large lighted play fields. Students must show a current Shocker ID card to use the activity areas for recreation or for classes.

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 008 Rhatigan Student Center, (316) 978-3022, and the Multicultural Resource Center is in 174 Grace Wilkie Annex, (316) 978-3034. Visit us online at www.twsu.edu/~wusdma.

We foster an environment that promotes multiculturalism and encourages students to become involved in campus life and community service to develop the skills necessary to become successful leaders.

Student Development and Multicultural Affairs' components are:

- Greek affairs—formal rush, greek leadership retreat, and greek conviction;
- Multicultural affairs—Cinco de Mayo celebration, cultural theme-month programming, and pre-Kwanzaa celebration;
- Student involvement—student organizational support, student organization registration, and leadership institutes;
- Volunteerism—alternative spring break, Building Up Dreams in Urban Youth (BUDUY) student mentoring program, and "Into the Streets";
- Women's programming and resources —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 $5.5 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 Scholarship 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 annu-
Student Health Services

Student Health Services, the on-campus health care facility for students, is located in 209 Ahlborg Hall. Student Health Services, the on-campus health care facility for students, is located in 209 Ahlborg Hall. Student Health Services, the on-campus health care facility for students, is located in 209 Ahlborg Hall. Student Health Services, the on-campus health care facility for students, is located in 209 Ahlborg Hall. Student Health Services, the on-campus health care facility for students, is located in 209 Ahlborg Hall.

Information about insurance plans is available, however insurance is not a requirement to be seen.

For more information, call (316) 978-3620, or see our website, www.twusu.edu/-shs/.

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; Henry Levitt 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 and first generation college students with a multiplicity of academic support services which assist students to persist and graduate from WSU. The program has three components which provide comprehensive, one-on-one tutorial assistance and an interconnected series of support services: academic and personal counseling, financial aid assistance, career guidance, assistance in the development of study skills, a text book usage program and free access to computers and typewriters. The program serves 250 students each year and has been in operation at WSU since 1970.

For more information, contact us online at www.twusu.edu/~ssswww/ss.html.

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 limited-income and/or first generation individuals in gaining admission to postsecondary institutions throughout the nation and preparing 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 Labette Community College serve middle (WSU only) and high schools and community agencies in Wichita and nine counties in southeast Kansas. The WSU office is located in Brennan I, third floor. Our website is www.twusu.edu/~talser/.

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.

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 coursework.

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 four themes important in the discipline of science:

- **Space Science**—emphasizes how and why this country puts both human being and machine into outer space.
- **Aerodynamics**—investigates the wonders of flight within earth’s atmosphere.
- **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.

Veterans Services

The Office of Student Affairs, 105 Grace Wilkie Hall, provides services to veterans and active duty people. 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 Serviceman's Opportunity College.
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 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 as 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 Rhatigan Student Center, (316) 978-3022.

Student Organizations

Academic
Aerospace Design Club
Alpha Pi Mu (Industrial engineering)
American Institute of Aeronautics and Astronautics
American Marketing Association
American Society of Mechanical Engineers
Association of Collegiate Entrepreneurs (ACE)
Association for Computing Machinery
Collegiate Music Educators National Conference
Geology Club
Health Careers Opportunity Club
Promotions
Human Factors and Ergonomics Society
Institute of Electrical and Electronic Engineers
Institute of Industrial Engineers
International Business and Studies Association
Japanese Student Association
Kansas Association of Nursing Students
Legal Assistants Society
Mini-Baja Team
Philosophy Society
Physician Assistant Student Society
Pi Mu Epsilon
Political Science Club
Potters' Guild
Psi Chi (Psychology)
Psychology Graduate Student Organization (PGSO)
Russkii Kruzhok, The Russian Club
Sculpture Guild
Sigma Gamma Epsilon (Science)
Society for Human Resource Management
Society of Automotive Engineers
Society of Manufacturing Engineers
Sport Administration Student Club
Student Art Education Association
Student Music Teachers Association
Student of Finance Association (SOFA)
Student Speech, Language, and Hearing Association
The Arts Projects Student Committee
Visual Artists Students Advisory Committee
Visual Arts Guild
Women's Studies Scholars and Allies
Cultural/International
Association of Moroccans in Wichita
Chinese Student Friendship Association
Hispanic American Leadership Organization (HALO)
Indian Students Association
Indonesia Student Association
International Student Union
Korean Student Association
Latin American Association (ALIANSA)
Multicultural Student Coalition
Pakistani Students Association
Sri Lanka Student Association
Student Association of Bangladesh
Taiwanese Student Association
Turkish Student Association
Vietnamese Student Association
Governing/Representative Councils
Black Student Union
Interfraternity Council
National Pan-Hellenic Council
Society of Women Engineers
Student Government Association
Women's Panhellenic Association
WSU Engineering Council

Greek
Junior Greek Council
Fraternities
Beta Theta Pi
Kappa Alpha Psi
Kappa Sigma
Omega Psi Phi
Phi Beta Sigma
Phi Delta Theta
Pi Kappa Alpha
SigmaAlpha Epsilon
Sigma Phi Epsilon
Sororities
Alpha Kappa Alpha
Alpha Phi
Delta Delta Delta
Delta Gamma
Delta Sigma Theta
Gamma Phi Beta
Sigma Gamma Rho
Zeta Phi Beta
Honorary
Alpha Kappa Delta (Sociology)
Alpha Psi Omega (Theatre)
Emory Lindquist Honors Society (WSU Honors Program)
Eta Kappa Nu (Electrical engineering)
Golden Key National Honor Society (Top 15%, juniors and seniors)
Lambda Pi Eta (Communications)
Mortar Board (Senior honor society)
Omicron Delta Kappa (Leadership)
Phi Eta Sigma (Freshmen)
Pi Delta Phi (French)
Pi Sigma Alpha (Government)
Pi Tau Sigma (Mechanical engineering)
Pinnacle (Non-traditional students)
Senior Honor Men and Women
Tau Beta Pi (Engineering)
Political
WSU College Republicans
Residence Hall
Brennan Community Association
Fairmount Towers Activities Council
Residential Housing Association
Recreation/Sports Club
Aikido Club
Bowling Team
Chess Club
Flying Club
Lifeguard Club
Vovinam Club
Women's Soccer Club
WSU Swing and Ballroom Dance Club
Religious
Campus Crusade for Christ
Christian Challenge
First Baptist International
Intervarsity Christian Fellowship
St. Paul Parish/Newman Center
University Lutheran Ministry
WSU Humanist and Freethought Society
Special Interest/Social/Community Service/Other
Academic Quiz Team (SI)
C.S. Lewis Socratic Society
Eagle Forum Collegians of WSU
Hajime Anime Club of WSU (SI)
Middle Ages Re-enactment Society (SI)
Native American Student Association (SI)
Non-Traditional Student Association  
Pay Back Society (CS)  
Student Activities Council (O)  
Student Advertising Federation (SI)  
Student Ambassador Society (SI)  
Student Health Advisory Council (SI)  
Student in Free Enterprise (CS)  
Student Organization of Social Work (SI)  
Student Physical Therapy Association  
Student Advertising Federation  

Some of the University's special facilities  
See description of the University's sports and recreation facilities on page 25.

University Facilities  
Instructional facilities on the 330-acre Wichita State campus are used for educational purposes more hours per day than at any other Kansas college or university. Some of the University's special 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 25.

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.

Classes and special services including the Speech-Language-Hearing Clinic and the Wichita Radio Reading Service are available at the Hughes Metropolitan Complex, 29th Street North at Oliver, 978-3258.

Course locations are listed in the Schedule of Courses.

Sports Facilities  
See description of the University's sports and recreation facilities on page 25.

Ulrich Museum of Art  
The Edwin A. Ulrich Museum of Art is recognized among university museums for its outdoor sculpture collection and for the quality of its exhibition program. In addition to galleries which hold exhibitions from the museum's collection, the museum hosts seven special exhibitions a year, each of which runs for approximately six weeks. Call (316) 978-3664 for information on current exhibitions.

The museum is named in honor of Edwin A. Ulrich, a retired businessman who contributed funds to the University designated for the construction of the museum building. Ulrich also gave a collection of artwork by the American marine painter, Frederick Judd Waugh (1861-1940).

The museum opened in 1974 and over the years has developed an active exhibition program. As a visual laboratory for the students of the University as well as the community, the exhibition program presents a blend of traditional artwork, often from the museum collection, with more experimental work. Exhibitions have featured artists such as David Hockney, Romare Bearden, Morris Louis, Isabel Bishop, David Salle, Sandy Skoglund, Jesus Moroles, Faith Ringgold, and Elizabeth Murray, along with collections of electronic and neon artists and Kansas native artists. In cooperation with the faculty of the College of Fine Arts the museum is the setting for concerts, lectures, and demonstrations by visiting artists as well as WSU faculty.

The art collection, owned by Wichita State University Endowment Association and managed by the professional staff of the museum, now numbers more than 7,500 objects. Nineteenth and 20th century European and American art, paintings, drawings, sculpture, and prints form the core of the collection. The museum organizes traveling exhibitions of work from the collection. Solo exhibitions by Frederick Waugh and Ernest Trova and theme exhibitions such as Twentieth Century American sculpture have traveled to museums both in this country and abroad.

A major aspect of the collection is the 65 piece outdoor installation of the Martin H. Bush Sculpture Collection, named in honor of the founding director of the museum. The collection contains a cross-section of 19th and 20th century sculptures by artists such as Auguste Rodin, Henry Moore, Louise Nevelson, George Rickey, Lynn Chadwick, and Luis Jimenez, among others. The centerpiece of this outdoor collection is the mural, Personnages Oiseaux, by the Spanish artist Joan Miró, located on the face of the museum building. Consisting of nearly one million pieces of Venetian glass and marble, the mural depicts whimsical bird characters that inhabit the imagination of the artist.

Policies and Procedures—Academic

Student Responsibility  
Students at Wichita State University have the following responsibilities:

1. To consult their advisors on all matters pertaining to their academic careers, including changes in their programs
2. To observe all regulations of their 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 other students, 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 on the WSU website (www.wichita.edu) under University Policy and Procedures Manual.

Academic Honesty

Opportunities for learning at Wichita State University involve the students' rights to express their views and to take reasoned 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, or 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 unreturned 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 student/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; or 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 when 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 34.

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. All honors are based on the cumulative grade point average.

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 3.500 or higher for a semester.

Students enrolled in six through eleven semester hours who achieve a 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 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 be graduated 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 either because of failure to complete their projects or failure 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 six 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 the 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 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 six 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.

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 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 fifth 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 noncredit basis with appropriate approval under an auditor classification. To be enrolled as auditors, students must enroll in the same manner and pay the same fees as for credit courses at the University. Auditors may participate fully in the class and expect instructor evaluation of their work. Auditors are expected to attend class regularly. The audited course will appear on the transcript with the grade notation of Au.

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 semester hours or more 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, nine graduate credit hours are considered a full load. (Graduate students who are half-time teaching assistants are considered full-time if they take six 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, six hours are full time for both undergraduate and graduate students, with graduate teaching assistants full time with three hours.

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 35.

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) and 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 by 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 CrE 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.).

Credits are accepted on the basis of a grade of C or better in regular courses and for credit by examination for many undergraduate courses for which these tests are available.

Credit by examination is subject to University policies and will be reviewed by the Registrar before being placed on the transcript.

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

Credit by examination from all accredited institutions of higher education is evaluated in the same manner as regularly graded 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 when rereamination is deemed to contribute to the academic objectives of the course.

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

Special examinations, when requested, will be given only with the consent of the dean of the college involved. Students with disabilities should contact the Director of Disability Services for assistance with special examinations.

Students who miss an assigned examination should arrange with their instructor to take a make-up examination. Deans of the college will serve as arbitrators only when deemed necessary.
Grading System

Wichita State grades include A, B, C, D, F, W, AU, Cr, NCr, S, U, I, R, and CrE.

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 hours 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.
Au: Audit. No credit given; no credit points. Does not affect grade point average. See Auditor, page 31.
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 32.
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 32.
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. Course reverts automatically to an F. Students may not enroll in the course in which they received an 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 W 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, RF, 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 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. Beginning Fall 1994, see (b).
   (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 grades received for that course in the 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, College-Level Examination Program (CLEP) credit, for 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 32.

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. The grades Au, 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 as follows for 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 I but exclude Au 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 U 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 ten hours of completing their 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 implement-ed, the policy waives all previous credits and grades except in the case of credits and grades earned in the special nondegree-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 initiated by the chairperson of the department that offered the course if, and 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. The dean must then notify the chairperson of the department concerned that the grade has been changed.

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 form.

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 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 excluded). However, 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 the University.

When students receive their graded reports (A, B, C, D, or F) and if they have below a 2.000 GPA, they may file a request with the dean of the student's college that all work in the transition semester be translated into Credit/No Credit (Cr/NCr) on their official records, with Cr applying to letter grades A, B, and C, and NCR applying to letter grades D and F.

To have letter grades translated into Cr/NCr, the Transition Semester Request Form must be filed by the student with the dean of the student's college between the posting of the semester grades and the student's next enrollment, including Summer Session. Students who file for transition semester will be placed on probation and will be required to meet the following criteria:

1. Students are limited to a maximum of 12 semester hours (or a proportional enrollment during Summer Session) or less during their next enrollment period.
2. Students must complete at least six (6) graded hours during their next enrollment (excluding Summer Session) before eligibility will be reviewed. This does not include enrollment in courses taken for Credit, Audit, or Satisfactory.
3. Students must receive at least a 2.000 GPA.

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 and Wichita State grade point average of 3.250. The minimum standard for graduating cum laude is a cumulative and Wichita State 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 nondegree-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 commencements a year. Summer and fall graduates are invited to attend December commencement. Spring graduates attend 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, NCR, 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 (transfer work included) and a grade point average of 2.000 on all work taken toward a degree at Wichita State. Furthermore, students must maintain a grade point average of 2.000 in the courses in their major field of study.

Students 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 40 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 40 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 Cr) 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 six 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 a minimum of 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

Access to Records (Privacy Law)
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 who are declared independent. 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. You may obtain a copy of the policy from the Registrar's office.

No one outside the institution shall have access to or 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 the Act.

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

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

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 Campus Directory, which is published each Fall and which is available to people outside WSU.

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) the 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 by the code as: "Information relating to a student: Name, current address, level and school, date of birth, major field of study, participation in officially recognized activities and sports, height and weight of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational institution attended by the student. 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."

C. Disclosure: Permitting access to the release, transfer, or other communication of education records of the student or the personally identifiable information contained therein, orally, 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 faculty, 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 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.

D. 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 education records prior to January 1, 1975, if such letters were submitted with an understanding of confidentiality, and are used only for the purpose for which they were specifically intended;

(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.

E. 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 government 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 is 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 form a student, a student's parents, 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 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 given written 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 with the university's student affairs office 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.

(2) If a student challenge to the content of a given record is successful, the University shall amend the education record accordingly and so inform the student. Upon the student's specific written request to the 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 check first with 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. In the event the University is found not to be in compliance, it will be afforded the necessary time to comply. If it does not then comply, the matter will be sent to a review board for a hearing. For 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, veteran status, age, or disability in admission or access to, or treatment or employment in, its programs and activities. 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 website, 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 Kansas legislature, rather than University policy, determines the residence of students entering Wichita State. 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 months 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/re-enrollment."

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 for the 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 or graduate) 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-lit 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.
The mission of the W. Frank Barton School of Business is to add value to students and to advance the practice of business through:

- offering undergraduate and graduate programs,
- conducting basic, applied, and instructional research,
- performing service that facilitates economic and personal development, and
- capitalizing on our metropolitan location.

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 are 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 environ-

ment. 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—the International Association for Management Education; 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.

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's

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.

Associate of Science

A two-year program in legal assistant training, which leads to the Associate of Science, is available. The legal assistant program is offered by the Department of Finance, Real Estate, and Decision Sciences.

**Graduate**

Master's degree programs in the school lead to the Executive Master of Business Administration (EMBA), Master of Business Administration (MBA), Master of Professional Accountancy (MPA), Master of Science (MS) in business, 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 degree program in health care administration offered through the College of Health Professions. 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 six hours of English composition, three hours of communication, and three 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 six hours of elementary accounting, six hours of elementary economics, business statistics, business calculus, and a business computer course; and (4) declared a professional major in the school. For degree-seeking students in the Barton School of Business, advanced standing is a prerequisite for all upper-division courses in the school.

Transfer students planning to transfer into the Barton School of Business from another two- or four-year institution to obtain the BBA are advised to complete as much of Wichita State’s general education requirements as possible before transferring. The following course areas are recommended for the first two years of college work:

- Mathematics
  - College algebra (3 hours)
  - Survey of calculus (3 hours)
- Communication
  - Composition (6 hours)
  - Speech (3 hours)
  - Fine arts (3 hours)
  - Humanities (9 hours)
- Social sciences
  - Principles of economics (6 hours)
  - Psychology, sociology, anthropology, political science (3 hours)
  - Social sciences (6 hours minimum)
  - Biology, chemistry, geology, physics
- Business
  - Introductory accounting (6 hours)
  - Business microcomputers (3 hours)
  - Business statistics (3-4 hours)
  - Nonbusiness electives (10 hours)

Transfer students should be aware that 50 percent of their business course work must be taken at Wichita State University.

Probation and Dismissal
Students are placed on probation at the end of any semester in which they do not have a WSU cumulative grade point average of 2.250. Probation is removed when their WSU grade point average reaches the 2.250 level. Students remain on probation if (1) they earn a 2.000 or better grade point average in the semester during which they are on probation, and (2) their WSU cumulative grade point average does not fall below 2.000. Students on probation because of a deficient cumulative grade point average may not be academically dismissed until they accumulate 12 or more attempted hours after being placed on probation.

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 six 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 one hour of physical education. Students admitted to advanced standing in the college are limited to a maximum of 18 hours, to which may be added one hour of physical education.

All Barton School of Business students are limited to enrollment in one course during a summer presession, 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
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 one hour of co-op per semester with a 2.25 cumulative grade point average as early as their sophomore year. Students enrolling in two or three hours of co-op during a single semester must have junior standing and at least a cumulative GPA of 2.25.

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.

Advising
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.

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 on-line 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 of times for 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 (100 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.

Legal Assistant Majors (100 Clinton Hall). All legal assistant majors are advised by the associate director of the Legal Assistant Program. Appointments should be made in 325 Clinton Hall.

Academic Honesty

The faculty of the Barton School of Business strongly endorses 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 of course work offered outside the school (Econ. 201Q, 202Q, 231, and 232 count 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 144/242Q; Econ. 201Q, 202Q, 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 taken 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.

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
Engl. 101-102, College English I-II
Comm. 111, Public Speaking

General education electives

Sophomore Year
Acct. 210, Financial Accounting
Acct. 220, Managerial Accounting
Acct. 260, Introduction to Information Processing Systems for Business
Econ. 201Q-202Q, Principles of Macroeconomics and Microeconomics
Econ. 231, Introductory Business Statistics
Econ. 232, Statistical Software Applications for Business
Entre. 220C, The Entrepreneurial Experience

General education electives

Junior Year
DS 350, Introduction to Production and Operations Management
MIS 495, Management Information Systems for Business
Fin. 340, Finance
IB 333, International Business
Mgmt. 360, Management and Organizational Behavior
Mkt. 300, Marketing
Upper-division business law course
Major courses

Senior Year
Mgmt. 681, Strategic Management
Major courses

Students graduating from the Barton School will take at least one behavioral science course from the following list:
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 any of the following:

1. Students who have close to 60 hours and have enrolled in the required lower-division (100 to 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.

3. Students may petition the school's Exceptions Committee for special permission to enroll in upper-division courses.

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:

I. Foundation Knowledge for Business
   A. Accounting
      Acct. 210, Financial Accounting*
      Acct. 220, Managerial Accounting*
      Acct. 260, Introduction to Information Processing Systems for Business*
   B. Behavioral Science
      Mgmt. 360, Management and Organizational Behavior
   C. Economics
      Econ. 201Q*, 202Q*, Principles of Macroeconomics and Microeconomics
   D. Mathematics and Statistics
      Math. 111, College Algebra*
      Math. 144, Business Calculus*
      Math. 242Q, Calculus I will be accepted in lieu of Math. 144*
   Econ. 231, Introductory Business Statistics* and Econ. 232, Statistical Software Applications for Business

II. Environment of Business—provides an understanding of the perspectives that form the context for business
   A. Law 431, Legal Environment of Business or
   B. Law 433, Law of Commercial Transactions and
   C. Law 436, Law of Business Associations

Entre. 220C, The Entrepreneurial Experience
IB 333, International Business

III. Business Functions
   Mkt. 300, Marketing
   Fin. 340, Finance
   DS 350, Introduction to Production and Operations Management
   MIS 495, Management Information Systems for Business

IV. Business Policy
   Mgmt. 681, Strategic Management

In addition, University graduation requirements include courses designed to help develop written and oral communication skills (Eng. 100 or 101, Eng. 102, and Comm. 111). These courses must be completed with a grade of C or better.

* These courses are prerequisites for upper-division courses.

Note: Any faculty member teaching an upper-division course in the Barton School of Business may assume that all students have completed the specific courses listed under Freshman Year and Sophomore Year above.

First-Year Course
   BA 190A, The Right Start: Becoming a Master Student, is a 3-credit-hour course specifically designed for first-year business students. Extensive research indicates that students who take a course like this

1. make vital connections to university faculty and resources,
2. are more likely to complete their degree,
3. do better academically, and
4. enjoy their university experiences more.

A complete course description appears on page 52.

Major/Minor Areas

Candidates for the BBA degree must satisfy the additional requirements of one of the following curricular majors. All students may claim 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 Professional Accountancy (MPA) 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 Professional Accountancy degree, see the Barton School of Business—Master of Professional Accountancy section of the Catalog. Undergraduate students may begin work leading toward the MPA degree early in their academic career.

MPA—Preprofessional Program Major

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

BBA—Accounting Major

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Acct. 310, Financial Accounting and Reporting: Assets</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 320, Accounting for Decision Making and Control</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 410, Financial Accounting and Reporting: Equities</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 430, Introduction to Federal Income Tax</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 560, Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 610, Financial Accounting and Reporting: Special Entities and Complex Issues</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 620, Accounting for Strategic Support and Performance Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 630, Taxation of Business Entities</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 640, Principles of Auditing</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 210, Composition: Business, Professional and Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

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 2.25 or better, and 9 hours of accounting course work must be completed at WSU.

Business Administration Major

Required Courses:

<table>
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<tr>
<th>Course</th>
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<tr>
<td>Acct. 310, Financial Accounting and Reporting: Assets</td>
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<td>3</td>
</tr>
<tr>
<td>Acct. 430, Introduction to Federal Income Tax</td>
<td>3</td>
</tr>
</tbody>
</table>
Econ. 304, Managerial Economics (3); Econ. 340, Money and Banking (3); Econ. 661, Collective Bargaining and Wage Determination (3); Econ. 672, Introduction to International Economics and Business (3), Fin. 620, Investments (3); Fin. 631, Money and Capital Markets (3); Fin. 660, Cases in Finance (3).

Mgmt. 462, Leading and Motivating (3); Mgmt. 464, Communicating Effectively in Organizations (3); Mgmt. 661, Coaching, Developing, and Mentoring; Mgmt. 662, Managing Workplace Diversity; Mgmt. 663, Building Effective Work Teams; Mgmt. 660, Designing Effective Organizations (3); Mgmt. 680, Making Effective Decisions (3); B. Law 436, Law of Business Associations.

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 15 hours of economics including Econ. 201Q and 202Q (or equivalent) and 9 hours of upper-division economics.

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 teach 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 business core. Students who plan to major or minor 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
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

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. 690S, Project SIFE—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. 404, Retail Management ............. 3
Mkt. 601, International Marketing ............. 3
Mkt. 604, Distribution Management ............. 3
Mkt. 607, Promotion Management ............. 3
RE 310, Principles of Real Estate .......... 3

Entrepreneurship Minor
A minor in entrepreneurship is available to any WSU student whose major field or area of emphasis is other than entrepreneurship. The minor consists of 15 hours of entrepreneurship courses including Entre. 220C or 320 and 12 hours of upper-division entrepreneurship courses. The student must take at least 9 hours at WSU and maintain a 2.25 GPA in those courses.

Finance Major
Department of Finance, Real Estate, and Decision Sciences

The major requires 21 hours beyond the college core. An emphasis in Bank Management or Real Estate may be obtained within the finance major. In addition, the department also offers a finance minor. All finance majors are required to complete Econ. 340, Money and Banking.

Required Courses:
Fin. 440, Financial Management II .... 3
Fin. 660, Cases in Finance ............. 3
Electives, from the following ............. 15
Corporate Finance
Fin. 610, Short-term Financial Management ............. 3
Fin. 612, Capital Budgeting ............. 3
Investments
Fin. 620, Investments ............. 3
Fin. 622, Futures and Options Markets ............. 3
Fin. 625, International Financial Management ............. 3
Fin. 650, Financial Modeling ............. 3
### Financial Institutions
- Fin. 330, Introduction to Insurance  
- Fin. 432, Contemporary Issues in Banking  
- Fin. 433, Money and Capital Markets  
- Fin. 632, Bank and Financial Institution Management  

### Real Estate
- RE 611, Real Estate Finance  
- RE 618, Real Estate Investment Analysis  

#### Emphasis in Real Estate
An emphasis in Real Estate, within the finance major may be obtained by taking 21 hours beyond the college core, as follows:
- Required courses
  - RE 310, Introduction to Real Estate  
  - Fin. 440, Financial Management II  
  - Fin. 619, Urban Land Development  
  - Electives (9 hours), from the following...
    - RE 438, Real Estate Law  
    - RE 611, Real Estate Finance  
    - RE 614, Real Estate Appraisal  
  
- Electives (3 hours), from the following...
  - Electives (3 hours), from the following...

### Finance Minor
A minor in finance consists of 15 hours, including Fin. 340, Fin. 440, Acct. 210, and six additional hours of finance courses (real estate courses will not count). At least six hours of upper-division finance courses must be taken in residence.

### Human Resource Management Major
#### Department of Management

<table>
<thead>
<tr>
<th>Required Courses</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 669, 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. 660, Designing Effective Organizations  
- Mgmt. 661, Coaching, Developing, and Mentoring  
- Mgmt. 662, Managing Workplace Diversity  
- Mgmt. 663, Building Effective Work Teams  
- IB 625, International Financial Management  
- Mgmt. 561, Introduction to International Economics and Business  
- IB 600, International Management  
- IB 601, International Marketing  

**Direct electives**

#### International Business Major

**Department of Management**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB 625, International Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 561, Introduction to International Economics and Business</td>
<td>3</td>
</tr>
<tr>
<td>IB 600, International Management</td>
<td>3</td>
</tr>
<tr>
<td>IB 601, International Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Directed electives**

Three of the following courses selected in consultation with the student's major advisor.
- Anthr. 303Q, World Cultures or Anthr. 515Q, China: People and Culture or Anthr. 516Q, 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, decision, 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. 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>
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</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>IB 690, Making Effective Decisions</td>
<td>3</td>
</tr>
<tr>
<td>HRM 466, Fundamentals of Human Resource Management</td>
<td>3</td>
</tr>
<tr>
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<td>3</td>
</tr>
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<td>3</td>
</tr>
</tbody>
</table>

Up to six 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

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM 260, Introduction to Information Processing Systems for Business (or computer science equivalent)</td>
<td>3</td>
</tr>
<tr>
<td>MIS 200, Fundamentals of Programming and Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>MIS 250, Fundamentals of Data Structures, File Design, and Access</td>
<td>3</td>
</tr>
<tr>
<td>MIS 300, Data Communications and Computer Networks</td>
<td>3</td>
</tr>
<tr>
<td>MIS 350, Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>MIS 600, Database Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS 650, Problem Solving, Decision Support, and Expert Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS 696, Management of the IS Function</td>
<td>3</td>
</tr>
</tbody>
</table>

### Human Resource Management Major

**Department of Management**

### Management Information Systems Major

**Department of Finance, Real Estate, and Decision Sciences**

The MIS major consists of the following courses

<table>
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<th>Hrs.</th>
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<tbody>
<tr>
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<td>MIS 696, Management of the IS Function</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: ................ 6

Mkt. 404, Retail Management
Mkt. 407, Marketing for Service and Nonprofit Organizations
Mkt. 601, International Marketing
Mkt. 604, Distribution Management
Mkt. 606, New Product Marketing
Mkt. 607, Promotion Management
Mkt. 608, Selling and Sales Force Management

Electives, selected with consent of major advisor ............................................ 6

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 2.25 GPA in these courses.

Master of Professional Accountancy

The Master of Professional 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.

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

The MPA 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 MPA 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 MPA 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 are lacking no more than nine hours of the preprofessional curriculum may be admitted on a conditional basis. These nine hours must be completed in the first semester following conditional admission or as soon thereafter as course scheduling permits.

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 MPA 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 Professional Accountancy (MPA) are required to meet specified 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 62 semester hours. The following courses are specifically required by the School of Accountancy and may be counted within this 62 hours:
   - Econ. 201Q and 202Q, 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
   - Math. 111, College Algebra ......................................... 3
   - Math. 144, Business Calculus ...................................... 3
   - Comm. 111, Public Speaking ....................................... 3
2. The candidate must complete a minimum of 25 hours of the following Barton School of Business core requirements:
   - Acct. 210, Financial Accounting .................................. 3
   - Acct. 220, Managerial Accounting .................................. 3
   - Acct. 260, Introduction to Information Processing Systems for Business .. 3
   - DS 350, Introduction to Production and Operation Management ....... 3
   - Entre. 220C, The Entrepreneurial Experience ....................... 3
   - Fin. 340, Finance ..................................................... 3
   - IB 333, International Business .................................... 3
   - Mgmt. 360, Management and Organizational Behavior ................ 3
   - MIS 495, Management Information Systems ......................... 3
   - Mkt. 300, Marketing ............................................... 3
3. The candidate must complete the following courses required by the School of Accountancy:

Preprofessional Accounting Core
Acct. 310, Financial Accounting and Reporting: Assets
Acct. 320, Accounting for Decision Making and Control
Acct. 410, Financial Accounting and Reporting: Equities
Acct. 430, Introduction to Federal Income Tax

During the semester in which the preprofessional curriculum will be completed, the candidate for the MPA must apply for admission to the Graduate School. The GMAT should be taken during, or just prior to, this semester.

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 xx 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:

Acct. 815, Financial Accounting and Reporting: Contemporary Issues
Acct. 825, Management Control Systems
Acct. 835, Tax Research and Selected Topics
Acct. 840, Advanced Principles of Auditing
Acct. 860, Advanced Accounting Information Systems
Electives outside accounting, selected with consent of graduate accounting advisor

Additional electives, accounting or nonaccounting, selected with consent of graduate accounting advisor

A minimum of 21 semester hours must be in course work numbered 800 or above.

Associate of Science in Legal Assistant

A legal assistant program is offered through the Department of Finance, Real Estate, and Decision Sciences to prepare students for law-related employment in law firms, corporations, and government. The 64-hour program is geared to the role concept of the legal assistant who is not a lawyer but who is trained to handle extensive professional responsibilities under the supervision of a lawyer.

The tasks of a graduate of the program might be expected to perform are legal research, preparing briefs, interviewing clients and witnesses, preparing corporate instruments, drafting wills and probate instruments, drafting pleadings and interrogatories, filing papers, assisting in trial preparation, and numerous other matters of challenge and responsibility. The program has been granted approval by the American Bar Association.

Degree Program Admission

Students seeking admission to the Legal Assistant Program must meet the general entrance requirements of WSU, the initial requirements of the Barton School of Business, and the special requirements of the Legal Assistant Program.

Initial admission to the Barton School of Business requires (1) completion of 24 semester credit hours, (2) a cumulative grade point average of 2.250, and (3) completion of six hours of English composition, three hours of communication, and three hours of college algebra with at least a grade of C in each course. Students may apply for admission to the Legal Assistant Program during the semester that these requirements will be completed.

Admission to the program involves these steps: (1) completion of an application for admission, including documentation of the GPA and specific course work listed above, and (2) completion of an admissions interview with the director or associate director of the program. In the event there are more applicants than the program can reasonably accommodate, the program reserves the right to set up admissions quotas. In such circumstances, applicants will be evaluated on the basis of academic record. Thus far, this procedure has not been necessary.

The associate director/advisor is available to counsel beginning and advanced students to ensure their basic skills and general education course work progress toward the legal courses in a logical and meaningful way. Appointments for pre-registration are recommended.

Nondegree and Single Course Admission

Students not pursuing the degree program are required to complete a special admission form. The student must identify the particular course or courses, the reason for seeking admission and the background which is the basis for a request for waiver of any stated prerequisites.

Such special admissions are evaluated against the following criteria: (1) whether the purpose of the student conforms to the objectives of the program, (2) whether the student has the background necessary to handle the course and not impede the class, and (3) if there is space available.

Degree Requirements

The degree requirements for the Associate of Science in Legal Assistant are summarized as follows:

Course Hrs.

I. General Education Requirements

Basic Skills ........................................... 30
Engl. 101 and 102, College English I and II ................. 6
Comm. 111, Public Speaking ................................ 3
Math. 111, College Algebra ................................ 3
Humanities and Fine Arts .................................. 12
Social and Behavioral Sciences ............................. 12
Mathematics and Natural Sciences .......................... 12

These requirements will be deemed satisfied in cases in which the student has earned a baccalaureate degree from a regionally accredited university.

II. Professional Curriculum ................................ 34

A. Required Courses ...................................... 16

B. Law 130Q, Introduction to Law .......................... 3
Legal 230, Introduction to Paralegalism ..................... 2
Legal 231A, Legal Research and Writing .................... 3
Legal 233, Litigation I ..................................... 3
Legal 240, Substantive Law: Torts ........................... 3
Acct. 210, Financial Accounting ......................... 3

B. Required Courses or Validated Equivalents .............. 6

Legal 238, Legal Assistant Internship ...................... 2
Legal 244, Legal Assistant Computer Skills .............. 3

Legal assistant internship is a requirement for students who do not have the law-related work experience equivalent. Proficiency in utilization of a microcomputer is also a graduation requirement. Work experience in a law office may be validated to satisfy the Internship requirement. Computer skills may be validated to satisfy the computer requirement.
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, but graduate students may also receive graduate credit for these courses.

Business courses numbered 700 to 799 are structured primarily for graduate students, but undergraduate, upper-division students may be admitted if they meet course prerequisites.

Courses numbered 800 to 899 are designed for graduate students only, and students may not be admitted to these courses unless they have been admitted to the Graduate School. (See the Academic Information section of the Catalog for special conditions under which seniors may be admitted to graduate courses.)

Business Administration—

Lower-Division Courses

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 by studying, working with other students, interacting with faculty, and planning their career. 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 190. Selected Topics. (1-3). Repeatable with departmental consent.

BA 250A. Introduction to Information Processing Systems for Business. (3).

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

Upper-Division Course

BA 490. Selected Topics. (1-3). Repeatable with departmental consent.

Accounting (Acct.)

School of Accountancy

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. 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, presentation, e-mail, e-mail attachments, file transfer, file compression, and search engines.

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 contemporary business contexts. Prerequisites: junior standing; Math. 111 or 112, and Acct. 220 and 260.

Acct. 390. Special Group Studies in Business. (1-3). Repeatable for credit with School of Accountancy consent.


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.

Acct. 481. Cooperative Education. (1-3).

Acct. 491. Independent Study in Accounting. (1-3). Individual study for CV/CNR only. Prerequisites: 2.750 grade point average.

Courses for Graduate/Undergraduate Credit

Acct. 560. Accounting Information Systems. (3). A study of the content, design and controls of accounting systems, emphasizing the use of computers for processing financial data. Prerequisites: Acct. 220 and 260; Math. 111 or 112; senior standing.

Acct. 610. Financial Accounting and Reporting: Special Entities and Complex Issues. (3). Examines accounting concepts and techniques related to consolidated statements, governmental and not-for-profit entities, and partnerships. Includes accounting for foreign currency, hedges, financial instruments, and emerging issues in financial accounting and reporting. Prerequisites: Acct. 410 or equivalent; Math. 111 or 112; senior standing.

Acct. 620. Accounting for Strategic Support and Performance Evaluation. (3). The use of accounting information to assist management in developing and identifying superior strategies to produce and sustain comparative
and/or competitive advantages. Focuses on goal-congruent strategies and incentives. Prerequisites: junior standing; Math. 111 or 112; Acct. 260 and 320.

Acct. 630. Taxation of Business Entities. (3). Studies the federal tax law as it applies to corporations, partnerships, 5 corporations, and tax-exempt entities. Examines the effect of taxation on business decisions. Prerequisite: Acct. 430 or equivalent.

Acct. 640. Principles of Auditing. (3). A study of the auditor's attest function, emphasizing auditing standards and procedures, independence, legal responsibilities, codes of ethical conduct and evaluation of accounting systems and internal control. Prerequisites: Acct. 260, 410, 560; Math. 111 or 112; senior standing.

Acct. 690. Seminar in Selected Topics. (1-3). Repeatable for credit with School of Accountancy consent.

Acct. 777. Review for Professional Examinations. (1-6). Prepares students for professional certification examinations in accounting, including the CPA, CMA, and CIA examinations. Enrollment governs whether course is offered. Graded S/U/A and may be repeated for credit. Registration for up to 6 semester hours is permitted. Credit for this course does not count for degree credit in the School of Accountancy or Barton School of Business. Prerequisite: permission of the School of Accountancy.

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, deductions, 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. 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. 510 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. 880. 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.


Business Law (B. Law)
Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses
B. Law 130Q. Introduction to Law. (3). A basic introduction to law. Considers the nature and functions of law, the structure of the American legal system and legal processes and procedures. Also surveys the major areas of substantive law. Open to students with a general interest in law. Students interested in the Legal Assistant Program should enroll concurrently in Legal 230.

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

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. Prerequisite: junior standing.


B. Law 436. 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. Prerequisite: junior standing.


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

B. Law 491. Independent Study. (1-5). Offered Cr/NC 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/NC only. Prerequisites: junior standing, 2.750 GPA in business law and departmental consent.

Courses for Graduate/Undergraduate Credit
B. Law 690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.


Courses for Graduate Students Only
B. Law 831. Legal Environment of Business. (3). An introduction to the legal environment in which the business system operates. Considers the functions of law in relation to the business system, the institutions and processes involved in the interaction between business, society, and government and the major frameworks of private and public law. Emphasizes the realm of public law from a managerial per-
spective, including the ethical and social responsibility aspects of business behavior.

B. Law 890. Seminar in Special Topics. (1-3). Repeatable with departmental consent.
B. Law 891. Directed Studies. (1-5). Prerequisite: 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 Math. 144, or equivalent, and junior standing.


DS 481. Cooperative Education. (1-3).

DS 491. Independent Study. (1-5). Offered Cr/NCR 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/NCR only. Prerequisites: junior standing, 2.750 GPA in decision sciences and departmental consent.

Courses for Graduate/Undergraduate Credit
DS 575. Decision Making Techniques. (3). An introduction to the quantitative techniques commonly used for managerial decision making and their application to problems in such areas as production, distribution, and finance. Includes linear, integer, goal and dynamic programming, transportation models, network models, queuing theory, and simulation. Prerequisite: DS 350.

DS 651. Design of Operations Systems. (3). Offers 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 system, job design, personnel planning and scheduling, and current issues. Prerequisite: DS 350.

DS 652. Operations Planning Systems. (3). Offers an in-depth analysis of the short-term or operational aspects of goods- or service-producing systems. Includes forecasting methods, inventory control methods, material requirements planning, aggregate planning and scheduling, and current issues. Prerequisite: DS 350.

DS 690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

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

Courses for Graduate Students Only
DS 850. Production and Operations Management. (3). Concepts for planning and controlling the production of either goods or services. Topics include: linear programming, scheduling, quality control, inventory models, and waiting-line models. Not open to students with credit in DS 350. Prerequisites: calculus and statistics.

DS 851. Intermediate Production Management. (3). Theory of productive systems, decision making under uncertainty and advanced technological forecasting methods for business and industry. Application of forecasting methods and some operations research models to real-world productive systems. Prerequisite: DS 350 or 850.

DS 871. Multivariate Statistical Methods. (3). A study of selected multivariate statistical methods used in support of modern decision making. Includes multivariate hypothesis testing, multiple regression, correlation, analysis of variance and covariance, and discriminant analysis. Prerequisite: Econ. 870 or Econ. 231.

DS 872. Advanced Statistical Analysis. (3). Examines topics such as sample design, chi square, variance analysis and correlation, and regression analysis from conceptual and decision-making points of view. Prerequisite: DS 871.

DS 874. Management Information Systems. (3). A study of the structure and the strategic organizational role of computer-based information systems in organizations. Covers transaction processing/accounting information systems, management reporting and executive information systems, decision support and expert systems, and workflow information systems. An information resource management perspective emphasizes issues of building an information architecture, data integration and administration, and managing risk in information systems development efforts.

DS 875. Management Science. (3). Provides quantitative bases from which the student may develop analytical abilities for use as a decision maker. Areas of study include mathematical programming, game theory forecasting, queuing theory, and simulation. Prerequisite: calculus.

DS 876. Advanced Management Science. (3). An in-depth examination of selected management science models. Includes advanced inventory and quality control topics, goal programming, and other current decision making techniques. Prerequisite: DS 675 or departmental consent.

DS 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, assuring database integrity, database conversion, database administration, and data management for computer integrated manufacturing. Prerequisite: DS 874 or instructor's consent.

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

DS 891. Directed Studies. (1-6). 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.


Economics (Econ.)
Department of Economics
Courses in the economics department are offered in the following subject areas. Some courses are listed in numerical sequence, the following summary is presented to assist in locating courses by subject area.

Economic principles and theory—Econ. 201Q, 202Q, 203H, 204H, 301, 302, 304, 605, 600, 601, 802, 804

Industrial organization and regulation—Econ. 614, 615, 617

History and comparative systems—Econ. 622, 625, 627

Statistics and econometrics—Econ. 231, 702, 731, 803, 831

Monetary and financial economics—Econ. 340, 740, 847

Public finance—Econ. 765, 865

Labor and manpower economics—Econ. 660, 661, 662, 663, 861

Economic growth and development; international economics—Econ. 671, 672, 674, 870

Urban, environmental and regional economics—Econ. 688

Directed study; thesis—Econ. 491, 692, 750, 891, 892, 896.

Lower-Division Courses

> Econ. 202Q. Principles of Microeconomics. (3). General education further study course. An introduction to the behavior of markets and the individual decision-makers in the economy. Also includes market structures and their performance, contemporary public policy issues, and international economics. Prerequisite: Econ. 201Q.

Econ. 204H. The Economics of Public Issues. (3). A seminar on selected topics of current
Interest in economics that analyzes major economic problems of the day as a guide to making public policy decisions. Included are the economics of environmental control; externalities, public goods, social costs and their effects in the market system; related problems such as urban development and economic growth, inflation, unemployment, concentration of economic power, depletion of resources, pollution and conservation. Open only to honors students. Prerequisite: Econ. 231H.

**Econ. 231. Introductory Business Statistics.** (3). An introduction to statistical inference, estimation, and hypothesis testing. Includes summary measures, probability, random variables and their distributions, sampling distributions, elements of Bayesian decision theory, linear regression and correlation, and time series analysis. Uses commercial statistical packages to perform statistical data analysis. Prerequisite: Math. 111 or 112, and Econ. 232 concurrently.

**Econ. 232. Statistical Software Applications for Business.** (3). A computer lab focusing on applying statistical software to business analysis and decision-making. Prerequisite: Math. 109, 111, or 112, and Econ. 231 concurrently.

-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 are 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. 201Q, 202Q and junior standing.

Econ. 302. Intermediate Microeconomics. (3). Theory of resource allocation by means of prices and markets. Economic choice, production, cost, supply, demand and market structure are discussed, as well as efficiency and distributions in consumption, production, distribution and exchange. Prerequisites: Econ. 201Q, 202Q and junior 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, effect of market structure on business decision-making, and decision-making with risk. Prerequisites: Econ. 202Q and 231.

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 the current practice of e-business and the effects of e-business and the Internet on society outside the business realm. Prerequisites: Econ. 201Q and 202Q or instructor's consent.

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. 201Q and junior standing.

Econ. 403. Business and Economics Forecasting. (3). An application of statistical method to business and economics forecasting using real world data. Includes collection of data, survey of business indicators, and application of forecasting techniques such as moving averages, smoothing, regression, time series decomposition, and ARIMA. Prerequisites: Econ. 201Q, 202Q, 231, and junior 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. Cr/NCR only. Prerequisites: 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. 201Q, 202Q, or 800, and junior standing.

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

Econ. 615. Economics of Transportation. (3). A study of how businesses can effectively use transportation 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. 201Q and 202Q, or Econ. 800, and junior 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. 201Q, 202Q, or 800, and junior standing.

Econ. 622. Comparative Economic Systems. (3). A comparative analysis of the evolutionary structure of capitalism, socialism, and communism. Emphasizes differences in pricing, resource allocation, distribution of income, and economic planning. Prerequisites: Econ. 201Q, 202Q, or 800, and junior 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. 201Q and junior standing.

Econ. 627. Economic History of the United States. (3). Cross-listed as Hist. 515. 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. 201Q and junior 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. 201Q, 202Q, or 800, and junior 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. 201Q and 202Q, or Econ. 800, and junior 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 wage incentives. Prerequisites: Econ. 201Q and 202Q, or Econ. 800, and junior standing.

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

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

multinational companies, immigration, as well as differences in cultural, political, and economic systems. Includes current events. Prerequisites: Econ. 201Q, 202Q, or 800, and junior standing.

Econ. 674. International Finance. (3). Cross-listed as Fin. 625 and IB 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. 201Q, 202Q, or 800, and junior 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. 201Q and 202Q, or Econ. 800, and junior 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. 201Q, 202Q, 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. 231 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. 201Q, 202Q, or 800; 340; and junior standing.

Econ. 750. Workshop in Economics. (1-4). Prerequisite: junior standing.

Econ. 765. Public Sector Economics. (3). Cross-listed as P. Adm. 765. An analysis of fiscal instruments and techniques, including synthetic and integral calculus, an introduction to mathematical tools that are useful in decision making by managers. Prerequisites: Econ. 201Q, 202Q, or 800, and one course in calculus.

Econ. 831. Applied Econometrics II. (3). Introduces the maximum likelihood estimation and the methods of moments estimation technique. Covers SUR, panel data, simultaneous equations, VAR, and ARCH/GARCH models. Emphasizes the time series model building practiced in finance and macroeconomics. Prerequisites: Econ. 731 and 702 or equivalent.

Econ. 847. Speculative Markets. (3). Cross-listed as Fin. 822. Analysis of the markets for speculative securities such as futures, options and commodities. Evaluates underlying theories explaining speculative markets in which such securities are traded. Discusses trading strategies such as hedging and arbitrage. Prerequisite: Fin. 840 or equivalent.

Econ. 861. Seminar in Contemporary Labor Issues. (3). An intensive analysis of contemporary problems in the field of labor. The specific nature of the problems is determined by the interest of those enrolled in the course. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

Econ. 865. State and Local Government Finance. (3). Cross-listed as Pol. S. 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. Prerequisites: Econ. 765 or instructor's consent.

Econ. 870. International Finance and Investment. (3). Cross-listed as Fin. 820. A case study of the contemporary and business related issues of international finance and investment. Includes foreign exchange markets, European integration, international trade organizations and monetary systems, and emerging markets. Prerequisites: one of the following courses: Econ. 672 or 674, Mgmt. 561, or Fin. 625.

Econ. 891. Directed Study. (1-3). Individual study of various aspects and problems of economics. Repeatable for credit with departmental consent. Prerequisites: graduate standing and departmental consent.

Econ. 892. Group Studies in Economics. (1-3). Repeatable for credit. Prerequisite: departmental consent.

Econ. 896. Thesis. (1-2).

Entrepreneurship (Entre.)
Department of Marketing and Entrepreneurship

Lower-Division Courses
Entre. 160Q. Introduction to Entrepreneurship. (3). An introductory course designed not only to familiarize the student with the world of small business but also to analyze the personal strengths and weaknesses as they relate to launching an entrepreneurial career. Considerable attention is given to the elementary concepts of planning, financing, starting, and managing a new business.

Entre. 220C. 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 the course. Prerequisites: Engl. 101, 102, Comm. 111 (C or above average required); Acct. 210, and Econ 201 or instructor's consent. Credit will not be granted for both Entre. 220C and 320.

Entre. 250. Entrepreneurship and Personal Enterprise. (3). 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.

Upper-Division Courses
Entre. 320. Principles of Entrepreneurship. (3). A fundamentals course which provides a broad overview of the entrepreneurial process and discipline. Includes entrepreneurial history, its theoretical foundations, principles of venture creation, development, management, and final exit/harvesting of the firm. The start-up process includes pre-start-up research, determination of ownership, and final preparation before the opening and initial launch of the business. Individual processes explored include entrepreneurial mentality and attitudes and organizational behaviors such as managing innovation, change, and growth in a rapidly growing firm. Includes women and minority entrepreneurship, TQM, and family business issues. Prerequisite: junior standing or instructor's consent. Credit will not be granted for both Entre. 220C and 320.

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 junior standing.

Emphasizes the tools used in the identification of opportunity and subsequent development of the business concept by either starting one's own business or by purchasing an existing business or a franchise. The business will be researched and developed to the point of launching the new venture. Develops a marketing plan that positions the venture to achieve a competitive advantage in the market place. Includes both primary and secondary research to estimate market potential, competitiveness in a given geographical market place, analysis of industry trends, and environmental threats and opportunities. The analysis results in the creative strategy and tactics for the venture's launch. Prerequisite: Entre. 220C or 320, Mkt. 300, or concurrent enrollment, or instructor's consent.

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/NCr only. Prerequisites: junior standing and 2.5 GPA.

Entre. 491. Independent Study in Entrepreneurship. (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in entrepreneurship courses.

Entre. 492. Internship in Entrepreneurship. (1-3). Offered Cr/NCr only. Prerequisites: junior standing, 2.750 GPA in entrepreneurship, and departmental consent.

Courses for Graduate/Undergraduate Credit

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. Prerequisite: Mkt. 300.

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. Prerequisite: Mkt. 300.


Entre. 620. Growing and Managing an Entrepreneurial Firm. (3). Focuses on the organization, operation, marketing, and financial management of an on-going entrepreneurial firm. Emphasizes the strategic management of growth associated with a rapidly changing business as distinguished from "small business management," which could include small enterprise units that are static. Teaches the practical aspects of managing a growing business on a day-to-day basis. Practical application to "intrapreneurship," such as growing a division or department within a larger organiza-

Finance (Fin.)
Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

Fin. 140Q. 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 returns. Exposes the student to a set of tools that can be applied in personal financial management to provide a flexible and relevant framework for future decision making.

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

Upper-Division Courses

Fin. 330. Introduction to Insurance. (3). A study of both property/casualty and life/health insurance. Analysis of risk and the ways to treat both personal and business loss exposures. Study of the contracts, rate making, and services of the insurance business as well as the marketing and regulation of both private and governmental insurance. Prerequisite: junior 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. Prerequisite: Fin. 340.

Fin. 481. Cooperative Education. (1-3).

Fin. 491. Independent Study. (1-6). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in finance.

Fin. 492. Internship in Finance. (1-3). Offered Cr/NCr only. Prerequisites: junior standing, 2.750 GPA in finance and departmental consent.

Courses for Graduate/Undergraduate Credit


Fin. 612. Capital Budgeting. (3). A study of the planning and control of capital expenditures. Explores the use of various decision rules for making accept/reject decisions on projects. Includes the study of project cash flows and analysis, mutually exclusive projects, and the choice of the discount rate. Prerequisite: Fin. 340 and junior 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 and junior standing.

Fin. 625. International Financial Management. (3). Cross-listed as Econ. 674 and 682. 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. 201Q, 202Q, or 800; and junior 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 and junior 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 and Acc. 260.

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, six hours of accounting, or departmental consent, and junior standing.

Fin. 690. Seminar in Selected Topics. (1-6). Repeatable with departmental consent. Prerequisites: Fin. 340 and junior 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. 812. Capital Budgeting. (3). A study of the organization and operation of the capital budgeting system. Explores problems in partial decentralization and in comparability of estimates of funds flow. Includes contemporary methods of treating uncertainties and constraints and the application of programming techniques. Also explains the determination of appropriate discount rates. Prerequisite: Fin. 840 or equivalent.

Fin. 820. International Finance and Investment. (3). Cross-listed as Econ. 870. Case study of the contemporary and business-related issues of international finance and investment. Includes foreign exchange markets, European integration, international trade organizations and monetary systems, and emerging markets. Prerequisite: one of these courses: Econ. 672 or 674, Mgmt. 561, or Fin. 625.

Fin. 821. Investment Analysis and Portfolio Management. (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. Prerequisites: Fin. 840 and Econ. 830.

Fin. 822. 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. Financial Institutions and Markets. (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. Principles of Finance. (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: Acc. 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. 860. Cases in Financial Management and Investments. (3). An integrated treatment of basic business finance, financial management, financial statement analysis, and financial institutions. Prerequisite: Fin. 840 or equivalent.

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

Fin. 891. Directed Studies. (1-6). 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 481. Cooperative Education. (1-3).

HRM 491. Independent Study. (1-5). Offered Cr/NC only. Closed to graduate credit. Prerequisite: junior standing and 2.750 GPA in HRM courses.

HRM 492. Internship in Personnel. (1-3). Offered Cr/NC 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.

HRM 666. Human Resource Selection. (3). Analysis of all phases of the election 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. Prerequisite: HRM 466 or instructor's consent.

HRM 668. Compensation. (3). Approaches to compensation processes in organizations. Discusses job evaluation techniques, wage level and wage structure determination, individual performance analysis, individual wage rate decisions, incentive plans, and benefits. Considers the legal constraints on compensation practices. Prerequisite: HRM 466 or instructor's consent.

HRM 669. Training and Development. (3). Analyzes the training and development function as applied in private and public sector organizations. Considers the role of training and development in today's business environment, needs
assessment, learning objectives, learning theory, instructional methods and techniques, and evaluation of training effectiveness. Prerequisite: HRM 466 or instructor’s consent.

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

HRM 750. Workshop in Human Resources. (1-5). Prerequisite: junior standing.

Courses for Graduate Students Only

HRM 867. Seminar in Personnel Administration. (3). An in-depth study and analysis of several critical and/or major current problems in human resources and a review of significant literature. The direction of the course could be determined by the interests of the class. Prerequisite: HRM 466.

HRM 868. Wage and Salary Administration. (3). A study of job evaluation and other procedures that lead to the development of a sound wage and salary structure. Prerequisite: HRM 466 or instructor’s consent.

HRM 890. Seminar in Special Topics. (1-5). Repeatable with departmental consent.

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


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 business, 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.

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

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

Courses for Graduate/Undergraduate Credit

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, nationalization, protectionism, technology transfer, and trade policy. Prerequisites: HRM 360 or concurrent enrollment and junior 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 and junior standing.

IB 625. International Financial Management. (3). Cross-listed as Econ. 674 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 programs. Prerequisites: Econ. 210 (Q, 202), or 800; and junior standing.

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

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: B. Law 130, concurrent enrollment or departmental consent.

Legal 231A. Legal Research and Writing I. (3). An introduction to the tools and techniques of legal research, emphasizing the basic analytical skills. Includes an introduction to the components of a legal 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 231B. 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.

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.
Management (Mgmt.)
Department of Management

Lower-Division Courses

Mgmt. 101G. Introduction to Business. (3). Everyone spends a lifetime dealing with and being influenced by business firms. 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. Prerequisite: junior 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. Prerequisite: junior 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 and junior 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 and junior standing.
Mgmt. 481. Cooperative Education. (1-3).
Mgmt. 491. Independent Study. (1-3). Offered Cr/NC only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in management.
Mgmt. 492. Internship in Management. (1-3). Offered Cr/NC only. Prerequisites: junior standing, 2.750 GPA in management, and departmental consent.

Courses for Graduate/Undergraduate Credit

Mgmt. 561. Introduction to International Economics and Business. (3). Cross-listed as Econ. 672. 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. 201Q and 202Q and junior standing.
Mgmt. 660. 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 and junior 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 and junior 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 and junior 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 team 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 and junior 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 and junior standing.
Mgmt. 681. Strategic Management. (3). An analysis of business problems from a strategic management perspective. A capstone course which integrates the functional areas of business, including management, marketing, finance, accounting, and production. Discusses both domestic and international policy issues, large and small firms, and various sources of competitive advantage. Prerequisites: DS 250, Fin. 340, Mkt. 300, Mgmt. 360, and senior standing.
Mgmt. 690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.
Mgmt. 750. Workshop in Management. (1-4). 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 251 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. 836. International Business Administration. (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.
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 media emphasizing the applications of communication problems to 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. 869. Research in Behavioral Science. (3). An analysis of some of the concepts and tools of behavioral science relevant to research in organizations. One or two areas such as motivation, cognitive processes, attitudes, and values, etc., may be analyzed in depth. Prerequisite: Mgmt. 862 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. 886. Seminar in Research Methodology. (3). A study of concepts and procedures in the design and performance of research.

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. (1-6). 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 Course

MIS 200. Fundamentals of Programming and Programming Languages. (3). Introduces computer programming concepts, structured programming techniques, and programming languages. Starts with an overview of computer architecture and introduces computer programming in machine language, assembly language, third generation languages (BASIC, Pascal, C), and fourth generation languages (Visual BASIC, DELPHI). Programming projects emphasize modification (maintenance) of existing business application programs. Prerequisite: Acct. 260 or CS 105.

MIS 250. Fundamentals of Data Structures, File Design, and Access. (3). Introduces data structuring concepts necessary for building business application systems. Utilizes file design and access access as the vehicle to teach traditional concepts of in-memory data structures. Programming projects employ third generation languages, including COBOL, as well as fourth generation languages. Studies computer file organizations ranging from sequential to indexed sequential. Prerequisite: MIS 200.

Upper-Division Course

MIS 300. Data Communications and Computer Networks. (3). Takes a problem-solving approach to introducing data communications and computer networking concepts. Technical and managerial issues in providing video conferencing, Electronic Data Interchange (EDI), setting up a bulletin board system, a world wide web site, a local area network (LAN), remote access to a LAN, and internet working LANs over a wide area network provide the backdrop for introducing data communication concepts (OSI), standards (X.400, SNMP), protocols (TCP/IP), and technologies (ATM). Prerequisite: MIS 250.

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 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. Prerequisite: MIS 300.

MIS 481. Cooperative Education. (1-3). Offered Cr/NCr only. Prerequisite: 2.50 grade point average in MIS, junior standing, and departmental consent.

MIS 491. Directed Study. (1-3). Individual study for Cr/NCr only. Prerequisite: 2.75 grade point average in MIS, junior standing, and departmental consent.

MIS 492. Internship in MIS. (1-3). Offered Cr/NCr only. Prerequisite: 3.00 grade point average 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. Prerequisite: Acct. 260. Credit will not be granted for both DS 495 and MIS 495.

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. Prerequisite: MIS 300.

MIS 650. Problem Solving, Decision Support, and Expert Systems. (3). Introduces the design and implementation of decision support systems (DSS). Emphasizes problem solving and decision modeling techniques pertinent to representative problems in different business functional areas including accounting, finance, human resources, management, marketing, and production. Students utilize various end-user tools, including 4GLs, spreadsheets, statistical software, DSS generators, expert system shells, and EIS software to undertake several DSS implementation projects. Prerequisite: MIS 600.

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, organizing the IS department, IS personnel management, IS project management, and the role of IS as a user-support entity. Prerequisite: MIS 600.

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. Prerequisite: junior standing.


Mkt. 403. Marketing Research. (3). Cross-listed as Ent. 403. A study of the design of marketing information systems and marketing research procedures. Prerequisites: Mkt. 300, Econ. 231, and junior 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 clarifies new influences at work in the retailing environment. Prerequisite: Mkt. 300 or departmental consent.

Mkt. 405. Consumer Behavior. (3). A study of the variety of concepts in the behavioral sciences related to specific topics in consumer behavior, including mass communications, reference groups and sociological, psychological, and economic aspects of consumer behavior. Prerequisites: Mkt. 300 and junior 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 and junior status.
Mkt. 420. Developing a New Venture Marketing Plan. (3). Cross-listed as Entre. 420. Emphasizes the tools used in the identification of opportunity and subsequent development of the business concept by either starting one’s own business or by purchasing an existing business or a franchise. The business will be researched and developed to the point of launching the new venture. Develops a marketing plan that positions the venture to achieve a competitive advantage in the market place. Includes both primary and secondary research to estimate market potential, competitiveness in a given geographical market place, analysis of industry trends, and environmental threats and opportunities. The analysis results in the creative strategy and tactics for the venture’s launch. Prerequisites: Entre. 320, Mkt. 300, or concurrent enrollment, or instructor’s consent.

Mkt. 481. Cooperative Education. (1-3).

Mkt. 491. Independent Study. (1-5). Offered for Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in marketing.

Mkt. 492. Internship in Marketing. (1-3). Offered for Cr/NCr 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 and junior 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 and junior 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. Prerequisite: Mkt. 300.

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 promotion activities, and management of public relations. Prerequisites: Mkt. 300 and junior 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.

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 and six additional hours of marketing.

Mkt. 690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior 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 differences 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 Entre. 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.


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, mortgage analysis, appraisal, brokerage, mortgage financing, investment, and property management principles. Prerequisite: junior standing.

RE 390. Special Group Studies in Real Estate. (1-3). Repeatable with departmental consent.

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. Prerequisite: junior standing.

RE 481. Cooperative Education. (1-3).

RE 491. Independent Study. (1-5). Offered for Cr/NCr 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 for Cr/NCr only. Prerequisites: junior standing, 2.750 GPA in real estate, and departmental consent.

Courses for Graduate/Undergraduate Credit

RE 611. Real Estate Finance. (3). Real estate financing instruments, institutions, traditional and creative financing techniques. Risk analysis, mortgage financing and underwriting, primary and secondary mortgage markets. Prerequisite: Fin. 340. RE majors should have completed RE 310.


RE 618. Real Estate Investment Analysis. (3). Equity investor decision criteria, institutional and ownership entity investment constraints, financial leverage opportunities, cash flow analysis, and creative income tax strategies. Prerequisite: Fin. 340. RE majors should have completed RE 310.

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. Prerequisite: RE 310 or 611 or 618.
RE 690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

RE 750. Workshop in Real Estate. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

RE 810. Real Estate Feasibility Analysis. (3). Theory and practice of analyzing the feasibility of both new construction and redevelopment of income-producing projects. Approaches detailed comprehensive case studies with contemporary analytical techniques. Prerequisites: RE 310, 614, and 618.

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

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

RE 893. Special Project in Real Estate. (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.


The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R; 2L means four hours of lecture and two hours of lab.
The primary purpose of the College of Education is 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/Hearing Association, and the National Association of School Psychologists. The college recommends appropriate teacher's certificates be awarded to those who complete requirements established by the board.

The college also provides a non-teaching major in the area of health and physical education. Students may select one of two approved options: exercise science or sport administration. The option in exercise science prepares students to help people of all ages and abilities reach their fitness goals. The sport administration option allows students to take a combined curriculum in physical education and business.

Wichita State University and the College of Education offer a variety of services to students through the programs of the Learning Resource Center. Courses are offered to help students improve their reading comprehension and speed, critical thinking skills, library skills, study strategies, and standardized test-taking skills.

Degrees Offered

Undergraduate

The college offers 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 language clinicians, and other specialists. Teacher Education, the American education’s place of human growth and development and principles of human learning. Improving education at local, state, and national levels through teaching, research, and professional service.

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 a number of graduate programs. The Master of Arts (MA) and Doctor of Philosophy (PhD) degrees are offered in speech language pathology/audiology, and the Doctor of Education (EdD) degree is offered in educational administration. The program in school psychology leads to the Specialist in Education (EdS) degree. Master of Education (MED) programs are available in counseling, educational administration, educational psychology, curriculum and instruction, physical education, special education, and sport administration.

Graduate courses are offered to meet state requirements for certification or endorsement as audiologists, early childhood teachers, educational administrators, middle-level teachers, reading specialists, school counselors, school psychologists, special education teachers, speech and language pathologists, English as a second language, bilingual/multicultural education, and supervisory personnel. Master's programs in curriculum and instruction and educational psychology have also been designed for teacher practitioners who wish to enhance their teaching skills. For specific graduate programs see the Wichita State University Graduate Bulletin.

Policies

Admission to the College of Education

Pre-program Students

Degree-bound students who select education as a major will enter the college as pre-program students. To remain in the pre-program category in the College of Education, a student must maintain at least a 2.000 grade point average. For more information on general University admission requirements, see the Admission to Wichita State section of the Catalog.

Full Admission

Students who request full admission to the College of Education must satisfy the following admission requirements:

1. Complete 24 credit hours with an overall grade point average (GPA) and a WSU GPA of at least 2.50.
2. The 24 hours must include Engl. 101 and 102, College English I and II, with a grade of C or above, Comm. 111, Public Speaking, with a grade of C or above, and Math. 111, College Algebra with a C or above, or their equivalents.
3. 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 Programs in Teacher Education

The programs offered by the College of Education are designed for teacher practitioners who complete requirements estab-

ished by the board.

The college also provides a non-teaching major in the area of health and physical education. Students may select one of two approved options: exercise science or sport administration. The option in exercise science prepares students to help people of all ages and abilities reach their fitness goals. The sport administration option allows students to take a combined curriculum in physical education and business.

Wichita State University and the College of Education offer a variety of services to students through the programs of the Learning Resource Center. Courses are offered to help students improve their reading comprehension and speed, critical thinking skills, library skills, study strategies, and standardized test-taking skills.
3. Earn a grade of C or better in Engl. 101 and 102, College English 1 and 1; Comm. 111, Public Speaking; and Math. 111, College Algebra.

4. Attain a minimum overall grade point average of 2.500.

5. Complete a second course in mathematics above College Algebra. Stat. 370 may be chosen in Division D of the General Education Program.

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 six 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

Pre-program Students

Pre-program students are required to maintain at least a 2.000 (C) average. Students are placed on academic probation whenever they have attempted six hours and their WSU grade point average falls below 2.000. The transition semester counts toward the number of hours attempted but does not count in the calculation of the grade point average used to assess probation or dismissal.

Transfer students admitted on probation must complete at least 12 semester hours of credit work and achieve a 2.000 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 Dean of the College of Education. The limitation of 12 hours also applies to students who have declared a transition semester.

All pre-program students who have accumulated 12 attempted credit hours after being placed on probation and who do not have a 2.000 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.

Full Admission Students

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 the semester on probation is not at least 2.500. Students who fail to earn at least a 2.500 for any semester 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 forwarded 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 readmissions counseling session at least five days before the first day of enrollment 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.

Cooperative Education

The College of Education is one of the participating colleges in the University Cooperative Education 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 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.

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.
Requirements for Teacher Certification

All graduates applying for teacher certification in Kansas are required to complete the National Teachers 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.)

* A new examination will replace this test after June 1999.

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.
   English 100 or 101 and 102, College English I and II (6 hours)
   Math. 111, College Algebra (3 hours)

II. Distribution requirements
   A. At least one Introductory Course* in Fine Arts: art history, dance (history), musicology-composition, theater, or an Issues and Perspectives course**.
   B. At least one Introductory Course* from two different Humanities disciplines: communication (non-basic skills), English (non-basic skills), history, linguistics, modern and classical languages and literature, philosophy, religion, women's studies, or an Issues and Perspectives course**.
   C. At least one Introductory Course* from two different Social and Behavioral Science disciplines:
   anthropology, economics, geography, minority studies, political science, psychology, sociology, or an Issues and Perspectives course**.
   D. At least one Introductory Course* from two different Mathematics/Natural Sciences disciplines: biology, chemistry, computer science, geology, mathematics/statistics (non-basic skills), physics, or an Issues and Perspectives course**. One must be biology, chemistry, geology, or physics.
   E. At least one Further Study Course in the same discipline as the Introductory Course taken in Fine Arts or the Humanities or an Issues and Perspectives** course.
   F. At least one Further Study Course in the same discipline as the Introductory Course taken in Social and Behavioral Sciences or an Issues and Perspectives** course.
   G. At least one Further Study Course in the same discipline as the Introductory Course taken in Natural Sciences and Mathematics or an Issues and Perspectives** course.

* No courses in the student's major discipline may be taken as Introductory Courses.
** At least one but not more than two Issues and Perspectives courses must be selected. No Issues and Perspectives course in the student's major discipline may be taken.

For students who entered the University prior to Fall 1994, courses in the Undergraduate Catalog and the Schedule of Courses identified by a G or Q suffix qualify for general education credit. These general education requirements are stipulated in previous Undergraduate Catalogs.

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 specializations and additional graduation 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 required to meet all general education requirements. In Division B, courses must be taken in two different departments. At least six hours of psychology are required.

II. Professional Education

Preprofessional Block

Course | Hrs.
--- | ---
CI 271, Introduction to Professional Education | 2
CI 272, Field Experience/Preprofessional Block | 1
CESP 728, Theories of Human Development | 3
CI 702, Introduction to Exceptional Children | 3
CI 711, Multicultural Education | 3

In addition to the general education requirements and the professional education sequence, students must complete the requirements for the major. 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.

Elementary Education

I. General Education

Students majoring in elementary education should meet all requirements in the general education program. In addition, three social science courses and Psychology 111 are required in Division B. In Division C, a biological science and/or a physical science are required (one must include a lab), along with Math. 501.

II. Professional Education

Preprofessional Block

Course | Hrs.
--- | ---
CI 271, Introduction to Professional Education | 2
CI 272, Field Experience/Preprofessional Block | 1
Block I
CESP 334, Growth and Development | 2
CI 430, Social/Multicultural Education | 3
CI 320, Introduction to Exceptional Child | 2
CI 311, Field Experience/Block I | 1
Block II
CESP 433, Learning and Evaluation | 3
CI 328, Curriculum, Instruction, and Management | 5
CI 312, Field Experience/Block II | 1
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 Child, or Art E. 518, Art for the Exceptional Child, or Mus. E. 611, Music for Special Education, 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, and Management 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-student 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 from the College of Education.

Secondary Teaching Major
Students 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.

For majors in foreign language, 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 Child 2
CI 311, Field Experience/Block I 1
Block II
CESP 433, Learning and Evaluation 3
CI 328, Curriculum, Instruction, and Management 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-student 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.

For majors in foreign languages
For other requirements, see Modern and Classical Languages and Literatures, Fairmount College of Liberal Arts and Sciences.

Secondary Teaching Fields
The major is generally no fewer than 30 semester hours. (For specific exceptions see languages and the combined curricula programs.) Students may elect certain 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 foreign language because they wish to become high school foreign language teachers. To do so, they complete the foreign language major as prescribed by the modern and classical languages and literatures department in Fairmount College of Liberal Arts and Sciences. 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.

Majors and Minors
Art* English language and literature* Foreign language French Spanish Mathematics Music* Physical education Science* Chemistry Natural sciences—biological Natural sciences—physical Physics
Minors Only
Bilingual/multicultural education Computer studies English as a second language Journalism Speech communication

* Needs no minor.

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. Students also may make arrangements to qualify to teach other sciences.
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. Students also may make arrangements to qualify to teach other sciences.

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 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).

CESP 152. Special Studies in Education. (1-4).
For undergraduates with an interest in issues related to counseling, guidance and student development. Different preselected areas may be emphasized during a semester. Repeatable with advisor's consent.

Upper-Division Courses

CESP 333. Adolescent Development. (3). A study of the growth and development of the individual during early, middle, and late adolescence; emphasizes the relationship among research, theory, and application. Prerequisite: Psy 111Q or equivalent.

CESP 334. Growth and Development. (2). 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: Psy 111Q, acceptance into teacher education program, and concurrent enrollment in CI 311, 430, 601.

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 instruments, observations, questioning strategies, and grading plans. 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 611. Cooperative Education (1-8). A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Prerequisites: graduate standing in the department and department chairperson approval. No more than 3 credit hours will be allowed in one Plan of Study. Repeatable for credit. Offered Cr/NCr.

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, t test, correlated t 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.

CESP 728. Theories of Human Development. (3). Describes what developmental theories are, what they do, where they come from, how they work, and how they are used to explain human nature. Uses theoretical assumptions and related research to systematically evaluate developmental theories in terms of their scientific worthiness and their ability to address characteristics of human development. Focuses on those theories which helped shape the 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 732. Behavior Management. (3). Presentation and utilization of psychological principles and techniques for dealing with development-related behavioral problems. Emphasizes the preschool and elementary school child. Prerequisite: CESP 334 or equivalent or departmental consent.

CESP 750. Workshops. (1-6).

CESP 752. Special Studies in Education. (1-5).
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). S/U grade only. A laboratory approach to an examination of the counselor's role in the counseling process. Helps the prospective counselor increase personal understanding of self as a variable in the counseling process. Prerequisite: counseling major or departmental consent. To be taken concurrently with CESP 804. May not be taken concurrently with CESP 825.

CESP 803. Counseling Theory. (3). A study of selected theories of counseling. Prerequisite: CESP 804 or concurrent enrollment or admission to school psychology program.

CESP 804. Principles and Philosophy of Counseling. (3). The development of a guiding 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.

CESP 807. Counseling: Child Abuse and Neglect. (2). The etiology, symptoms and indicators, treatment, and prevention issues of physical abuse and neglect, emotional abuse and neglect, and sexual abuse. Prerequisites: CESP 701, 704, 802, 803, 804.

CESP 808. School Psychology Professional Issues. (3). Examines roles and functions of school psychologists within the context of historical foundations of the profession. Uses lecture, discussion, 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, 802, 803, 804.


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 lifespan; (2) sources and organization of information; (3) assessment designs and career intervention techniques; and (4) career decision-making/planning processes. Includes hands-on experiences with a variety of assessment methods and intervention techniques and theory-based career decision-making strategies for career interventions. Prerequisites: CESP 701, 704, 802, 803, 804.

CESP 819. Social Psychology of Education. (3). A critical study of the individual in social interaction in a variety of educational settings. Application of theory and research to school-related issues and problems.

CESP 820. Learning Theory and Instruction. (3). Applications of some major learning theories and learning principles. Prerequisite: CESP 701 or departmental consent.
CESP 821. Multicultural Issues in Counseling. (2). Acquaints students with cultural differences which are often the source of conflicts among people of various cultures. Prerequisites: CESP 701, 704, 802, 803, 804; or instructor's consent.

CESP 822. Psychometric Procedures 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; counseling students must also have CESP 802, 803, 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 nonparametric statistics. Develops all statistics through practical application with computer programs. Prerequisite: CESP 704 or instructor's consent.

CESP 824. Techniques of Counseling. (3). Examine and practice counseling through simulated counseling situations and extensive examination of counseling case studies. Prerequisites: CESP 726, 821, 822, 840, and counseling major or departmental consent.

CESP 825. Group Counseling Techniques. (2). Examines different kinds of groups, group selection, communication patterns in groups and issues to be addressed in group settings. Prerequisites: CESP 821, 822, and counseling major or departmental consent.

CESP 830. Introduction to Marriage and Family Counseling. (3). A survey course on marriage and family counseling including theory, techniques, and research in the field. Prerequisite: CESP 803 or departmental consent.


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, healthy 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 852. Special Studies. (1-4). Covers specific topics identified by the department in consultation with institutions or groups of graduate students. Course procedures vary according to topic. Repeatably. 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 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, 825, coordinator's consent, and counseling major or departmental consent. Must be taken within one year of completion of CESP 824.

CESP 857. Professional and Ethical Issues. (2). Study of major ethical, legal, and professional issues in counseling. Prerequisites: CESP 824 and 825, or concurrent enrollment.

CESP 858. Diagnostic Testing. (3). Use of individual tests, rating procedures, and behavioral techniques for the appraisal of perceptual development, cognitive development, classroom behavior, and academic skills. Considers assessment theory and research relevant to these areas in a lecture-discussion format which includes some case simulation and practice activities. 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 manuscript form. Repeatable for a maximum of two hours of credit. Prerequisite: CESP 860.

CESP 866. Practicum in Guidance Services. (2-3). Supervised practice in administration, test interpretation, group counseling, and other activities of the department. Prerequisites: CESP 833 or 810 and instructor's consent.

CESP 867. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and counseling. Repeatable for three hours of additional credit. The second practicum must be in a different area or have a different focus from that of the first. Prerequisites: CESP 825, 856, and instructor's consent.


CESP 881. Seminar in School Psychology. (1). Examines current trends and issues within the area of school psychology. Also considers alternative role models for the school psychologist from the standpoint of research and program development in related areas such as special education, general education, and professional psychology. Repeatable to a maximum of four hours. Prerequisite: CESP 804 or concurrent enrollment or instructor's consent.

CESP 890. Special Problems. (1-3). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent.

CESP 903. Counseling Theory I. (3). In-depth critical review of research and applicability of major theories to the evaluation and design of interpersonal intervention strategy.

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 915. Intervention Design. (2). Given student further experience and skill in utilizing theories of interpersonal relations in creating macro- and micro-learning experience designs for individuals or groups experiencing dysfunctional situations. Stresses individual and organizational effectiveness assessment skills.

CESP 926. Seminar: Selected Topics. (2). Intensive study of current issues, techniques, research, and application of the selected topic. Repeatable for a maximum of eight hours. Prerequisite: 15 hours of related graduate course work.

CESP 928. Seminar: Postsecondary Student Services. (2). Intensive study of issues, theories, and research in topics related to postsecondary student services. Repeatable for different topics for a maximum of eight hours.

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 alternate personality assessment approaches and reviews of personality theory and psychopathology. Includes supervised experience. Prerequisites: CESP 822, 855, post-master's standing or last six 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, clini-
EAS 805. Practicum: School Opening. (1). Engage in closing the school year with a principal/mentor; participate in an inquiry project in the local school; and 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 831. Seminar: Human Development and Managing the Learning Environment. (3). Examine developmentally appropriate practices in the classroom for student learning 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 legal concepts related to the selection, 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 liabilities. Prerequisite: admission to the MEd in educational administration or instructor's consent.

EAS 835. Practicum: School Law and Personnel Management. (3). Apply the concepts related to the selection, recruitment, certification, orientation, staff development, evaluation, transfer and 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 the legal responsibilities of school personnel.

EAS 843. Seminar: Curriculum and Learning Theory. (3). Examine theoretical concepts related to curriculum philosophies and developmental processes. Examine recent trends in curriculum development as well as the development of 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 and innovations in advanced educational administration and supervision, especially for practicing administrators or advanced students. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

EAS 854. Finance and Facilities Management. (3). Designed 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 860. Research Seminar in Educational Administration and Supervision. (3). Designed for students in advanced study. Emphasizes development of research proposals and studies. Prerequisite: completion of master’s degree or advisor’s consent.

EAS 862. Presentation of Research. (1-2). A project submitted in the thesis manuscript form. Repeatable for a maximum two hours of credit. Prerequisite: EAS 860.

EAS 875-876. Master’s Thesis. (2-2).

EAS 884. 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 935. Financial Support of Education. (3). Focuses on the financial support of education at local, state, and national levels. Emphasizes methods of taxation, budget preparation, and efficient expenditures.

EAS 955. Field Project in Administrative Analysis. (2-6). Field projects are planned to meet a legitimate need in an educational setting in which the student, under professional guidance, can become directly involved. The project may fulfill a community need, a departmental concern, or a needed investigation or inquiry. Acceptable projects are developmental or must include an appropriate research design. A useful, well-documented report of the project is required, with the plan, format, and style approved by the student’s committee. Prerequisite: completion of master’s degree.

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 those frameworks. Class activities require the application of the constructs and propositions considered to an ongoing analysis of school-related problems and the conceptualization of action programs for addressing such problems. Prerequisite: admission to 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 EdD program; EAS 970 and 981, concurrent enrollment in EAS 982.

EAS 972. Administrative Leadership Seminar. (5). Designed to facilitate 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 EdD program; EAS 970 and 971, 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 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 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 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 EdD dissertation proposal. Prerequisites: admission to 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. Prerequisites: admission to EdD program, EAS 986.

EAS 988. Field-Based Research III. (1). Follows EAS 986 and 987 and culminates this field-based sequence. Prerequisites: admission to EdD program; EAS 986 and 987.

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 991. Practicum in Educational Administration and Supervision. (1-2). Designed for persons who have been employed in their first administrative position and are seeking certification in Kansas. Course is individually designed by an EAS faculty member with the student and his/her school district supervisor. Aims to assist the student to extend basic skills relevant to a particular administration problem. Students must register for three hours of credit in EAS 991 to meet certification requirements. S/U grading only. Prerequisites: completion of master’s degree and departmental consent.

EAS 992. Superintendency/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, and for six credits each semester during the last year of enrollment. Provides students with dissertation proposal and dissertation advising. May be taken for one to six credits per term for a maximum of 24 credits. Up to 17 credits may be counted toward program completion. Prerequisites: 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 graduate program offers broad, comprehensive, and professional education 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 degree, a professional 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 applications 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 practica courses or student teaching. In addition, medical clearance is required for all observation and practica classes. Admission to a major in CDS does not constitute assurance of automatic entrance into the practica 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.

The major consists of a combined curriculum in speech-language pathology and audiology. It consists of a minimum of 44 hours. Students should work closely with advisors to ensure proper course selection for certification and degree. A check sheet of requirements is available from the College of Education and the department office, 113 Hubbard Hall.

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 the degree. A check sheet of requirements is available from the College of Education and Fairmount College of Liberal Arts and Sciences.

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 3.000; a 3.000 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 111Q, 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 practica 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 practica 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.

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 260. Signing Exact English I. (1). 2R. Introduction to 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 281. Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Offered CR/NC only.

Upper-Division Courses

CDS 360. Signing Exact English II. (1). 2R. 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 365. Introduction to American Sign Language. (3). Focuses on the use of American Sign Language as used by the American deaf community. Development of basic communication skills leads to basic conversational skills in ASL.

CDS 465. Conversational American Sign Language. (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 365.

CDS 481. Cooperative Education. (1-8). See CDS 281.

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 540. Senior Seminar. (2). Explores theories, principles, practices, and pitfalls of audiology and speech-language 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 570. Foreign Accent and Dialect Modification. (3). Primarily for the nonnative speaker of American English wanting to improve pronunciation. Studies problems of foreign accent
and American English dialect reduction. Analyzes speech patterns and designs an individual program in dialect modification. Provides intensive practice. Not for the student who is beginning the study of English.

CDS 625. Introductory Methods and Practicum in Communicative Disorders and Sciences. (2). Techniques and methods for development of clinical skills in a supervised practicum in an appropriate audiology or speech-language pathology setting at the WSU Speech-Language-Hearing Clinic. Prerequisites: 25 observation hours; grade of C or better in CDS 351, 310 (may be taken concurrently), and 516; 2,750 cumulative and 3,000 GPA in the major; departmental application required one semester prior to enrollment; medical clearance and insurance.

CDS 676. Teaching English as a Second Language (Methods). (3). Discusses current methods of teaching English to nonnative speakers. Students learn to analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use.

CDS 681. Cooperative Education (1-8). 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 Cr/NC.

CDS 704. Graduate Issues in Ethics and Practice in Communicative 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, parental rights, managed care, 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 content 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 Communicative Disorders and Sciences. (1-3). Individual or group study in specialized areas of communicative disorders and sciences. Repeatable.

CDS 750. Workshop in Communicative Disorders and Sciences. (1-4). Offered periodically on selected aspects of speech and hearing habilitation.

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 the different research methods utilized in the fields of communication sciences and communicative 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 892. Presentation of Research. (1-3). A directed research project culminating in a manuscript appropriate for publication. Repeatable, but total credit hours may not exceed three. 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 two. Prerequisite: instructor's consent.

CDS 899. Thesis. (1-2). Repeatable, but total credit hours counted toward degree requirements shall not exceed two. Prerequisite: instructor's consent.

CDS 935. Advanced Practicum in Communicative Disorders and Sciences. (1-4). Supervised internship in one or more of the following sections: Advanced Practicum in Client Management, Advanced Practicum in Clinical Supervision, Advanced Practicum in Academic Instruction, Advanced Practicum in Research, and Advanced Practicum in 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 specialized 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 specialized content areas in speech and language pathology, audiology, or speech sciences. 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 Proseminar. (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.

Lower-Division Courses

CDS 111Q. Disorders of Human Communication. (3). An orientation to disorders of human communication, communicative and psychosocial problems commonly encountered, and general approaches to habilitation.


Upper-Division Courses

CDS 300. Anatomy and Physiology of the Speech and Hearing Mechanisms. (3). A study of the prenatal development and basic anatomy of the systems necessary for speech and hearing. Discusses the respiratory, pharyngeal, articulatory, and auditory mechanisms from a functional point of view. Prerequisite: CDS 111Q.

CDS 304. Language I: Normal Acquistion. (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 111 or department 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 physiologic, 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 111Q or department consent.

CDS 416. Language II: Introduction to Disorders. (3). Introduces language disorders and children who do not acquire language typically. Studies language and behavioral character-
istics 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.

CDS 419. Genetic and Organic Syndromes. Provides human genetics and the impact of chromosomal and structural anomalies of communication disorders. Assessment and remediation of cleft palate speech. Prerequisite: CDS 300.

Courses for Graduate/Undergraduate Credit

CDS 501. Speech and Hearing Science. Examination of 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 301.

CDS 510. Introduction to Diagnostics. 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. 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. Discussion of current language interventions, 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 605. Neurology of Speech and Language I: Basic Processes. A consideration of basic neuroanatomy and neurophysiology necessary for obtaining an understanding of the representation of speech, language, and hearing 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. 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) centers that demonstrate the significant relationship between explicit and direct teaching or oral language aspects of acquiring reading in a written alphabetic language system. Prerequisite: instructor's consent.

Courses for Graduate Students Only

CDS 801. Advanced Speech and Hearing Science. 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 809. Communication Disorders in Educational Settings. Organization, administration, and professional responsibilities in public school speech and language management programs in the elementary and secondary school levels. Emphasizes procedures and materials for surveying, scheduling, writing IEP's; therapeutic management, record keeping, and utilization of various instructional media. Should be taken prior to student teaching. Prerequisite: prior or concurrent enrollment in CDS 510.

CDS 810. Neurology of Speech and Language II: Motor Speech Disorders. 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. 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. 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 neuropathologies on communicative function in the elderly. Prerequisite: CDS 605 or instructor's consent.

CDS 813. Communication Disorders in Medical Settings. Provides the principles underlying a transdisciplinary teaming 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 810 and 812.


CDS 815. Assistive Technology for Special Populations. Provides information about assistive technology for persons with special needs across the lifespan (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. Explores resources for funding.

CDS 816. Language Disabilities in Children and Adolescents. Examination of various approaches to working with children and adolescents with language abilities. Practical application of language assessment procedures, individualized planning, and language intervention strategies. Language in the classroom for school-age children and adolescents. Multicultural literacy and the multidimensional nature of language in the classroom. Prerequisite: CDS 416 and 516 or departmental consent.


CDS 818. Fluency Disorders. 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 multicultural 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 Lifespan. 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 (SLI) 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. 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. Discussion and evaluation of student teaching experiences in public schools, demonstrations of applied clinical skills, counseling on the elementary and secondary school levels. Prerequisites: CDS 809
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 practice theories and methods for students’ assigned practice through discussion of various management techniques and methods with regard to different types of communication disorders and to provide support for the the current clinical experience. Prerequisites: CDS 625, medical clearance, and insurance.

CDS 823. Graduate Methods and Practicum in Medical Settings. (4-6). Class discussions cover various topics pertaining to hospital and adult care practice experiences. Relates theory and methods to student’s practicum assignments. Prerequisites: CDS 815, 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 external 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 conduction 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. Practicum issues relate to current client needs. Prerequisites: CDS 516, 816 (can be concurrent), instructor’s consent, medical clearance, and insurance.

CDS 826. Graduate Methods, Practicum, and Diagnostics in Language and Literacy. (2-4). 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 Multidisciplinary (AIM) program). Primary focus 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 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 parent conferences. Prerequisites: departmental consent one semester prior to enrollment, medical clearance, and insurance.

CDS 831. Introduction to Speech and Language. (3). Introduces the etiology, nature, and symptomatology of auditory disorders and pathologies. Prerequisite: CDS 111Q.

CDS 832. Auditory Development and Disorders. (2). Introduces the etiology, nature, and symptomatology of auditory disorders and pathologies. Prerequisite: CDS 111Q.

CDS 833. Introduction to Auditory Assessment. (3). History and scope of the field. Surveys audiology threshold testing procedures, immittance audiometric interpretation. Prerequisite: CDS 251.


Courses for Graduate/Undergraduate Credit

CDS 655. Graduate Methods and Practicum in Auditory Assessment-SLP. (2). Methods in audiolingual evaluation for speech and language pathology students. Discusses procedures for diagnostic evaluation of a broad range of auditory disorders in infants, children, and adults. Each week in class meetings, along with laboratory procedures for hearing screening, hearing aid maintenance, and counseling, and others as appropriate. Speech and language pathology students engage in practicum experiences in audiolingual screening and assessment as arranged. Prerequisites: CDS 251 and 351, medical clearance, and insurance.

Courses for Graduate Students Only

CDS 802. Anatomy and Physiology of the Auditory System. (2). Examine 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 501.

CDS 803. Introduction to Psychoacoustics. (2). Basic principles underlying the perception of auditory stimulation. Emphasizes the interdependencies between sound stimuli and subjective auditory experience as related to communication behavior. Prerequisite: CDS 802.

CDS 804. Clinical Audiology I (3). Discusses diagnostic and rehabilitative procedures in the audiologic clinic. Provides theoretical and clinical principles associated with the administration and interpretation of the basic comprehensive audiologic test battery. Prerequisites: CDS 251 and 351.

CDS 805. Clinical Audiology II (3). Discusses diagnostic and rehabilitative procedures in the audiologic clinic. Includes application of theoretical principles toward the administration and Interpretation of site-of-lesion and other special tests of auditory function beyond the traditional audiologic test battery. Prerequisite: CDS 804.

CDS 851. Medical Audiology. (3). Many hearing disorders require evaluation/treatment by both the audiologist and medical professions. Reviews the basic medical aspects of the more common of these conditions found in children and adults. Prerequisites: CDS 251 and 802.

strategies for hearing impaired children birth to school-age. Provides demonstration and practicum experiences in the assessment of the status of the auditory system. Refers to working in conjunction with individuals in related professions (i.e., speech pathology, psychology, education, medical). Administration and interpretation of electrophysiologic tests of the auditory system, including otocoustic emissions (OAEs), electrocochleography (ECochG), auditory brainstem response (ABR, AEP), and somatosensory evoked response testing (SEPT). Addresses the audiologist’s role on an Individual Education Plan (IEP) in special education, including with public school systems, laws, and requirements for qualification for services. Prerequisites: CDS 850, 855, 860.

CDS 886. Electrophysiologic Audiology. (4). Techniques and procedures for administration and interpretation of electrophysiologic tests of the auditory system, including otocoustic emissions (OAEs), electrocochleography (ECochG), auditory brainstem response (ABR, AEP), and somatosensory evoked response testing (SEPT). Addresses the audiologist’s role on an Individual Education Plan (IEP) in special education, including with public school systems, laws, and requirements for qualification for services. Prerequisites: CDS 850, 855, 860.

CDS 865. Graduate Methods and Practicum in Auditory Assessment-Aud. (2). Provides students with experiences in the provision of auditory habilitation/rehabilitation on behalf of children and adults who possess impaired hearing. Prerequisite: CDS 864 (can be concurrent).

CDS 885. Advanced Methods in Auditory Assessment-Aud. (1). Methods in audiologic evaluation for audiology students. Discusses procedures for diagnostic evaluation of a wide range of auditory disorders and types of evaluations in infants, children, and adults, including standard audiological 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 886. Advanced Practicum in Auditory Assessment-Aud. (1). Practicum experiences encompassing diagnostic evaluations covering a full range of auditory disorders and types of evaluations in infants, children, and adults, including standard audiological 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 860. Amplification and Hearing Aids I. (3). Reviews basic electronics as it applies to amplification systems. Encompasses 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 appropriate 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. Prerequisites: CDS 803, 804, 805, and 864.

CDS 861. Amplification and Hearing Aids II. (3). Reviews basic electronics as it applies to amplification systems. Encompasses 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 appropriate 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. Describes and discusses the performance of digital, analog, and hybrid amplification systems and provides a detailed evaluation of requirements for dispensing such devices. Discusses counseling and techniques related to hearing aid fitting. Prerequisite: CDS 860.


Theory and procedures for habilitation/rehabilitation of children and adults with hearing loss. Prerequisites: CDS 351 and 450.

CDS 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.

CIS 201. The Computer as a Learning Tool I. (1). Provides students with the skills necessary to succeed in the academic environment. Learn how to use computers and software to organize coursework, outline, and plan research papers, write, 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.

CIS 271. Introduction to Professional Education. (2). Students examine the nature of education, characteristics of good teaching, the nature of teacher education programs, basic historical and philosophical foundations of education, and employment options. They analyze their own personalities, personal strengths and weaknesses, and values and beliefs about teaching, and 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: 2.75 GPA; in the 35th hour; and concurrent enrollment in CIS 272.

CIS 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 in which they can help their development as teachers, including with colleagues and peers as teachers. Graded S/U only. Prerequisites: C or better in English I and II, Communication, and College Algebra; sophomore standing: 2.75 GPA; in the 35th hour; and concurrent enrollment in CIS 272.

CIS 270. Directed Study. (2-3).

Upper-Division Courses

CIS 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 interrelationship 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 resources (bilingual paraprofessionals, parents, etc.) to minimize such language performance among this population. Prerequisites: acceptance into the Teacher Education Program and a Professional Development Site Program.

CIS 304. Clinical Field Experience: English as a Second Language (ESL) II. (1-4). An extension of CIS 303. Prerequisites: acceptance into the Teaching Education Program and a Professional Development Site Program.

CIS 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 (SPED, IEP, ECSE, ADHD, EMR, etc.).
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/e-mail, graphics); become familiar with basic terminology; 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 and 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. (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 teach their students in a variety of settings. Prerequisites: acceptance into teacher education; CI 311, 316, 320, 430; CESP 334; completion of or concurrent enrollment in CI 328 and CESP 433; concurrent enrollment in CI 413 for a practicum experience.

CI 328. Curriculum, Instruction and Management. (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 in the school and in the classroom. 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 media 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 the 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. Presudent Teaching. (1-3). This field experience allows students to spend an extended length of time in an appropriate classroom working under a cooperating teacher to plan and implement instruction designed to teach distinct objectives and evaluate learning outcomes. They 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, or concurrent enrollment in these courses.

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. Prerequisite: 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 student programs and assuming the responsibilities of a teacher. Graded Cr/NCr 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. (8-15). The primary purpose of student teaching field experience is to provide evidence of the preservice teacher's readiness to engage in independent reflective practice as a certificated teacher. Working with one or more cooperating teachers in the schools, preservice 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 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 a preschool (three- and four-year-olds) under guidance of a master teacher and a college supervisor. Prerequisites: CI 322, 402 and 406 and nine semester hours of early childhood education. Prerequisites may be waived for equivalent experience with depart...
I. **Philosophical and Psychological Foundations** (3). Students are engaged in the examination of the 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 reading 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.

II. **Student Teaching Seminar: Secondary** (1). (E) English; (F) Foreign Language; (J) Social Studies; (M) Mathematics; (S) Science. Students examine the content and methods of instruction in their subject area and teach their subject. Students are provided with the understanding of the development of learning and reading skills and their use in content areas. Prerequisites: acceptance into teacher education. CI 312 and 328, CESP 433, and concurrent enrollment in CI 413.

III. **Student Teaching: Secondary English** (3). 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.

IV. **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. Prerequisites: successful completion of 24 credit hours and a 2.500 GPA. Repeatable for credit. Offered CR/NCr.

V. **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. Strengths 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 explore instructional approaches for guiding secondary students in those strategies and their use in content areas.

- **CI 616. Literature for Adolescents.** (3). Students participate in extensive reading of literature and engage in the analysis of the characteristics 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 10-14 year olds, their characteristics, and their needs. Students examine many curricular and instructional alternatives for middle grades education and learn to manage changes.

- **CI 701. Foundations of Education.** (3). Students survey the various foundations, including philosophical, historical, social, and comparative. This course is prerequisite to subsequent foundations courses. 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 exceptionality 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 reading difficulties, and principles of assessment. Includes the standards developed by the International Reading Association concerning knowledge and beliefs about reading as the learning outcomes. Prerequisite: graduate standing.

- **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 students understanding multiple perspectives in a global society and developing multiple modality, culturally aware curriculum experiences. Provides disciplined inquiry and critical experience to become more responsive to the human condition, cultural integrity and cultural pluralism in society (NCATE, 1982, p. 14). Emphasizes diversity issues in education and the development of a knowledge base to support culturally responsible pedagogy. Prerequisite: 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 the food chain industry touches every person's life. Teachers learn to integrate agricultural information into existing teaching basic subjects like math, language arts, social studies, science, art.

CI 714. Reading Instruction and Assessment. (4). Helps students create instructional environments, teaches phonemic awareness, word identification (including phonics), vocabulary-building skills, strategies for comprehension and the construction of meaning, and study strategies; and assesses student performance and progress. Prerequisite: CI 705 or departmental consent.

CI 715. 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: teacher certification and acceptance into graduate study in curriculum and instruction or departmental consent.

CI 717. The Ethnography of Schooling. (3). Through readings, guided experiences in research and field work, graduate students become familiar with qualitative research approaches in education, emphasizing case study methodology and expertise in non-participant and participant field work experiences. Prerequisite: CI 726 or equivalent.

CI 718. 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 767.

CI 729. Reference Materials. (3). Provides skills in evaluating and using indexes, bibliographies, encyclopedias, dictionaries, and other print and electronic media, including the Internet. Prerequisite: CI 716.

CI 730. Curriculum in the School Library. (3). Discusses 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). This integrated course builds a foundation for self-reflection and critical thinking about educational issues, research, and learning research principles that can be used to collect and analyze the success or failure of potential solutions. Prerequisite: admission to ME in Curriculum and Instruction.

CI 732. Library Management and Design. (3). This course will provide students with information and examples on ways to effectively manage a library. The course will cover budgeting, grants, policies, procedures, and collection selection/deselection. Prerequisite: CI 716.

CI 740. Introduction to Early Childhood Special Education. (3). Students are introduced to the historical and socio-educational perspectives germane to gifted education. Issues related to the field of gifted education are presented in terms of theories of intelligence, character, needs of gifted learners, and the impact of socioeconomic status and learning needs. Special populations, curriculum differentiation, and underachievement are explored. Prerequisite: graduate standing.

CI 741. Early Childhood Special Education: Preschool. (3). Provides specific techniques needed to teach children with exceptionalities in preschool settings. Includes competencies within early childhood special education curriculum. 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 767.

CI 777. Information Technologies in the School Library IL. (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, and network operation. 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 or equivalent.

CI 778. 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 767.

CI 733. Library Management and Design. (3). This course will provide students with information and examples on ways to effectively manage a library. The course will cover budgeting, grants, policies, procedures, and collection selection/deselection. Prerequisite: CI 716.

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. Prerequisites: CI 705 and graduate standing.

CI 735. Introduction to the Gifted. (3). Students are introduced to the historical and socio-educational perspectives germane to gifted education. Issues related to the field of gifted education are presented in terms of theories of intelligence, character, needs of gifted learners, and the impact of socioeconomic status and learning needs. Special populations, curriculum differentiation, and underachievement are explored. Prerequisite: graduate standing.

CI 736. Organizing a Reading Program. (3). Helps students communicate information about reading to various groups, develop literacy curriculum, participate in or lead professional development programs, participate in or conduct research, communicate assessment results, and engage in professional activities. Prerequisite: CI 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: Preschool. (3). Provides specific techniques needed to teach children with exceptionalities in preschool settings. Includes competencies within early childhood special education curriculum. 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 767.
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 Ed graduate program as a non-degree student, or instructor's consent.

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 759U, CDS 676.

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 763. How Computers Work. (1). The basics of how computers process, store, and retrieve data. All educators seeking a computer specialization should take this course early in their sequence of course work toward that specialization. Educators who want to know more about computers will gain a basic knowledge base that will be helpful in other computer-related courses. Emphasizes how this basic information affects decisions made in the field of education.

CI 771. Technology in the Classroom. (2). Introduces classroom teachers to new technologies and their use in the classroom. Uses field trips and speakers to expose teachers to leaders in specific technology. Includes telecommunications, multimedia applications, integrated media, and new hardware and operating systems. Prerequisite: CI 770M or CI 770P or instructor's consent.

CI 772. Integrating Technology into the Curriculum. (3). Covers skills and strategies needed for classroom teachers to use computers and computer-related technology to meet curricular goals and professional standards. Includes professional standards, classroom management, choosing appropriate software, assessment, teaching strategies and activities, and professional resources. A project-based course; educators develop materials and strategies to assist in integrating available technology into the curriculum.

CI 780C. Computers and the Young Child. (1). Learn to use the computer with children in preschool through second grade. Appropriate software is evaluated and used in planning for instruction. Prerequisite: CI 770 or instructor's consent.

CI 780L. Computers in Language Arts. (2). Enables classroom teachers to utilize computers and related technology in the language arts curriculum. Appropriate software is evaluated and used in planning for instruction. Prerequisite: CI 770 or instructor's consent.

CI 780M. Computers in the Math Classroom. (1). Focuses on the integration of software programs designed for middle and high school mathematics classrooms. Explore software and instructional activities which support math at the middle and high school levels using Apple IIe and Macintosh systems. Prerequisite: CI 770 or instructor's consent.

CI 780S. Computers in Science. (2). Introduces classroom teachers to applications of computer technology, CD-ROM, and laserdisc technology in the science curriculum. Appropriate software is evaluated and used in planning for instruction. Prerequisite: CI 770 or instructor's consent.

CI 781. Co-Op Education. (1-4). 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.

CI 782. Internet in the Classroom. (3). This course will be project-based and require students to identify internet resources that best meet classroom curricular goals and plan instruction using those resources. This course assumes all enrolled students have basic computing skills prior to enrolling in this class and access to a computer connected to the Internet.

CI 783. Special Projects in Internet. (1). Explore and expand your knowledge of Internet. Complete a special project designed to utilize knowledge and experiences developed in CI 782. Students and instructor establish goals and activities appropriate for graduate-level study and applicable in an educational setting. Prerequisite: CI 770M or 770P or CI 782 or instructor's consent.

CI 786. Structured BASIC. (2). Designed to prepare middle school and high school teachers to teach beginning programming courses. Techniques include top-down programming, modularization, subroutines, documentation, program preparation, and different data types including string, integers, real numbers, and file manipulations. Prerequisite: CI 770M or 770P.

CI 790. Special Problems in Education. (1-4). Directed reading, activity, or research under supervision of a graduate instructor. Prerequisite: departmental consent.

CI 791. Practicum: Methods of Computer-Related Instruction (2). Introduces teaching and learning strategies related to the use of computers in the classroom. Includes the design and management of instructional activities related to software integration, programming, and the development and assessment of computer-related student competencies. Students will be supervised in the field while they apply methods and principles of computer-related instruction. Prerequisite: CI 773M or 772P or department consent.

CI 793. Multimedia in the Classroom. (2). Prepares educators to plan and create multimedia presentations. Includes 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 will present oral and written presentations. Prerequisite: within 6 hours of graduation, CESP 701.

CI 804. Classroom Research in Curriculum and Instruction. (6). This integrated class guides students in using classroom research principles to collect, analyze, interpret, and report data to develop solutions for curriculum, instruction, and student issues. Prerequisite: successful completion of CI 731.

CI 807. Philosophy, History, and Psychology of Secondary and Elementary Education. (3). Students study issues of the 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 702, 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 exceptionality. Prerequisites: full admission to the graduate program, CI 723, 724, 809, and 887. Permission from the instructor 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 exceptionality. Prerequisites: full admission to the graduate program, CI 723, 724, 809, and 887. Permission from the instructor 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 setting 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) 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. Prerequisite: CI 705.

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 move effective instruction through an understanding of partnerships with family members and other 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 or 702, CI 740, full admission to the MEd in special education program, or instructor's consent.

CI 843. The Professional Educator and Portfolio. (6). This integrated course emphasizes application of professional behavior, curriculum research skills, communication/presentation skills, and reflection. A professional portfolio documenting the attainment of the MEd in Curriculum and Instruction program's goals will be completed and presented to a faculty committee.


CI 847A. Practicum/Internship in Early Childhood Special Education - 1 to 10. Provides students with participation in a class for early childhood handicapped (847A), children/adolescents with learning disabilities (847E), educable mental retardation (847I), or behavior disorders (847K) supervised by a master teacher and University professor, emphasizing applied teaching methods for students with mild exceptionalities, including informal-informal psycho-educational assessment devices, curriculum strategies, behavior management, and prescriptive remediation for academic deficits. Prerequisites: full admission to MEd program in special education, CI 723, 724, 809, and 887.

CI 847B. Practicum: School Libraries. (3). Students pursue a professional experience in a school library media center under the supervision of an experienced practitioner in the field and a University supervisor. Prerequisites: application by scheduled date and department consent.

CI 847C. Practicum: Cataloging. (2-4). Students pursue a professional experience in a school library media center or central office under the cooperation supervision of an experienced cataloger in the field and a University supervisor. Prerequisite: CI 728 or departmental consent.

CI 847E. Practicum/Internship in Learning Disabilities. (1-10). See CI 847A, including prerequisites.

CI 847H. Practicum in Center-Based/Home-Based Early Childhood Handicapped (ECH). (3). Provides opportunities for the student to develop clinical competencies with handicapped young children and their parents under the supervision of trained professionals in the field and while working in the center and the homes of the child clients. Prerequisites: CI 740, 847R, 891; CDS 815 or CI 760; and departmental consent.

CI 847L. Practicum/Internship in Educationally Handicapped (1-10). See CI 847A, including prerequisites.

CI 847M. Practicum/Internship in Behavior Disorders. (1-10). See CI 847A, including prerequisites.

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 853. Improvement of Instruction in Language Arts. (3). Students examine recent developments in the teaching of language arts in elementary and/or middle school grades: problems, concerns, methods, materials, and research related to using to oral, written, and visual communication including "school" writing and creative writing. Students select particular concepts and related skills for special attention.

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. Alternative teaching strategies and complementary evaluative techniques are reviewed and practiced.

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 those 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 861. Seminar in Special Education Research. (3). Development and presentation of research proposal. Prerequisite: admission to MEd in Curriculum and Instruction, CI 706, CESP 701.

CI 862. Professional Portfolio Development. (2). Students develop the professional portfolio.
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 physical education: 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 degree program offers a quality education for students desiring a career teaching physical education. The curriculum provides students with a scientific and practical background upon which to base teaching content and methods. The 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-student teaching experiences. Graduates qualify for the Kansas teacher certification in physical education K-12.

Physical Education: Exercise Science
Wichita State's physical education: exercise science degree program offers a quality curriculum with a variety of options including science, pre-physical therapy, sport administration, gerontology, and athletic training. Students in the exercise science degree option complete both practicum and internship requirements. The department also has a comprehensive human performance laboratory that is available for students completing exercise science course work. Graduates of this program work in a variety of settings including corporate fitness programs, schools, hospitals, wellness programs, for-profit health clubs, and community-based programs.

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, 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, KSS 328, KSS 331, KSS 440, KSS 470, KSS 530, HS 331Q, 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 525, 560, 565; Mkt 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.

Service Program
The Physical Education Activity Program represents a variety of one 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 115. Personal and Community Health. (3). Introductory course to study the multiple dimensions of personal health and the outside forces that shape health, lifestyle, disease, aging, death, and dying. Responsibilities for one's health is fostered through the use of wellness inventories, lifestyle assessments, nutritional analyses, and goal-setting.

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 be come permanent.

KSS 150. Workshop. (1-3).

KSS 152. Special Studies in Health, Physical Education, and Recreation. (1-3). Group study activities in preselected areas of health, physical education, or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

KSS 201A. Introduction to Activities. (2). Introduces the major student to the basic skills of badminton, tennis, and flag football.

KSS 201B. Introduction to Activities. (2). Introduces the major student to the basic skills of golf, bowling, and archery.

KSS 201C. Introduction to Activities. (2). Introduces the major student to the basic skills of softball, volleyball, and activities for middle school.

KSS 201D. Introduction to Activities. (2). Introduces the major student to the basic skills of soccer, basketball, and fitness activities.

KSS 201E. Introduction to Fitness Activities. (2). Introduction to activities appropriate for fitness/wellness programs. Prerequisite: departmental major or departmental consent.

KSS 201F. Introduction to Gymnastics. (2). Basic skill development, teaching techniques, and progression appropriate for K-12 grades in gymnastic activities.

KSS 229. Applied Human Anatomy. (3). A study of the structure and function of the skeletal and muscular systems of the human body with direct application to body movements in physical activities.

KSS 270. Motor Learning. (3). The introduction and examination of the physiological and psychological factors that affect the acquisition of motor skills.

KSS 280G. Fitness for Life. (2). 1R; 2L. The whys and hows behind activities designed to develop and maintain the muscular and cardiorespiratory systems of the human body. Two days per week are spent in a laboratory situation to assess fitness components and participate in an individually designed fitness program. One day per week involves a lecture to enhance understanding of exercise, weight control, cardiovascular disease, and fitness parameters.

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. Student must show proficiency at the American Red Cross Swimmer-skil 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. Prerequisite: KSS 270 and 201A, B, C, D, admission to teacher education block, and completion of Preprofessional Block.

KSS 311. Methods and Techniques I. (3). Methods, techniques, teaching progression, analysis, and skill development of badminton, tennis, flag football, golf, bowling, and archery. Requires 30 hours of field experiences and observation in selected high schools. Prerequisite: Block I of teacher education program.

KSS 312. Methods and Techniques II. (3). Methods, techniques, teaching progression, analysis, and skill development of softball, volleyball, soccer, basketball, fitness activities, and activities for middle school. Requires 30 hours of field experiences and observation in selected middle 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 development of 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 of laboratory experiences with intermediate grade school children. Prerequisite: Block I of teacher education program.

KSS 328. Kinesiology and Biomechanics. (3). The understanding of the kinesthetics and mechanics of human motion with respect to participation in 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 337. Theory and Organization of Track and Field. (2). The theory, organization, responsibilities, and techniques of coaching track and field.

KSS 338. Theory and Organization of Basketball. (2). The theory, organization, responsibilities, and techniques of coaching baseball.

KSS 360. Adaptive 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 observations and physical activity with persons impaired, disabled, or handicapped. Prerequisite: KSS 229 or equivalent, admission to teacher education block, and completion of Preprofessional Block.


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; use and application of various modalities in the treatment of athletic injuries.


KSS 440. Concepts in the Prescription of Exercise. (3). An introduction of techniques appropriate for screening, health appraisal, and fitness assessment as required for prescribing exercise programs for persons without disease or with controlled disease, and provision for practical experience in a supervised setting outside the class. Prerequisite: KSS 201E and 530 or equivalent.

KSS 449. Student Teaching—Elementary Health. (13). Prerequisites: completion of all courses in major field and completion of Block III of teacher education program.

KSS 460. Practicum—Sport Administration. (3). Integrates course work with planned and supervised professional experience for a minimum of 15 hours per week. Prerequisites: 2.5 GPA, junior standing, and admission to College of Education.

KSS 470. Fitness Practicum. (3). Application of theory to practice by assisting in campus fitness classes and the Human Performance Lab a minimum of 15 hours per week. Prerequisites: KSS 117, 201E, 530; a 2.5 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
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). Develops an understanding of sport in the American culture, including how sport interacts with other facets of society (e.g., politics, economics, societal subcultures, ethics, socialization processes).

KSS 481. Cooperative Education. (4). Allows students to participate in Cooperative Education program. Offered Cr/Nr only. Prerequisite: 2.500 GPA and admission to College of Education.

Courses for Graduate/Undergraduate Credit


KSS 502. Applied Health I. (2). Introduction to public health problems and practices. Field excursions are arranged. Prerequisite: departmental consent.

KSS 504. Applied Health II. (2). Intensive study of selected health problems with regard to illness prevention and the present state of world health. Prerequisite: KSS 502 or departmental consent.

KSS 515. Rhythmic Activities. (2). Teaches methodology and curricular content of rhythmic activities appropriate for elementary and middle school children. Prerequisites: 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 the organizing and conducting of sport tournaments and events.

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.

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.

KSS 528. Sport Finance. (3). Introduces the sport administration student to financial challenges, financial statements, financial planning, and related issues within sport organizations.

KSS 530. Physiology of Exercise. (3). Provides a working knowledge of human physiology as it relates to exercise. Prerequisite: KSS 229 or equivalent.

KSS 533. Measurement and Evaluation in Physical Education. (3). A study of the modern practices utilized in the total evaluation of physical education programs including (1) basic statistical procedures, (2) evaluating students, (3) evaluating teaching, and (4) a survey of measurement tools. Prerequisite: KSS 111 and 201A or B or E.

KSS 540. Seminar in Sport Business. (3). Integrates the knowledge base of sport and business as they apply in the practical setting. Prerequisites: 2.50 GPA, admission to College of Education, KSS 460, and senior standing.

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 the appropriate agency for a total of at least 520 hours. Prerequisites: KSS 460 (when applicable), 2.500 GPA overall and in major, senior standing in College of Education, advisor's approval.

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 the appropriate agency for a total of at least 520 hours. Prerequisites: 2.500 GPA overall and in major, senior standing in College of Education, advisor's approval.

KSS 557. Internship in Fitness/Wellness. (8). Culminating activity for students in the fitness field option specialization. Students spend the equivalent of full-time employment in the appropriate agency for a full semester. Prerequisites: senior standing, departmental consent, KSS 470, 2.500 minimum GPA overall and for major, admission to College of Education.

KSS 559. Independent Study. (1-3). Prerequisite: departmental consent.

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 570. Sport in Society. (3). Impact of sports on American culture, with focus on competition and innovation in the physical education and sport sciences. Prerequisites: departmental consent.

KSS 578. 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 581. 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 eight hours counting toward the graduate degree. Offered Cr/Nr only.

KSS 790. Applied Exercise Physiology. (3). Focuses on the applied aspect of exercise physiology. Includes the areas of environmental influences on performance, optimizing perfor...
mance through training, nutrition, and ergogenic aids, and training and performance of the adolescent athlete and of elderly, and the differences in performance and training between genders. Prerequisite: KSS 530 or 830.

KSS 795. Physiology of Athletic Performance. (3). Explores the physiological responses involved with various athletic performances, including sports requiring endurance, speed, and power. Includes such areas as 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.

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 environment, sport participation, and sporting goods sectors of the industry.

KSS 812. Advanced Techniques in Physical Education. (3). Comprehensive coverage of selected physical activities, emphasizing class procedures. Includes laboratory experiences.

KSS 814. Analysis of Teaching. (3). An in-depth examination of teacher effectiveness. Includes analysis of research in physical education, identifying significant teacher and student behaviors 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. Prerequisite: KSS 530 or equivalent and graduate standing.

KSS 816. Physical Education in Secondary Schools. (3). For the physical education specialist. New concepts and recent trends in methodology, programming, and supervision at the secondary level.

KSS 825. Physical Education in Elementary Schools. (3). For the elementary teacher and physical education specialist.

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 exercise science or sports 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 review and critical evaluation of the literature, research design and statistical processes, methodology, data collection techniques, computer-based analysis of data and thesis/report writing. Students design and complete a mini-research project. Prerequisite: KSS 800.

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 two. 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 two. 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. Problems in Health, Physical Education, and Recreation. (1-4). Directed reading and research under supervision of a graduate instructor.

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, 4R:2L translates to four hours of lecture and two hours of lab.
College of Engineering

100 Wallace Hall • (316) WSU-3400 www.engr.twsu.edu/

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, industrial, 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, and mechanical engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Two new programs leading to the Bachelor of Science in manufacturing engineering and in computer engineering, which are not presently accredited by EAC/ABET, are also offered.

Graduate

A Master of Science (MS) is offered in aerospace, electrical, industrial, and mechanical engineering. A new 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 pre-degree program in the College of Engineering. The pre-degree program of study must include the following courses: (a) Eng. 101/100, Eng. 102, and Comm. 111, (b) Math. 242Q, and (c) Phys. 313Q or Chem. 111Q, or their equivalents.

Students will be admitted to an engineering degree program when they have satisfied the following requirements:

1. Completion of at least 24 semester credit hours of college-level work with a WSU grade point average of 2.000 or higher, and an overall grade point average of 2.000 or higher (for transfer students). The 24 semester hours must include the above-specified courses in the pre-degree program, each with a grade of C or better;

2. Declaration of a specific engineering major.

Students may not continue in the pre-degree program after the semester in which they complete 48 semester hours.

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 that 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, six semester hours in an eight-week term, or three 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 nine 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 five hours for each four-week session or ten 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 nonengineering 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) 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. All engineering students must complete these three courses before they can be transferred to a degree program in engineering.

(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 in 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 also 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) Mathematics and Natural Sciences: 32-34 hours of mathematics and natural sciences must be completed, as prescribed by each department.

(2) Core requirements (13 hours): Engr. 310, Seminar in Engineering (0 hrs.); AE 223, Statics (3 hrs.); ECE 282, Circuits I (4 hrs.); IE 255, Engineering Economy (3 hrs.); and ME 398, Thermodynamics (3 hrs.). These are courses that all engineering students must complete, regardless of major.

(3) 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.

(4) 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 both 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 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.

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<tr>
<th>Year</th>
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<tbody>
<tr>
<td>Semester</td>
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<tr>
<td>Plan A</td>
<td>W</td>
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<tr>
<td>Plan B</td>
<td>C</td>
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</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 Education (Engr.)
The following courses explore general engineering topics.

Lower-Division Courses

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.

Upper-Division Courses

Engr. 310. Seminar in Engineering. (0). Seminars on the practice of engineering, including ethics and professionalism. Each College of Engineering student is required to attend four seminars. Graded Cr/NCr only. Prerequisite: admission to the College of Engineering.

Aerospace Engineering (AE)
The educational objective of the aerospace engineering program is to provide (a) an undergraduate education that will allow successful graduates to become aerospace engineers who are sufficiently trained in the principles of aerospace engineering to meet the needs of potential employers and (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 dynamics, and control, 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 computation, 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, 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 135 semester hours for graduation, minus advanced placement credit and plus Engr. 310. The suggested course of study for aerospace engineering students is given in the following table.

Model Program

Freshman

Course

Engineer. 101 or 100 and 102, College English I and II..........................6
Chem. 111Q, General Chemistry .................................................5
Math. 242Q and 243, Calculus I and II ..................10
Phys. 313Q and 315Q, University Physics I and Lab .............5
IEN 222, Engineering Graphics .............................................3
AE 227, Engineering Digital Computation ..........................2

Sophomore

Course

Comm. 111, Public Speaking .................................................3
Math. 344, Calculus III .......................................................3
Math. 555, Ordinary Differential Equations with Linear Algebra 4
Phys. 314Q, 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
Humanities and fine arts or social and behavioral sciences electives ** 3

Junior

Course

Engr. 310, Seminar in Engineering ......................................0
ME 521, Fluid Mechanics ..................................................3
AE 415, Introduction to Space Dynamics ..............................3

AE 424, Aerodynamic Theory ..............................................4
AE 502, Aerospace Propulsion ...........................................3
AE 514, Flight Mechanics and Controls ................................3
AE 525 and 625, Flight Structures I and II ......................6
IEN 255, Engineering Economy ........................................3
Humanities and fine arts or social and behavioral sciences electives ** 9

Senior

Course

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
Humanities and fine arts or social and behavioral sciences electives ** 6
Technical electives ..............................................................9

*To be chosen from a list of approved courses available from the College of Engineering.

**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 freshmen 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.

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 propulsion aspects of atmospheric flight vehicles. Intended for freshmen 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.

AE 223, Statics. (3). The study of the condition of equilibrium of rigid bodies under the action of forces. Rigid bodies include beams, trusses, frames, and machines. Considers both two and three-dimensional bodies. Also includes the study of centroids, centers of gravity, and moments of inertia. Corequisites: Math. 243 and Phys. 313Q.


AE 281A. Co-op Education. (1). Introduces the student to engineering practice by working in industry in an engineering-related job and pro-
vides 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/NCR only. Prerequisites: 30 hours toward a bachelor of science in aerospace engineering degree and approval by appropriate faculty sponsor.

AE 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. Students must enroll concurrently in a minimum of six hours of course work including the course in a minimum of 20 hours per week at their co-op assignment. Prerequisites: successful completion of 20 hours toward an engineering degree and approval by appropriate faculty sponsor. May be repeated. Graded Cr/NCR.

Upper-Division Courses


AE 415. Introduction to Space Dynamics. (3). Fundamentals of orbital mechanics and rigid body dynamics; two-body problems; orbital maneuvers and orbital determination; rigid body kinematics and kinetics. Prerequisites: AE 227 and 373; corequisite: Math. 555.


AE 460. Selected Topics. (1-3). New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: instructor's consent.

AE 481A. Co-op Education. (1). See AE 281A. Graded Cr/NCR unless student has received permission before enrolling for course to be used as a technical elective. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated.

AE 481P. Co-op Education. (1). See AE 281P. Graded Cr/NCR unless student has received permission before enrolling for course to be used as a technical elective. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated.

Courses for Graduate/Undergraduate Credit


AE 508. Systems Dynamics. (3). Lump 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 528. Aerospace Design I. (4). 2R; 2L. Methodology of flight vehicle design, mission objectives, regulations and standards, use of hand and computer methods for configuration development and component sizing; ethics and liability in design. Prerequisite: AE 514.


AE 625. Flight Structures II. (3). Strength analysis and design of flight vehicle components.

Introduction to energy methods and variational principles. Application of finite element method to the analysis of flight vehicle structures. Special projects in structural analysis and design. Prerequisite: AE 525.

AE 628. Aerospace Design II. (4). 2R; 2L. Preliminary design of flight vehicles, design iteration, sensitivity studies, optimization, economic considerations, and introduction to project management. Prerequisite: AE 528.

AE 653. Basic Composite Material Technologies. (3). An introduction to the basic composite material technologies including mechanical behavior, material classification, testing for mechanical properties, manufacturing methods, nondestructive inspection and design. Prerequisite: AE 533.

AE 654. Manufacturing Composite Structures. (1-2). Manufacturing methods and tooling for fiber-reinforced polymer structures and structural components. Prerequisites: ME 250 and AE 653 both recommended.

AE 660. 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 704. 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 706. Advanced Aerodynamics Laboratory. (3). 1R; 3L. Advanced topics in wind tunnel
testing including analysis and sensitivity, modeling techniques, flexure design and calibration, control surface loads and moments, laser velocimetry, hot film anemometry, dynamic signal processing, flow measurement probes, flow visualization using smoke tunnels and water tunnel. Prerequisite: 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, buffeting, dynamic response to rapidly applied periodic forces, aeroelastic 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 420, 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 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. Use Airy stress functions to obtain solutions. Introduction energy principles and variational methods. Prerequisite: instructor's consent.


AE 737. Mechanics of Damage Tolerance (3). An introduction to the mechanics of damage tolerance with emphasis on stress analysis-oriented fracture mechanics. Topics include stress intensity, fracture toughness, residual strength, fatigue crack growth rate, fatigue crack propagation, and damage tolerance concepts. Prerequisites: AE 525 or instructor's consent.

AE 750. Aerospace Engineering Workshop (1-4). Various topics in aerospace engineering. Prerequisites: instructor's consent.

AE 760. Selected Topics (1-3). Prerequisite: instructor's consent.


AE 777. Vibration Analysis (3). A study of forced, damped and undamped vibrations, one and two degrees of freedom, as well as classical, numerical and energy solutions of multidegree freedom systems. Introduces continuous systems. Prerequisites: Math. 555, AE 373 and 333.

Courses for Graduate Students Only


AE 811. Panel Methods in Aerodynamics (3). An Introduction to panel method theory and application for incompressible attached flows. Utilization of some two and three dimensional computer code. Prerequisites: AE 711 and Math. 757 or equivalent.

AE 812. Aerodynamics of Viscous Fluids (3). Viscous fluids flow theory and boundary layer. Prerequisites: AE 424 or ME 521.

AE 814. Advanced Dynamic Flight II (3). Sensitivity analyses of flight parameters; control surface sizing; handling qualities; pilot in-the-loop analysis; trajectory optimization. Prerequisite: AE 714.

AE 815. Spacecraft Attitude Dynamics (3). An in-depth study of advanced six degrees-of-freedom kinematics, spinning motion, effects of gravitational forces, simple spacecraft dynamics, and flexible spacecraft. Prerequisite: AE 714 or 773 or equivalent.

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; computation techniques. 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; short time test facilities. Computational techniques. Propulsion methods; airframe-engine integration; SCRam jets. Prerequisites: AE 711 and 716 or equivalent.

AE 822. Finite Element Analysis of Structures (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: graduate standing.

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 on the project. 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 high lift 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 719 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 fundamental modules of unstructured grids and finite volume schemes. Prerequisites: AE 719 or ME 889.

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)
The objectives of the electrical and computer engineering program are to:

1. Provide students with understanding of the fundamental knowledge prerequisite for the practice of electrical or computer engineering or graduate study, including scientific principles, rigorous analysis and creative design.

2. Provide students with the broad education, including knowledge of important current issues in electrical or computer engineering and a commitment to lifelong learning, as is necessary for productive careers in the public or private sectors.

3. Develop skills for clear communication and responsible teamwork, and to inculcate professional attitudes and ethics in an innovative program that is rigorous, challenging, open, and supportive.

Students in the electrical and computer engineering (ECE) department have two degree programs from which to choose, electrical engineering or computer engineering. 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 requirements 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 computer engineers have a strong background in electrical engineering principles.

Electrical 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 two semester 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, electrical power systems, electronics, and digital systems.

The computer engineering degree is a more specialized degree with more required courses and fewer electives. It requires, in addition to the senior project sequence, a one semester lab where students are introduced to state-of-the-art equipment and design tools.

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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</thead>
<tbody>
<tr>
<td>Eng. 101/100 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Math. 242Q 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>4</td>
</tr>
<tr>
<td>ECE 229, Engineering Computing in C</td>
<td>3</td>
</tr>
<tr>
<td>General education courses</td>
<td>*3</td>
</tr>
</tbody>
</table>

Model Program—Computer Engineering Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
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<tbody>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Math. 555, Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>ECE 284, Circuits II</td>
<td>3</td>
</tr>
<tr>
<td>ECE 238, Assembly Language Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 313Q and 314Q, University Physics I and II</td>
<td>8</td>
</tr>
<tr>
<td>General education courses</td>
<td>6</td>
</tr>
<tr>
<td>ECE 394, Introduction to Computer Architecture</td>
<td>3</td>
</tr>
<tr>
<td>AE 223, Statics</td>
<td>3</td>
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</table>

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 555, Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 313Q and 314Q, University Physics I and II</td>
<td>8</td>
</tr>
</tbody>
</table>

Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIE 254, Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 383, Signals and Systems</td>
<td>3</td>
</tr>
</tbody>
</table>
ME 398, Thermodynamics I ............ 3
ECE 492 and 493, Electronic Circuits
1 and II ......................... 7
CS 320, Discrete Structures in Computer
Science .......................... 4
ECE 477I, Unix ...................... 3
Chem. 111Q, General Chemistry ...... 5
General education courses* .......... 3
Senior
Course
IEN 255, Engineering Economy .... 3
ECE 594, Microprocessor Based System
Design .................................. 3
ECE 585 and 595, Electrical Design
Project I and II .................... 3
ECE 644, Advanced Digital Lab .... 2
CS 540, Operating Systems ......... 3
ECE 744, Introduction to VHDL .... 3
General education courses* .......... 6
Technical electives** ............... 8

* Refer to graduation requirements at the beginning of this section for details.
** Must be chosen with advisor’s approval from a departmental approved list.

Lower-Division Courses
ECE 101, Introduction to Electrical Engineering (1). Gives those students also enrolled in Engr. 101 the opportunity for a hands-on experience in each of the areas of specialization in electrical engineering: digital design, power, communications, and control.
ECE 150, Workshop on Electrical and Computer Engineering (1-3). Workshops on electrical and computer engineering are offered on an irregular basis. Prerequisite: departmental consent.
ECE 194, Introduction to Digital Design (1). 3R; 3L. An introduction to digital design concepts. Includes number systems, Boolean algebra, Karnaugh maps, combinational circuit design, adders, multiplexers, decoders, sequential circuit design, state diagram, flip flops, sequence detectors, and test different combinational and sequential circuits. Uses CAD tools for circuit simulation. Prerequisite: Math. 111 or equivalent.
ECE 229, Engineering Computing in C (3). Introductory course in digital computer programming using C with applications to elementary engineering problems. Stresses both syntax rules and problem solving approaches. Laboratory exercises given for programming on personal computers. Prerequisite: Math. 111 or 112 or equivalent.
ECE 238, Assembly Language Programming for Engineers (3). An introduction to basic concepts of computer organization and operation. Studies machine and assembly language programming concepts that illustrate basic principles and techniques. Laboratory exercises given for experience using personal computers. Prerequisite: ECE 229.
ECE 282, Circuits I (4). 3R; 3L Electric circuit principles and methods of analysis. Includes d.c. circuits, network theorems, capacitance and inductance, a.c. circuit analysis, phasor plane techniques, complex power, and balanced three-phase circuits. Prerequisite: Math. 242.
ECE 284, Circuits II (3). Includes circuits with mutually coupled elements, transfer functions emphasizing frequency response, two-port networks, Laplace transforms and application to transient circuit analysis and the application of computer aided analysis software toward circuit analysis and design. Prerequisites: ECE 282 and Math. 243; corequisite: ECE 229.
ECE 294, Digital Design Techniques (3). Digital design techniques include registers and memory interfacing and microprogramming. Programmable logic devices, different types of PLDs, combinational and sequential circuit design using PLDs. PAL programming. PLD based design using ABEL, CMOS family. TTL to CMOS and CMOS to TTL interfacing. Uses CAD tools for circuit simulation. Prerequisite: ECE 194.

Upper-Division Courses
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. Prerequisite: Math. 555. Corequisite: 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 477, Selected Topics in Electrical Engineering (1-4). New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.
ECE 491A, 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 491P, 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 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, opamp circuits, rectification, and transistor amplifiers. Corequisite: ECE 284.

Courses for Graduate/Undergraduate Credit
ECE 585, Electrical Design Project (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, Electrical Design Project II (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 588, Introduction to Communication Systems (4). 3R; 3L. Fundamentals of communication systems; models and analysis of source, modulation, channel and demodulation in both analog and digital form. Reviews Fourier Series, Fourier Transform, DFT, Probability, and Random Variables. Studies in Sampling, Multiplexing, AM and FM analog systems, and additive 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 IEN 254.
ECE 596, Advanced Electric Motors (3). Advanced electric motor applications and theory. Includes single-phase motors, adjustable speed ac drive applications, and stepping motors. Prerequisites: ECE 498 and 492.
ECE 594, Microprocessor Based System Design (3). Development of microprocessor based systems presented. Interfacing the address bus, data bus, and control bus to the
processor chip studied. 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. Prerequisite: ECE 238 and 294, or 394.

ECE 595. Electrical Design Project II. (2). 3L-May not be counted toward a graduate electrical major. A continuation of ECE 585. Prerequisite: ECE 585. Will not count towards a graduate electrical engineering degree.

ECE 598. Electric Power Systems Analysis. (3). Analysis of electric utility power systems. Topics include analysis and modeling of power transmission lines and transformers, power flow analysis and software, and an introduction to symmetrical components. Prerequisite: ECE 282.

ECE 636. Telecommunications. (3). Topipics 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 639. Microcontrollers. (3). A review of microprocessor architectures and assembly language programming. A detailed study of microcontroller architectures, assembly languages and peripheral devices for applications in embedded and real-time control systems. Prerequisite: ECE 238.

ECE 644. Advanced Digital Lab. (3). 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). 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 cyclo converter, 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 requirement 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, BiCMOS, and MOS fabrication, application specific semi-custom VLSI arrays, 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 network 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, PSK, DPSK, QPSK, MSK and other techniques appropriate for communicating digital information in both baseband and baseband-pass systems; intersymbol interference; effects of noise on system performance; optimum systems; and general M-ary digital systems in signal-space. Prerequisites: ECE 586 and 754.

ECE 736. Data Communication Networks. (3). Presents a quantitative performance evaluation of telecommunication networks and systems. Includes fundamental digital communications system concepts; basic communication networking theory; OSI, S2, and SNA layered architectures; stop-and-wait protocol, go-back-N-protocol, and high-level data link layer; network layer flow and congestion control; routing; polling and random access; local area networks (LAN); integrated services digital networks (ISDN), and broadband networks. Prerequisites: ECE 636 or departmental consent.

ECE 738. Embedded Systems Programming. (3). A study of the requirements and design of embedded software systems. Application of the C programming language in the implementation of embedded systems emphasizing real-time operating systems, interfacing to assembly and high-level languages, control of external devices, task control and interrupt processing. Prerequisite: ECE 238.

ECE 744. Introduction to VHDL. (3). An introduction to VHDL hardware description language. Includes different types of modeling techniques using state-of-the-art CAD tools. Covers extensively behavioral modeling, structural modeling, and data flow modeling. Design assignments include design and simulation of both combinational and sequential circuits using VHDL.

ECE 748. Wide Area Networks. (3). An in-depth study of wide area networks, including ATM, X.25, Frame Relay, and SMDS. Prerequisite: ECE 648.

ECE 754. Probabilistic Methods in Systems. (3). A course in random processes designed to prepare the student for work in communications controls, computer systems information theory, and signal processing. Covers basic concepts and useful analytical tools for engineering problems involving discrete and continuous-time random processes. Discusses applications to system analysis and identification, analog and digital signal processing, data compression parameter estimation, and related disciplines. Prerequisites: ECE 383 and either Stat. 471 or IEN 254.

ECE 764. Routing and Switching I. (4). 3R. 3L. An introductory course which studies different hardware technologies, such as Ethernet and token ring. Discusses VLSI. Introduces different routing protocols. Includes hands-on experience in the ECE department's routing and switching lab. Prerequisite: ECE 294, 229, or departmental consent.

ECE 765. Routing and Switching II. (4). 3R. 3L. Discusses different bridging techniques, including SRB, RSRB, and DLSW. Also includes advanced routing protocols, like OSPF and EIGRP, and route redistribution. Includes hands-on experience in the ECE department's routing and switching lab. Prerequisite: ECE 764 or departmental consent.

ECE 777. Selected Topics in Electrical Engineering. (1-4). New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

ECE 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.


ECE 790. Independent Study in Electrical Engineering. (1-3). Arranged individually, independent study in specialized content areas in electrical engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: departmental consent.

ECE 792. State Variables. (3). Review of mathematics fundamental to state-space concepts. Formulation of state-variable models for linear and nonlinear continuous and discrete systems and concepts of controllability and observability. Studies state-space systems in addition to Lagrange and Lagrange stability and computational approximation techniques. Prerequisite: ECE 383.

ECE 797. Computer Application to Power System Analysis. (3). Describes the use of power system component models and efficient computational techniques in the development of a new generation of computer programs representing the steady and dynamic states of electric power systems and inform of methods currently employed in the electric utility industry. Emphasizes algorithms suitable for computer solution of power systems problems such as power flows and system voltages during normal and emergency conditions and transient behavior of the system resulting from fault conditions and switching operations. Prerequisites: ECE 229 and 598.
Courses for Graduate Students Only

ECE 798. Advanced Electric Power Systems Analysis. (3). Advanced topics in analysis and operation of electric utility power systems. Topics include faulted system analysis, economic dispatch, generator modeling, power system stability, and system protection. Prerequisite: ECE 598.

ECE 826. Digital Communication Systems II. (3). Presents in-depth theoretical and practical digital communication systems and channels. Includes the modeling and analysis of all digital communications systems; receiver with intermediate frequency (IF) sampling; and A/D converter; synchronization techniques; trellis-coded modulation (TCM); Multiple Access: fading multipath channel; radio frequency interference (RFI) channel; and jamming channel. Applies to digital satellite communications system; and digital cellular code division multiple access (CDMA) system. Prerequisite: ECE 726.

ECE 842. Modern Filters. (3). Concerned with estimating a signal of interest or the state of a system in the presence of additive noise, making use of the statistical characteristics of both the signal and the noise. Course includes Wiener filters, Kalman filters; linear prediction, and algorithms for linear prediction parameter estimation. Prerequisite: ECE 754.


ECE 845. 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 prior statistical characteristics of the signal or 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-designing. Includes concepts of convergence, tracking ability, and robustness. Prerequisite: ECE 754.

ECE 846. Spectrum Estimation. (3). Concerned with estimating the frequency spectrum, primarily power but also energy, of a signal of interest. Reviews historical methods, but concentrates on modern methods that are model based, achieving high resolution even for short data lengths. Content includes maximum entropy, maximum likelihood, autoregressive, moving average, and autoregressive moving average spectrum estimation methods. Applications also included. Prerequisite: ECE 754.

ECE 854. Stochastic Control Systems. (3). Reviews the pertinent aspects of deterministic system models; stochastic processes and linear dynamic system models emphasizing linear systems driven by white Gaussian noise; linear estimation and optimal filtering; design and performance analysis of Kalman filters. Prerequisites: ECE 684 and 754.

ECE 876. MS Thesis. (1-6). Graded S/U only. Repeatable for credit toward the MS thesis option up to six hours. Prerequisite: prior consent of MS thesis advisor.

ECE 877. Special Topics in Electrical Engineering. (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

ECE 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.

ECE 882. Speech Digital Signal Processing. (3). An introductory study in speech signal generation and digital speech signal processing. Includes speech generation and perception, acoustic phonetics, models of speech signals and speech production, analysis methods of digital speech signals, short-time Fourier transforms and the application to spectrograms, pitch and formant estimation, parametric and nonparametric modeling of speech signals, and linear prediction methods, speech data compression, some methods of speech synthesis and recognition, and speech signals in the presence of noise. Prerequisites: ECE 754.

ECE 883. 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 754 or departmental consent.

ECE 884. Discrete-Time Control Systems. (3). Fundamentals of input-output and state-space analysis, difference equations and state space implementations; pole placement and observer design; optimal control and discrete minimum principle; linear state regulator design; equality-constrained control problems. Prerequisites: ECE 684 and 782.

ECE 886. Error Control Coding. (3). Presents fundamental topics from information theory which underlie source and error control coding. Reviews topics from finite field theory and vector spaces essential for the study of coding. Presents the concepts of code-space, sphere packing and perfect codes. Considers linear (n,k) block codes in some detail including error detection and correction concepts, parity check matrices and syndromes. Hamming codes, cyclic codes, error trapping decoding, BCH codes, burst-error-correcting codes, interleaving and product codes. Presents convolutional codes and topics such as the Viterbi algorithm for decoding. Prerequisites: ECE 586 and 754.

ECE 893. Optimal Control. (3). A continuation of the study of state-space concepts in the areas of nonlinear systems and optimal and suboptimal control systems with wide classes of performance measures. Prerequisite: ECE 792.

ECE 894. Advanced Computer Architecture II. (3). Vector processors, memory-hierarchy design, input and output. Prerequisite: ECE 844.

ECE 895. Nonlinear Control Theory. (3). An introduction to the analysis and design of nonlinear control systems emphasizing stability. Includes stability definitions, phase-plane methods, linearization, time and frequency domain stability criteria, limit-cycle criteria and exact methods for relay control systems. Prerequisites: ECE 684 and 792.

ECE 897. Operation and Control of Power Systems. (3). Acquires electric power engineering students with power generation systems, their operation in economic mode and their control. Introduces mathematical optimization methods and applies them to practical operating problems. Introduces methods used in modern control systems for power generation systems. Prerequisite: ECE 598.

ECE 960. 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 in 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 signals; 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 882 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 communications links under multi-path mobile fading environment using analysis techniques and simulation. Analyzes pseudo-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-optimal 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. Prerequisites: 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 nonlinearities, 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 (IMfGE) department at WSU takes responsibility for instruction and research in design, analysis, and operation of manufacturing and other integrated systems of people, material, equipment, and capital. The department offers curricula and educational experience designed and continuously improved through the involvement and contribution of its constituents: students and alumni, potential employers of program graduates, and faculty.

The IMfGE department offers two undergraduate degree programs, one in industrial engineering (BSIE) and another in manufacturing engineering (BSMfGE). The BSIE degree program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). The BSMfGE 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 specialization 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.

Modern, well-equipped laboratories are available to supplement classroom theory in ergonomics, manufacturing engineering, and computer analysis. The department's laboratory facilities include Cessna Manufacturing Processes Lab, Graphics Lab, Metrology 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. IEs apply a full range of analytical, simulation, and experimentation tools to problems in designing, planning, implementing, and operating systems. These problems are found in a wide variety of 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, 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 plus Engr. 310 for graduation, minus hours commensurate with advanced placement credit. Students may select 9 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.
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 MfgE 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 135 semester hours plus Engr. 310 for graduation, minus hours commensurate with advanced placement credit. Students may select 12 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

Engr. 101/100 and 102, College English I and II

Sophomore

Course

Math. 242Q and 243, Calculus I and II

Industrial Engineering (IEN)

Lower-Division Courses

IEN 101. Introduction to Industrial and Manufacturing Engineering. (3) Cross-listed as MfgE 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.

IEN 150. Workshop in Industrial Engineering. (1-3). Offered from time to time on various topics in industrial engineering.

IEN 222. Engineering Graphics. (3). 2R; 3L. The use of 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, thread 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.

IEN 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: IEN 222.


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/NCR only. Prerequisites: 30 hours toward bachelor of science in industrial engineering degree and approval by appropriate faculty sponsor.

Upper-Division Courses

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
IEN 481P. Co-op Education. (1). See IEN 281P. Pre-requisites: junior standing and approval by appropriate faculty sponsor.

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 553. Production Systems. (3). Quantitative techniques used in the analysis and control of production systems. Includes forecasting, inventory models, operation planning and scheduling. Prerequisite: IEN 550. Corequisite: IEN 524 or departmental consent.

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 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 550 and MfgE 258. Corequisite: IEN 452.


IEN 590. Industrial Engineering Design I. (3). An industry-based team design project utilizing industrial engineering principles performed under faculty supervision. May not be counted toward graduate credit. May not get credit in both IEN 590 and MfgE 590. Prerequisites: Complete at least two of the following courses (IEN 549, IEN 553, IEN 563) and be within two semesters of graduation.

IEN 664. Engineering Management. (3). An introduction to the design and control of technological systems. Emphasizes both the theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development and personal skill assessment. Prerequisite: IEN 254 or Stat 471.

IEN 670. Industrial Robotics. (3). A study of principles and applications of industrial robots in manufacturing systems. Includes robot classifications, actuators, sensors, control systems and robot programming. Prerequisite: ECE 239 or AE 227.

IEN 690. Industrial Engineering Design II. (3). Continuation of the design project initiated in IEN 590 or the performance of a second industrial engineering design project. May not be counted toward a graduate industrial engineering major. May not get credit in both IEN 690 and MfgE 690. Prerequisites: IEN 590 and departmental consent.


IEN 740. Analysis of Decision Processes. (3). Decision analysis such as applied to capital equipment selection and replacement. Decision design and policy development. Emphasis on the role of risk, uncertainty and multiplicity of 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 qualifying, assessing and verifying reliability. Presents various models that determine the capabilities of components. Emphasis on practical applications. Problems and examples 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 replication, and confounding. Prerequisite: IEN 524 or instructor's 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. Emphasis on feasibility, reliability, maintainability, supportability and economic feasibility. Prerequisites: IEN 254 and 255.

IEN 770. Industrial Automation. (3). (2R, 3). 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 239 or knowledge of a programming language.

IEN 775. Computer Integrated Manufacturing. (3). A study of the components, concepts 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 239 or knowledge of a programming language.

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 grade of 3.00 or above. CR/NCR only.

IEN 782. Assembly and Manufacturing Planning. (3). Studies various topics related to design, planning, and fabrication of mechanical assemblies. Includes joining processes, design for assembly (DFA) principles, assembly design, product modeling, product data management, assembly sequencing, and assembly tool design. Prerequisite: MfgE 258 and ECE 239 or knowledge of a programming language.

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.

Courses for Graduate Students Only

IEN 835. 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. Includes 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.

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 optional 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 930. 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 239 or AE 227 or departmental consent.

IEN 960. Advanced Selected Topics. (1-3). New or optional courses on advanced topics presented under this listing on sufficient demand. Prerequisite: instructor's consent.

IEN 970. Machine Vision Applications. (3). A study of machine vision techniques, such as thresholding, edge detection, boundary following, object identification and measurements using machine vision. Emphasizes the application of machine vision techniques in automated inspection and object recognition. Prerequisites: ECE 239 or knowledge of a programming language, IEN 670, or instructor's consent.


IEN 990. Advanced Independent Study. (3). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent.

Manufacturing Engineering (MfgE.)
Lower-Division Course

MfgE. 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.

MfgE. 258. Manufacturing Methods and Materials I. (3). 2R; 3LT This course provides students with a basic understanding of materials and processes that are used to manufacture products. Some of the major manufacturing processes covered in this course include, but are not limited to, metal machining, metal forming, extrusion, casting, joining, and plastics forming. The course emphasizes the use of materials, sciences and mathematics to understand the behavior of materials undergoing the manufacturing process. This course includes an introduction to process planning. Students will gain an extensive hands-on experience in different manufacturing processes and in teamwork. Prerequisite: Math 123.

Courses for Graduate/Undergraduate Credit

MfgE. 502. Manufacturing Measurement Analysis. (4). 3R; 3L Covers methods for measurement and analysis of variables in the production of industrial parts. Topics include basic principals of measurement, data acquisition, data analysis, dimensional measurement techniques, basic understanding and evaluation of GD&T, force, temperature, and surface finish measurement, principles 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, automatic data collection. Prerequisites: IEN 254 and MfgE. 258.

MfgE. 554. Manufacturing Tools. (3). Introduces the principles behind the design and fabrication of machine tools and production tools. Discusses tool materials; machine tool kinematics, accuracy, instrumentation, and control; and design of fixtures and jigs. Includes an introduction to design of inspection tools, machining and press working tools, and modular fixtures. Application of theories to labs and design problems.

MfgE. 558. Manufacturing Methods and Materials II. (3). Covers theoretical and practical aspects of manufacturing processes. In-depth study of manufacturing processes, such as metal machining, bulk forming and non-traditional machining practical problems. May not be taken for credit in both MfgE. 550 and MfgE. 559. Prerequisites: must be taken in conjunction with MfgE. 550. May not be counted toward a graduate industrial engineering major. May not get credit in both IEN 590 and MfgE. 590. Prerequisites: must be within one year of graduation and departmental consent.

MfgE. 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 interchange standards and the interface between CAD and CAM. Prerequisites: IEN 222 and ECE 229 or equivalent.

MfgE. 639. Applications of Finite Element Analysis in Mechanical Engineering Systems. (3). Introduces the finite element method as a powerful and general computer tool for solving problems related to mechanical engineering systems. Applies finite element techniques to one and two dimensional mechanical engineering problems in fluid mechanics, heat transfer, solid mechanics, and mechanical systems.
design. Introduces commercial finite element computer tools such as ALGOR and ANSYS. Prerequisite: ME 439, ME 522 or equivalent.

MfgE. 645. Manufacturing Systems Engineering. (3). 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: MfgE. 558.

MfgE. 654. Non-traditional Machining Processes. (3). A study of the role and economics of non-traditional processes; use of laser and electron beams in inspection and measurement; heat treatment; material removal; material joining and coating. Also covers the fundamentals of electro-discharge machining, electro-chemical machining, chemical milling, and water-jet machining. Prerequisite: MfgE. 558.


MfgE. 690. Manufacturing Engineering Design II. (3). Continuation of the project initiated in MfgE. 590 or a second industry-based design project. May not be counted toward a graduate industrial engineering major. May not get credit in both IEN 690 and MfgE. 690. Prerequisites: MfgE. 590 and departmental consent.

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 135 semester hours for graduation, minus hours commensurate with advanced placement credit plus Engr. 310. Specific requirements and a suggested course of study for the mechanical engineering program follow.

Model Program

Freshman

Course | Hrs.
--- | ---
Engl. 101/100 and 102, College English I and II | 6
Chem. 111Q, General Chemistry | 5
Math. 242Q and 243, Calculus I and II | 10

Sophomore

Course | Hrs.
--- | ---
Math. 344, Calculus III | 3
Math. 555, Ordinary Differential Equations with Linear Algebra | 4
Phys. 314Q, University Physics II | 4
AE 223, Statics | 3
AE 227, Engineering Digital Computations | 2
IEN 255, Engineering Economy | 3
ECE 282, Circuits | 4
ME 250, Materials Engineering | 3
ME 251, Materials Engineering Lab | 1
IEN 222, Engineering Graphics | 3
Engr. 310, Seminar in Engineering | 0

Junior

Course | Hrs.
--- | ---
AE 333, Mechanics of Materials | 3
AE 373, Dynamics | 3
ME 339, Design of Machinery | 3
ME 398, Thermodynamics I | 3
ME 402, Mechanical Engineering Measurements | 3
ME 439, Mechanical Engineering Design I | 3
ME 502, Thermodynamics II | 3
ME 521, Fluid Mechanics | 3
ME 522, Heat Transfer | 3
ME 523, Fluid and Heat Flow lab | 1
Natural science electives* | 3
Humanities and fine arts or social and behavioral sciences electives* | 3

Senior

Course | Hrs.
--- | ---
ME 503, Mechanical Engineering Systems Laboratory | 3
Mechanical Design electives$ | 3
Thermal Design electives$ | 3
ME 659, Mechanical Control | 3
ME 662, Mechanical Engineering
Practice.......................................................... 3

Engineering electives†........................................... 12

Humanities and fine arts or social and behavioral sciences electives*........ 9

* 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.
¶ The engineering electives must meet the following requirements (12 hours total):
1. A minimum of six hours must be selected from ME department electives.
2. The remaining six hours can be selected either from ME department elective courses or engineering courses outside the ME department.

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. Student groups design and build a mechanical device to perform some task in the design project. Prerequisite: mechanical engineering 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 111Q, Math 242.


Upper-Division Courses
ME 339. Design of Machinery. (3). Introduces engineering design process; synthesis and analysis of machinery and machines. Kinematic (position, velocity and acceleration) and inverse dynamic analysis of planar mechanisms by analytical, graphical and computer methods. Design of linkages for motion, path and function generation; cam design. Computer-aided engineering as an approach in engineering design; projects on practical engineering designs for machinery. Prerequisite: IEN 222. Corequisite: AE 373.

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 313Q.


ME 439. Mechanical Engineering Design I. (3). Principles of mechanical design, emphasizing practice in the application of various mechanical design elements—shafts, bearings, gears, brakes, clutches, thread fasteners, etc. Prerequisites: ME 339, 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 carries design credit and integrates into the design process topics of technical entrepreneurship. 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' towards 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, in addition to standard engineering topics. Prerequisite: 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 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/NCR 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 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/NCR only.

Courses for Graduate/Undergraduate Credit
The courses numbered 502 through 760 are not automatically applicable toward an advanced degree in engineering. They must be approved by the student's advisor, the graduate coordinator and the chairperson 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 Thermodynamics I, emphasizing cycle analysis, thermodynamic property relationships and psychrometrics, with an introduction to combustion processes and chemical thermodynamics. Prerequisites: ME 398 with grade of C or better.

ME 503. Mechanical Engineering Systems Laboratory. (3, 2RL). Selected experiments illustrate the methodology of experimentation as applied to mechanical and thermal systems. Includes 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. Prerequisites: ME 402, Engi. 102, Corequisite: ME 522.


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 523. Fluid and Heat Flow Laboratory. (1, 3L). Laboratory course designed to illustrate and reinforce the concepts in ME 521 and ME 522. Prerequisite: ME 521; corequisite: ME 522.

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.
ME 544. Design of HVAC Systems. (3). Analysis and design of heating, ventilating and air-conditioning systems based on psychometrics, thermodynamics and heat transfer fundamentals. Focuses on design procedures for space conditioning and 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. Repeatability for credit when subject material changes. Prerequisite: departmental consent.

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 598, AE 223, IEN 255, ECE 282, 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 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. Corequisite: ME 522 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. Repeatability for credit when subject material changes. Prerequisite: departmental consent.

ME 653. Internal Combustion Engines (3). A broad coverage of the basics of internal combustion engines with emphasis on spark ignition and diesel engines. Definition of engine types and configurations and important variables used to evaluate 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 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 part of the experience. Open only to mechanical engineering students in their last semester of study. Prerequisite: last semester of study.

ME 664. Introduction to Fatigue and Fracture. (3). Deads 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 and 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. Prerequisites: 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 fatigue toughness. Includes some review of basic mechanics of materials and elasticity as needed. Prerequisite: ME 250 or departmental consent.


ME 678. Studies in Mechanical Engineering. (1-3). Arranged individual, independent study in specialized content areas in mechanical engineering under the supervision of a faculty member. Requires written report or other suitable documentation of work for departmental records. Three (3) hours maximum technical elective credit. Not for graduate credit. Prerequisite: departmental consent.

ME 719. Basic Combustion Theory. (3). Introduction to the fundamental principles of combustion processes. Examines the chemistry and physics of combustion phenomena, i.e., detonation and flames, explosion and ignition processes. Prerequisites: Chem. 111Q 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. Emphasis is placed on applications involving use of engines and fuels. 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 programming for design for automation. Includes kinematics, trajectory planning, control, programming of manipulators 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 engineering 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. Microcomputer-based real-time control of mechanical systems. Familiarizes students with design and methodology of software for real-time control. Includes an introduction to the C programming language, with emphasis on 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 402 or departmental consent.

ME 750. Special Topics in Mechanical Engineering. (1-3). New or special topics are presented on sufficient demand. Repeatability for credit when subject material changes. 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 guid-
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 802. Turbulence. (3). An overview of the theory, practical significance and computation of turbulent fluid flow. Prerequisites: ME 521 or departmental consent.

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, crashworthiness and biodynamics. Prerequisite: ME 729 or instructor's consent.

ME 832. Failure Analysis Applications in Mechanical Design. (3). Application of engineering fundamental to the study of mechanical failure brought about by the stresses, strains and energy transfers 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 condensed into engineering practice with the analysis, design and construction of operating control systems. Emphasis is placed on the development of feedback control strategies 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 699 or equivalent.

ME 850. Special Topics in Mechanical Engineering. (3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: 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 854. Two-Phase Flow Heat Transfer. (3). Thermodynamic and mechanical aspects of interphase phenomena, boiling and condensation near immersed surfaces, pool boiling, internal flow convective boiling and condensation. Prerequisites: ME 522, Math. 555 or departmental consent.


ME 866. Advanced Fracture Mechanics. (3). Covers the fracture mechanics of elastic-brittle, ductile, time dependent and 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 planar crystalline defects, dislocation dynamics, 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 six hours. Prerequisite: consent of MS thesis advisor.

ME 878. MS Directed Project. (1-9). 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 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 metaloceramics. 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 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 four hours of lecture and two hours of lab.
College of Fine Arts

Walter J. Myers, Dean
415 Jardine Hall • (316) WSU-3389
finearts.twsu.edu/finearts/

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 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 Division of Dance 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 art education and in communication/theatre; a Master of Music Education (MME) with concentration 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 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 2.000 or above to remain in good standing (see Academic Probation and Dismissal Standards, p. 16).

Transfer students admitted on probation must complete at least 12 semester hours with a minimum grade point average of 2.000 on work at Wichita State before probation may be lifted. If a grade point average of 2.000 is not achieved for the first attempted 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.

General Education Requirements—For students entering fall 1995 or later

<table>
<thead>
<tr>
<th>Category</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills</td>
<td>12</td>
</tr>
<tr>
<td>English 100 or 101, and 102</td>
<td>6</td>
</tr>
<tr>
<td>Communication 111</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 111 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts and Humanities</td>
<td>12</td>
</tr>
</tbody>
</table>

Probation and Dismissal

Students are expected to make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the University.

Students are required to maintain an overall WSU grade point average of at least 2.000. Students enrolled in either the music education or art education programs must meet specific curriculum and GPA requirements prior to acceptance into student teaching; call or consult the Associate Dean of Students and Certification in the College of Education, (316) 978-3303.

Students who do not achieve or maintain the required 2.000 grade point average will be placed (or continued) on probation at the conclusion of each semester in which their overall WSU grade point average falls below 2.000. 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 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.

Transfer students admitted on probation must complete at least 12 semester hours with a minimum grade point average of 2.000 on work at Wichita State before probation may be lifted. If a grade point average of 2.000 is not achieved for the first attempted 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.
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 science.

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 the 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.

>FA 150. 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.

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 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
Donald Byrum, Chair
The School of Art and Design offers four program areas: graphic design, studio arts, art history, and art education. These programs offer professional courses within the BA and BFA degrees to train and educate art and design majors. Students in academic programs other than art are encouraged to enroll in 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 are designed to 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 will develop 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 Henrion Annex. The center provides extensive space for exhibiting student work. The Clayton Staples Gallery offers guest artist and thematic exhibits in addition to featuring BFA and MFA graduation 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
In addition to 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 course 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, 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, or art education are available in the office of the School.

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 leads to advanced and terminal project course work 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 will be studied. The certificate is recognized by the National Society of Tole 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 (12 hours), introductory art (15 hours), fine art electives (12 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 (12 hours), art history concentration (12 hours), and a reading proficiency in at least one foreign language to support research of primary source materials. Model program of study is available in 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; studio art–ceramics, painting/drawing, printmaking, or sculpture; and art history. In addition to the University's scholastic, residence, and general education requirements, candidates for the BFA must complete the foundation curriculum (15 hours), art history (15 hours), art electives (12 hours), and the concentration (18 hours). The specific requirements for the BFA with a concentration in design, studio arts, or art history are described under the appropriate program sections of the Catalog. Model programs of study are available in the School office.

Foundation Requirements and Course Listings

Foundation (Art F)
The following courses will be required of all undergraduate art major students. Either the Foundation curriculum (21 hours) or the Core curriculum (12 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. 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 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 arts 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, 6 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

Introductory Art History: three courses from the following

- Art H. 121G, Survey of Western Art: Ancient
- Art H. 122G, 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

Foundation Curriculum: two courses from the following

- Art F. 136 & 137, Design I & II
- Art F. 145 & 146, Drawing I & II
- Art F. 189, 3-D Design
- 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. 122G. 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 century 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 of 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 CR/NC 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. 121G 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. 421Q. 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. 121G 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 precursors, 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. 121G or instructor's consent.

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. 521Q. Italian Renaissance. (3).
General education further study course. Painting, sculpture, and architecture in Italy from the 13th to the 16th centuries. Prerequisite: Art H. 122G 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. 122G 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 Watteau through post-Impressionism.

Art H. 524. 18th and 19th Century American Art. (3).
General education further study course. A history of American art from the colonial period through the 19th century.

Art H. 525. 20th Century Art Before 1945. (3).
General education further study course. A history of American and European art in the first half of the 20th century.

Art H. 526. Art Since 1945. (3).
General education further study course. A study of the history of art in the United States from 1945 to the present, stressing the relationship between contemporary trends in criticism and artistic practice.

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 Flanders and Holland of the 17th century. Includes the art of Rubens, Rembrandt, and Vermeer. Prerequisite: Art H. 122G or instructor's consent.

Art H. 536. Northern Baroque. (3).
Painting and printmaking in Flanders and Holland of the 17th century. Includes the art of Rubens, Rembrandt, and Vermeer. Prerequisite: Art H. 122G 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. 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. Prerequisite: art history major. Prerequisite: suitable preparation for graduate work in art history (e.g., BA or BFA in art history) and instructor's consent.

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 enables design majors to meet their vocational goal. 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.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Foundation Curriculum</td>
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<tr>
<td>Art</td>
<td>336 &amp; 337, Design I &amp; II</td>
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<tr>
<td>Art</td>
<td>145 &amp; 146, Drawing I &amp; II</td>
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<tr>
<td>Art</td>
<td>189, 3-D Design</td>
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<tr>
<td>Art</td>
<td>240, Life Drawing</td>
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<tr>
<td>Art History</td>
<td>6</td>
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<tr>
<td>Art H. 124, Survey of Western Art: Modern</td>
<td>6</td>
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<tr>
<td>Art H. 300+</td>
<td>15</td>
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</tbody>
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Introduction Art | 21 |
| Art G. 200, Introduction to Computer Graphics | 3 |
| Art G. 216, Typography I | 3 |
| Art G. 234, Graphic Design Studio 1 | 3 |
| Art G. 235, Graphic Design Studio 2 | 3 |
| Art G. 238, Materials and Graphic Processes | 3 |
| Art G. 316, Typography II | 3 |
| Art G. 330, Still Photography for Graphic Design | 3 |

Art electives | 15 |

Graphic Design Concentration | 24 |
| Art G. 334, Graphic Design Studio 3 | 3 |
| Art G. 335, Graphic Design Studio 4 | 3 |
| Art G. 337, Drawing for Visual Communication 1 | 3 |
| Art G. 353, Junior Portfolio Review | 3 |
| Art G. 434, Graphic Design Studio 5 | 3 |
| Art G. 435, Graphic Design Studio 6 | 3 |
| Art G. 437, Drawing for Visual Communication 2 | 3 |
| Art G. 453, Graphic Design Senior Exhibition | 3 |

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. 430, Television for Graphic Design
Art G. 431, Design Media Topics
Art G. 433, Multimedia
Art G. 339, Television for Graphic Design
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 designers in traditional black and white photography with exposure to digital scanning of traditional silver-based images for computer usage. Prerequisites: completion of Art G. 234 or instructor's consent.
Art G. 331, Film/Video for Graphic Design. (3). Introduces film theory and video with 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 G. 137 and Art G. 200.
Art G. 332, Graphic Design Studio 2. (3). Continuation of Art G. 235 emphasizing the use of color with image and type. Prerequisite: Art G. 235.
Art G. 333, Graphic Design Studio 3. (3). Sequential and multiple-page layout and production techniques. Prerequisites: Art G. 334. Repeatable for credit.
Art G. 338, Graphic Materials and Processes. (3). Introduces a variety of graphic processes and materials including printing processes, cut-paper technique, linoleum cutting, embossment, foil + blind stamping, letterpress printing, marbling, box building, and assorted binding and presentation techniques. Prerequisite: Art G. 137 or instructor's consent.
Art G. 339, Package Design. (3). Box construction and surface treatment in product design. Prerequisites: Art G. 238 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. Prerequisites: prior to the last 30 hours or prior to entering senior standing within the graphic design program.
Art G. 430, 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, 331, or instructor's consent.
Art G. 431, Design Media Topics. (3). Advanced study of graphic, cinematography, or television with a design emphasis. Repeatable for credit. Prerequisites: Art G. 330, 331, or instructor's consent.
Art G. 434, Graphic Design Studio 5. (3). Logo design and its application to graphic design. Prerequisite: Art G. 334. Repeatable for credit.
Art G. 435, 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. 439, Editorial Illustration. (3). Concentration in editorial and narrative illustration emphasizing visualization and creative problem solving while exploring a variety of color media and technique. Prerequisite: Art G. 437. 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. 481, Cooperative Education. (1-8). See Art G. 281.
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 (cloths, 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, painting/drawing, printmaking, 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, and mixed media are offered. A terminal project is required of each student and provides the foundation for successfully completing the certificate program. 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 I ..................15
Art F. 145, Foundation Drawing I ...............15
Art S. 250, Introductory Oil Painting or Art S. 251, Introductory Watercolor Painting or Art S. 252, Introductory Acrylic Painting ..................................................15
Art S. 352, Decorative and Ornamental Painting and Design ..................................................15
Art S. 552, Advanced Decorative and Ornamental Painting and Design ..................................15
Art S. 559, Terminal Project: Decorative and Ornamental Painting and Design ..........................15

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 Hrs.
Core Curriculum ........................................12
Art F. 136, Design I .................................12
Art F. 145, Drawing I .................................12
Art F. 189, 3-D Design ..............................12
Art F. 240, Life Drawing ............................12
Art History ..............................................6
Art H. 124, Survey of Western Art: Modern .................................................................6
Art H. 300+ ..............................................6

Area Hrs.
Introductory Art .........................................3
Art F. 146, Drawing II ...............................15
Art S. 250, Introductory Oil Painting .............15
Art S. 260, Printmaking I ...........................15
Art S. 270, Basic Ceramics or Art S. 272, Handbuilding .................................15
Art S. 280, Sculpture ..................................15
Fine Arts Electives ....................................12
Fine Arts courses which complement the Introductory Art courses and the Studio Art Concentration .........................................................12
Studio Art Concentration .............................12
Studio focus area in either ceramics, painting/drawing, printmaking, or sculpture............................12

Note: 40+ upper-division hours are required for graduation.

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 is 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 art major is then expected to achieve the highest possible level of technical skill in that concentration and its expressive possibilities.

Area Hrs.
Foundation Curriculum ................................18
Art F. 136 & 137, Design I & II ..................18
Art F. 145 & 146, Drawing I & II .................18
Art F. 189, 3-D Design ..............................18
Art F. 240, Life Drawing ............................18
Art History ..............................................6
Art H. 124, Survey of Western Art: Modern .................................................................6
Art H. 300+ ..............................................6

Introductory Art .........................................21
Art S. 250, Introductory Oil Painting .........21
or Art S. 251, Introductory Watercolor Painting .........................................................21
Art S. 260, Printmaking I ...........................21
Art S. 280, Sculpture ..................................21
Art S. 340, Life Drawing Studio* .................21
Art S. 340 or 345, Intermediate Drawing .................................21
Art S. 362, Printmaking II or Art S. 364, Printmaking III ...................................................21
Art S. 545, Advanced Drawing* ..................21
Art Electives ...............................................12
Courses which complement the Introductory Art courses and the Ceramics Concentration .........................................................12
Ceramics Concentration ................................24
Art S. 270, Basic Ceramics ..........................24
Art S. 272, Handbuilding ............................24
Art S. 370, Intermediate Ceramics .........24
(take 3 times)
Art S. 570, Advanced Ceramics ..........................24
(take 2 times)
Art S. 572, Advanced Handbuilding ..............24

Note: 40+ upper-division hours are required for graduation.
Lower-Division Courses

Art S 270. Basic Ceramics Studio. (3). Experience in handbuilding, wheel throwing, glazing methods. Lecture periods involve general knowledge of clays, glazes, kilns, and historical and contemporary pottery. Repeatable for credit.

Art S 272. Handbuilding with Clay. (3). Uses various handbuilding techniques in the context of the vessel, 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 S 189 and Art S 270, or departmental consent for nonmajors.

Upper-Division Courses

Art S 370. Intermediate Ceramics Studio. (3). Exposes students to new possibilities in throwing or handbuilding. Thrown and thrown problems of teapots, two foot vases and planters; handbuilders pursue a personal direction. Both have a required slip casting assignment. Emphasizes striving to make a personal statement in clay. Also an exchange of ideas to help facilitate one's personal statement. To be taken twice; repeatable for credit. Prerequisites: completion of foundation program and Art S 270.

Art S 372. Intermediate Handbuilding. (3). Handbuilding-forming methods and drying-firing procedures relate to the various handbuilding 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 research assignments, notebook, and laboratory research. Prerequisites: completion of foundation program and Art S 370.

Courses for Graduate/Undergraduate Credit


Art S 374. 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.

Art S 574. 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: Art S 275 and 370.

Art S 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: Art S 575.

Courses for Graduate Students Only

Art S 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/Undergraduate Credit

Art S 549. 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/Undergraduate Credit

Art S 545. Advanced Drawing Studio. (1-3). Lab fee. Emphasizes individual development, figurative observation, and interpretation. Repeatable for credit. Prerequisite: completion of foundation program.


Art S 549. Independent Study in Drawing (1-3). A professional emphasis on technical or aesthetic research in the drawing area. Available for credit.
able only for the advanced drawing student with instructor’s consent. Statement of intent must be submitted for faculty approval before registration. Prerequisites: Art S. 340, 345 and instructor’s consent.

Courses for Graduate Students Only

Art S. 840. Special Problems in Life Drawing. (1-3). Drawing from life. Requires sketchbooks and/or portfolio. Repeatable for credit.

Art S. 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

Art S. 250. Introductory Oil Painting. (3). Introduces oil and alkyd painting emphasizing studio practices, fundamental principles, and techniques.

Art S. 251. Introductory Watercolor Painting. (3). Introduces transparent and opaque watercolor painting emphasizing studio practices, fundamental principles, and techniques.

Art S. 252. Introductory Acrylic Painting. (3). Introduces acrylic painting emphasizing studio practices, fundamental principles, and techniques.

Upper-Division Courses

Art S. 351. Intermediate Watercolor Studio. (3). Emphasizes individual development, personal interpretation, and creativity. Repeatable for credit. Prerequisites: completion of the foundation program and Art S. 251, or departmental consent.

Art S. 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 or exterior, and furniture decoration and design. Classroom projects can become part of a professional job portfolio. Repeatable for credit.

Art S. 354. Intermediate Painting Studio. (3). Emphasizes individual development, personal interpretation, and creativity. Repeatable for credit. Prerequisites: completion of foundation program, Art S. 250, Art S. 251 or 252, or departmental consent.

Courses for Graduate/Undergraduate Credit

Art S. 551. Advanced Watercolor Studio. (3). For the professionally oriented student. Emphasizes independent study. Repeatable for credit. Prerequisites: 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 aesthetic research in the painting area. Available only for the advanced painting student with instructor’s consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

Art S. 554. Advanced Painting Studio. (1-3). For the professionally oriented student. Emphasizes independent study. Repeatable for credit. Prerequisites: four semesters of Art S. 554 and interview with instructor.

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 form, ideas, independent thinking and personal expression. Mediums include oil, watercolor and synthetic media. Repeatable for credit with the consent of the painting faculty.

Art S. 858-859. Terminal Project—Painting. (1-3; 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 126 semester hours is required for a printmaking major with 81 credits distributed as listed below.

Area

Foundation Curriculum .............................18
Art F. 136 & 137, Design I & II
Art F. 145 & 146, Drawing I & II
Art F. 189, 3-D Design
Art F. 240, Life Drawing
Art History .............................................6
Art H. 124, Survey of Western Art:
Modern
Art H. 300+ Introductory Art............................21
Art S. 250, Introductory Oil Painting or
Art S. 251, Introductory Watercolor
Painting
Art S. 260, Printmaking
Art S. 270, Basic Ceramics Studio or
Art S. 272, Handbuilding
Art S. 280, Sculpture
Art S. 340, Life Drawing Studio
Art S. 340 or 345, Intermediate
Drawing
Art S. 354, Intermediate Painting
Studio* Art Electives ....................................12
Courses which complement the
Introductory Art courses and the
Printmaking Concentration
Printmaking Concentration ..........................24
Art S. 362, Printmaking II
Art S. 364, Printmaking III*
Art S. 300+, printmaking elective
Art S. 543, Advanced Drawing*
Art S. 560, Advanced Printmaking
Studio—Intaglio (6 credits)
or Art S. 561, Advanced
Printmaking Studio—
Lithography (6 credits)
* repeatable courses

Note: 40+ upper-division hours are required for graduation.

Lower-Division Courses

Art S. 161. Printmaking for Non-Art Majors. (3). Involves basic intaglio methods, etching, aquatint, soft ground, and mixed media techniques, as well as linoleum or wood block techniques, embossment, and a simplified unit on papermaking.

Art S. 260. Printmaking I. (3). An introduction to printmaking. Exploratory work in intaglio, collagraph, woodcut, or relief techniques, and a simplified unit on papermaking.

Upper-Division Courses

Art S. 362. Printmaking II. (1-3). Basic intaglio methods (etching, engraving, soft ground, aquatint, and mixed techniques). Second semester includes color printing in intaglio, collagraph, or mixed techniques. Repeatable for credit one semester. Prerequisite: Art S. 260.

Art S. 364. Printmaking III—Lithography. (3). Introduces lithography printing from the stone in black and white. The second semester includes color printing in lithography and combined techniques. Repeatable for credit. Prerequisites: completion of foundation program and Art S. 260.

Art S. 365. Basic Screenprinting and Papermaking I. (3). Part I introduces basic screenprint 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.
Courses for Graduate/Undergraduate Credit

Art S. 560. Advanced Printmaking Studio—Intaglio. (1-3). Intaglio, collagraph and mixed techniques. For students interested in professional printmaking, course offers specialization in color printing or black and white. Repeatable for credit. Prerequisites: Art S. 260, 262 and 364.

Art S. 561. Advanced Printmaking Studio—Lithography. (1-3). Lithography, black and white or color. For students interested in professional printmaking; course offers specialization in color printing. Repeatable for credit. Prerequisite: Art S. 364.

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 before 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 Henrion 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 126 semester hours is required for a sculpture major with 81 credits distributed as listed below.

Area Hrs
Foundation Curriculum 18
Art F. 136 & 137, Design I & II 4
Art F. 145 & 146, Drawing I & II 4
Art F. 189, 3-D Design 3
Art F. 240, Life Drawing 3

Art History 6
Art H. 124, Survey of Western Art: Modern 3
Art H. 300, Introductory Art 3
Art S. 250, Oil and Alkyd Painting or Art S. 251, Watercolor and Acrylic Painting 3
Art S. 260, Printmaking 3
Art S. 280, Sculpture 3
Art S. 340, Life Drawing Studio* 3
Art S. 340 or 345, Intermediate Drawing 3
Art S. 362, Printmaking II or Art S. 364, Printmaking III 3
Art Electives 12
Courses which complement the Introductory Art courses and the Sculpture Concentration 24
Sculpture Concentration 24
Art S. 380, Sculpture (take 2 times) 6
Art S. 381, Cast Sculpture 3
Art S. 345, Advanced Drawing* 3
Art S. 580, Advanced Sculpture 3
Art S. 300+, sculpture elective (take 2 times) 3
Note: 40+ upper-division hours are required for graduation.

Lower-Division Course


Upper-Division Courses

Art S. 380. Sculpture Studio. (3-9). 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. (3). Casting techniques for bronze and aluminum sculpture. Uses plaster investment, CO₂ spray, and vitrified shell 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. 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. 880. Special Problems in Sculpture. (1-5). 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; 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 either 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 student who plans 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 143 semester hours is required for an art education major with 70 art credits and 31 education credits distributed as listed below.

Area Hrs
Foundation Curriculum 18
Art F. 136 & 137, Design I & II 4
Art F. 145 & 146, Drawing I & II 4
Art F. 189, 3-D Design 3
Art F. 240, Life Drawing 3
Art History 6
Art H. 124, Survey of Western Art: Modern 3
Art E. 514Q, Aesthetic Inquiry 3
Introductory Art 12
Art S. 270, Basic Ceramics Studio 3
Art E. 302, Jewelry 3
Art E. 313, Fiber Exploration 3
Plus one of the following:
Art S. 250, Introductory Oil Painting 3
Art S. 251, Introductory Watercolor Painting 3
Art S. 260, Printmaking 3
Art G. 330, Photography 3
COLLEGE OF FINE ARTS/ART EDUCATION 111

Art Specialization ........................................9
Three courses from one of the following media: ceramics; painting/drawing; printmaking; sculpture; design—graphic, illustration, 3-D, multi-media; or art history

Art Education Concentration ..............................18
Art E. 311, Art Education—Elementary School
Art E. 410, Art Education—Middle School/Jr. High
Art E. 414, Art Education—High School
Art E. 419, Micro Computer
Art E. 510Q, Stimulating Creative Behavior
Art E. 515, Developing Visual Materials

Professional Education Requirements ...32
Specified courses in block sequences include Art E. 517, Student Teaching Seminar.

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 (Eng. 101 or 102 or its 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. Admission to teacher education is determined early in the students' program (see College of Education—Admission to Teacher Education Programs). Students must apply for student teaching by mid-term 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 National Teachers 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. 115, 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 text 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. 220, Art and the Child. (1-3). Study of the developmental stages of children's artmaking, K-9, the relationship between art and cognitive growth, the role of the teacher, the significance of sensory experience, and aesthetic behavior. Emphasizes the potential for creative behavior as a natural means of a child to respond to environmental stimuli.

Art E. 281, Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Offered Cr/NCr only.

Upper-Division Courses
Art E. 302, Jewelry Design/Construction. (3). Emphasizes metal working processes (forging, forming, casting, sawing, cutting, fusing, soldering) with emphasis on beginning knowledge of metal and ceramic processes applicable to jewelry.

Art E. 310, Art Education in the Elementary School. (3). A study of philosophy, psychology, and sensory growth of the elementary-age student, emphasizing the content, objectives, methods, and evaluation of the elementary school art program. Students participate in the Children's Art Workshop. Prerequisite: Art education major, upper-division eligibility.

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. 313, Fiber Exploration. (3). Focuses on fiber experiences appropriate for the classroom on the intermediate or secondary level. Explores various kinds of looms weaving, braiding, and twisting techniques that result in a fabric or web. Explores simple dye techniques.

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/Junior High 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. Prerequisite: Art E. 310, 311.

Art E. 413, Independent Study. (1-4). 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 school 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 curricular and instructional 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 micro-computer software and hardware. Students apply the Macintosh computer to art curriculum and instruction. Prerequisite: Art E. 310 or equivalent.

Art E. 481, Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Offered Cr/NCr only.

Courses for Graduate/Undergraduate Credit
Art E. 510Q, Stimulating Creative Behavior. (3). 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. 514Q, Aesthetic Inquiry. (3). Focuses on contemporary trends in aesthetics relative to the visual arts. Students write critical observations 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. 550, 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. 212, 302 or instructor's consent.

Art E. 710, Creative Behavior and Visual Thinking. (3). Emphasizes visualization and theories for creative and critical thinking. Emphasizes strategies for problem-solving and visual thinking and procedures to implement those strategies. Student identifies an area for individual investigation. Repeatable once for credit.

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 processes 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 new 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 720. Art and Early Childhood. (1-3). Emphasizes the cognitive and aesthetic domains of young children and develops the potential for creative and visually expressive behavior as a natural means of a child responding to environmental stimuli.

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.


School of 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 auditorium in Wiedemann Hall, which was constructed in 1986 to house the first Marcus 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 who submit proof of the completion of a comparable piano proficiency examination by official transcript or letter from their former institution are exempted from this requirement.

All proficiency examinations must be passed before a student is allowed to student teach.

Applied Music
Individual instruction is given in instruments and voice to develop musicianship, performance skills, and reading knowledge of music literature. Specific requirements for each level are set by the individual applied areas.

Applied students other than music majors must enroll in the appropriate nonmajor category (see Schedule of Courses). This will provide a 30-minute lesson per week.

One-credit hour enrollments are provided to music majors studying secondary instruments. These receive a 30-minute lesson each week and require a minimum of five hours of practice per week.

Two-credit hour enrollments are provided to majors and special music students. These receive two 30-minute lessons each week (minimum) and a one-hour master class each week or two one-hour lessons per week or other equivalent arrangements at the option of the instructor. Students are required to practice a minimum of ten hours each week.

Four-credit hour enrollments are provided to performance majors (juniors and above) and special music students. These receive two 30-minute lessons each week (minimum) and a one-hour master class each week, or other equivalent arrangements at the option of the instructor. Students are required to practice a minimum of 20 hours per week.

Students receive academic credit for applied music instruction only when they are taught on the University campus by approved music faculty. Students wishing to drop an applied lesson registration must inform the instructor in person and secure his/her signature on the drop form before approval may be given by the college office.

Applied music students may enroll in the following classifications: freshmen and sophomores, Mus. A. 112 (nonmajors), 231 and 232; juniors and seniors, Mus. A. 112 (nonmajors), 431, 432, and 434*; and graduate students, Mus. A. 712 (nonmajors), 731, 732, and 734*. These applied music courses are repeatable for credit.

Prior to graduation all music majors must achieve an acceptable level of performance proficiency, which is determined by the faculty according to each student's degree program. In addition, students may be required to pass an examination on materials in their chief performing medium.

*Performance majors or designated students only may enroll in 434 or 734.

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; they must be enrolled
in Recital during that semester (Mus. 400 for BME and BM majors; Mus. 450 or 451 for accompanying majors). Senior recital is not required for the BA in music.

All music majors are required to declare a chief performance medium. BM and BME majors are required to present a public or jury recital prior to graduation. The decision as to whether the performance will be jury or public is made by an examining committee. Students present to the examining committee a projected senior recital program and the examining committee determines: (1) the suitability of the projected program, (2) the capability of the student to perform the program publicly, or (3) the advisability of performing the senior recital before a faculty jury in lieu of a public recital.

Further recital specifications are found under graduation requirements for Bachelor of Music in Theory-Composition.

No music major may prepare or perform the senior recital without the guidance of a School of Music faculty member. In the event the required applied music credit hours have been earned prior to the recital presentation, music majors must continue to enroll (2 credit hour minimum) in their major instrument through the preparation for and the performance of the recital. The required number of credit hours must be earned in applied instruction even though there may be credits to complete after the senior recital has been performed.

Graduation Requirements
Bachelor of Music Requirements
Students receiving the BM choose either a performing medium (piano, organ, 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 Academic Information—Requirements for Graduation. 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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<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium (piano, organ)</td>
<td>16</td>
</tr>
<tr>
<td>Other performing medium</td>
<td>4</td>
</tr>
<tr>
<td>or Chief performing medium (nonkeyboard)</td>
<td>8</td>
</tr>
<tr>
<td>Keyboard performing medium</td>
<td>8</td>
</tr>
</tbody>
</table>

**Other performing media** | 4 |

**Theory and Composition** | 40 |

| Mus. C. 127Q-129, 128-130, 227-229, 228-230, 259, 260, 523, 559, 560, 561, 641, 659, 660, 661, 671 and 672 |  |

**History and Literature of Music** | 12 |

| Mus. C. 113Q, 334Q, 335Q, and three hours of upper-division electives in music history or literature |  |

**Conducting** | 4 |

| Mus. P. 217 or 218 and 651 or 691 Ensembles* | 8-10 |

| Electives (music or nonmusic courses) | 7 |

**Senior Recital (Mus. C. 400)** | 1 |

**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>
<tr>
<th>Area</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Applied Music</td>
<td>28</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>24</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>22</td>
</tr>
</tbody>
</table>

| Mus. C. 127Q-129, 128-130, 227-229, 228-230, 523, 559 or 641, or 612 |  |
| History and Literature of Music | 12 |
| Must include Mus. C. 113Q, 334Q, and 335Q |  |
| Conducting | 4 |

| Mus. P. 217 or 218 and 651 or 691 Ensembles* | 10 |

| Electives | 14 |

| 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) | 2 |

**Senior Recital (Mus. P. 400)** | 1 |

**Recital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)**

*See degree checksheet for specified electives.

**BM in Performance—Keyboard Emphasis**

**All Programs**

**Applied Music**

| Chief performing medium (see specific major below) | 4 |
| Second performing medium | 22 |

| Theory | 4 |

| Mus. C. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661, 345 or 641 |  |
| History and Literature of Music | 9 |

| Mus. C. 113Q, 334Q and 335Q |  |
| Conducting | 4 |

| Mus. P. 217 or 218 and 651 or 691 Ensembles (see specific major below) |  |

**Recital Attendance**

| Mus. P. 050 (enrollment for four semesters in a specified number of recitals) |  |

**Specific Keyboard Program Requirements**

**Piano Performance Emphasis**

| Applied Piano | 24 |
| Mus. P. 250 and 251, |  |
| Applied Concerto | 4 |

| Mus. P. 107-407, Piano Repertoire | 6 |
| Mus. P. 580, Piano Pedagogy | 2 |

| Mus. C. 782 and 783, Piano Literature | 4 |
| Ensembles (four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.) |  |

| Mus. P. 300, Junior Recital (piano) | 1 |
| Mus. P. 400, Senior Recital (piano) | 1 |
| Electives | 2 |

**Piano Accompanying Emphasis**

| Applied Piano | 16 |
| Mus. P. 223, 224, 423, and 424 |  |

| Applied Piano Accompanying | 12 |

| Mus. P. 121, 122, 221, 222, Ita, Eng., Fren., Germ. Diction | 4 |
| Mus. P. 107-407, Piano Repertoire | 4 |
| Mus. P. 580, Piano Pedagogy | 2 |

| Mus. C. 726, Voice Literature | 3 |
| Mus. C. 685, String Literature | 2 |
| Ensembles | 8 |

| (four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.) |  |
BM with Elective Studies in Business

<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>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus. C. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>9</td>
</tr>
<tr>
<td>Mus. C. 113Q, 334Q, and 335Q</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 (see degree sheets for specified ensembles)</td>
<td>8 or 10</td>
</tr>
<tr>
<td>Electives</td>
<td>8-10</td>
</tr>
<tr>
<td>Vocal majors require three dictation classes</td>
<td></td>
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<tr>
<td>Piano majors require Mus. P. 580</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (Mus. P. 400)</td>
<td>1</td>
</tr>
<tr>
<td>Recital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)</td>
<td></td>
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<tr>
<td>Journalism Requirements</td>
<td>21</td>
</tr>
<tr>
<td>Comm. 130 (3); 230 (3); 300 (3); 500 (3); 550 (3); 630 (3); 690 (3)</td>
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</tbody>
</table>

BM with Elective Studies in Journalism

(Advertising/Public Relations Emphasis)

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<thead>
<tr>
<th>Area</th>
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<td>Applied Music</td>
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<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus. C. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>9</td>
</tr>
<tr>
<td>Mus. C. 113Q, 334Q, and 335Q</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 (see degree sheets for specified ensembles)</td>
<td>8 or 10</td>
</tr>
<tr>
<td>Electives</td>
<td>8-10</td>
</tr>
<tr>
<td>Vocal majors require three dictation classes</td>
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<tr>
<td>Piano majors require Mus. P. 580</td>
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</tr>
<tr>
<td>Senior Recital (Mus. P. 400)</td>
<td>1</td>
</tr>
<tr>
<td>Recital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)</td>
<td></td>
</tr>
<tr>
<td>Journalism Requirements</td>
<td>21</td>
</tr>
<tr>
<td>Comm. 115Q (3); 200 (3); 325 (3); 350 (3); 502 or 525 (3); 550 (3); 560 (3); 690 (3)</td>
<td></td>
</tr>
</tbody>
</table>

BM with Elective Studies in Journalism

(Broadcasting Emphasis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>16</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus. C. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>9</td>
</tr>
<tr>
<td>Mus. C. 113Q, 334Q, and 335Q</td>
<td></td>
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</tbody>
</table>
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, 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

Area Hrs.
Education ........................................29
CESP 334...........................................2
CESP 343...........................................3
CI 271...............................................2
Mus. E. 272.........................................1
CI 311..............................................1
CI 312..............................................1
CI 328..............................................5
CI 427*............................................2
CI 430..............................................2
CI 451*.............................................4
CI 457*.............................................4
CI 469*.............................................4

*These courses are taken during the student teaching semester.

Additional Courses Required for Instrumental Emphasis

Area Hrs.
Applied Music ................................16
Instrumental majors (chief medium) .......14
(piano) ...........................................2
Keyboard majors (chief medium) .........14
(second instrument) .........................2
Electric bass majors (electric bass) .......10
(string bass) ...................................4
(piano) .........................................2
Students must be enrolled in applied music during the semester of their senior recital.

General Music ................................33-35

*These courses are taken during the student teaching semester.

Additional Courses Required for Vocal (Keyboard) Emphasis

Area Hrs.
Vocal majors (voice) ......................14
(piano) .........................................2
Keyboard majors (piano) ................14
(Mus. E. 342) ............................2

Students must be enrolled in applied music during the semester of their senior recital.

General Music ................................34
Mus. C. 113Q, 127Q-129, 128-130, 227-229, 228-230, 334Q, 335Q, 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

*These courses are taken during the student teaching semester.

Additional Courses Required for Special Music Education Emphasis (Vocal or Instrumental)

Area Hrs.
Music Education ........................14
Mus. E. 203, 241, 242, 303, 403*, 611, 342

*These courses are taken during the student teaching semester.

Additional Courses Required for Vocal (Keyboard) Emphasis

Area Hrs.
Vocal majors (voice) ......................14
(piano) .........................................2
Keyboard majors (piano) ................14
(Mus. E. 342) ............................2

Students must be enrolled in applied music during the semester of their senior recital.

General Music ................................34
Mus. C. 113Q, 127Q-129, 128-130, 227-229, 228-230, 334Q, 335Q, 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

*These courses are taken during the student teaching semester.
Students must be enrolled in applied music during the semester of their senior recital.

General Music ........................................ 33
Mus. C. 113Q, 127Q-129, 128-130, 227-229, 228-230, 334Q, 335Q, 523, 641, Mus. P. 217 or 218, 651 or 691.

Piano majors: Mus. P. 580 or 581 and Mus. P. 307 and 407

Ensembles .............................................. 7 or 9
Vocal majors............................................ 9
Instrumental and piano majors.............. 7
(see degree sheets for specified ensembles)

Recital attendance
Mus. E. 171 and 172; two semesters of Mus. P. 050
Plus Mus. P. 400, Senior Recital

Education Requirements

Ares  Hrs.

Recommended: one 600-level CI exceptionality course ......... 3

Music Education Methods .............. 17-23
Vocal Emphasis: Mus. E. 203, 303, 309, 403, 241, 242, 342, 611
Instrumental Emphasis: Mus. E. 204, 304, 309, 404, 235, 236, 237, 238, 239, 240, 686, 342, 611
Additional courses for piano pedagogy majors: Mus. P. 580
(2 hrs) and 790 (4 hrs)

Bachelor of Arts in Music

Students who wish 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.

Ares  Hrs.

Group I
Music Literature and History ............ 9
Mus. C. 113Q and six hours in additional music, history, and literature courses such as Mus. C. 334Q-335Q, 346Q, 624, 726, 753-754.
May not use courses counted in General Education requirement.

Group II
Music Theory .................................... 20
Mus. C. 127Q-129, 128-130, 227-229, 228, 523, 561 or 661, 641

Group III
Conducting ........................................... 2
Mus. P. 217 or 218

Group IV
Applied Music ..................................... 6
Voice, piano, organ, guitar
or orchestral instrument

Group V
Ensembles ............................................ 4
Select in consultation with advisor

Group VI
Electives from the areas of music literature, music theory, music applied, counterpoint, conducting, orchestration, and ensembles .......... 9

Group VII
Recital attendance
Four semesters, Mus. P. 050

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. 113Q, 127Q, 128, 129, 130, and 9 additional hours selected from among the following: Mus. C. 160G, 227, 228, 229, 334Q, 335Q, 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 techniques, 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. Prerequisite: music education major or instructor's consent. Grades 6-12.


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, reading selection and 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, 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 teaching of all brass instruments, emphasizing tone qualities, differences in embouchure, and necessary techniques for performance. Grades 4-12.


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 skill 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.

Mus. E. 281. 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 six 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: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NCr only.

**Upper-Division Courses**


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. Prerequisites: Mus. E. 203 or 204 with instructor's consent. Grades K-12.


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. 203 and 303, 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. 511. Jazz Pedagogy. (2). For both music education and music performance majors interested in teaching improvisation, jazz history and large and small jazz ensembles. Includes a review of current jazz methods and materials, rehearsal techniques for jazz ensembles, how to listen to jazz, lectures by visiting jazz performers and effective jazz programming. Prerequisite: completion of Mus. C. 228 or instructor's consent.

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 dysfunctioning children and their problems and current theory and practices in special music education. Satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification 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. 737A. Advanced Woodwind Techniques. (2). Special problems and techniques in the teaching of woodwind instruments. Surveys current materials. Prerequisites: Mus. E. 257 and 258 or equivalent.

Mus. E. 739A. Advanced Brass Techniques. (2). Special problems and techniques in the teaching of brass instruments. Surveys current materials. Prerequisite: Mus. E. 239 or equivalent.

Mus. E. 740A. Advanced Percussion Techniques. (2). Special problems and techniques in the teaching of percussion instruments. Surveys current materials. Prerequisite: Mus. E. 240 or equivalent.


Mus. E. 781. 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 enrolled in Co-op may enroll in a minimum of six 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: special academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NCr only.


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. 822. Advanced Techniques in Special Music Education. (3). For the 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 dysfunctioning child. Course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification 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 the special music education MME candidate 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. (3). Definition of understandings necessary for the attainment of musical awareness in the child. Directs the exploration of classroom experiences toward the successful development of understanding through the application of basic learning principles. Prerequisite: Mus. E. 403.


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 personal needs of the student. 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. Prerequisites: instructor and departmental consent.


Mus. E. 852. Introduction to Bibliography and Research. (3). See course listing under musicology-composition area.

Mus. E. 854. Research Seminar in Music Education. (3). Continued 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.


Music Performance

Applied Music Private Study (Mus. A.)

Mus. A. 112. Applied Music Instruction for Nonmajors. (2). Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

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. 712. Applied Music Instruction for Nonmajors. (2). Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

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 Classes (Mus. A.)

Mus. A. 113P. Piano Class. Level 1. (1). Non-piano music majors. Class piano prepares the student to pass the piano proficiency exam. Required of all music majors. Repeatable for credit. Prerequisite: class placement interview.

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. (1). 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. 117Y. Popular Vocal Styles. (2). Class voice instruction for adults emphasizing basic vocal technique and how it can be applied for use in popular styles of singing, including vocal jazz, pop, music theatre, etc. Gives students an opportunity to explore techniques for developing their own voices and to practice singing in a supportive environment, and includes information on vocal warm-ups, vocal warm-ups, and vocal warm-ups. Prerequisite: class placement interview. Repeatable for credit.


Mus. A. 118P. Piano Class. (1). Non-piano music majors. Prerequisite: class placement interview. Repeatable for credit.

Mus. A. 119P. Piano Class. (1). Piano majors. Prerequisite: class placement interview. Repeatable for credit.

Mus. A. 120P. Piano Class. (2). Nonmajors. 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.

Mus. A. 717Y. Popular Vocal Styles. (2). Class voice instruction for adults emphasizing basic vocal technique and how it can be applied for use in popular styles of singing, including vocal jazz, pop, music theatre, etc. Gives students an opportunity to explore techniques for developing their own voices and to practice singing in a supportive environment, and includes information on vocal warm-ups, vocal warm-ups, and vocal warm-ups. Prerequisite: class placement interview. Repeatable for credit.

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.

Group Performance (Mus. P.)

Noncredit Courses

Mus. P. 050. Recital. (1). Recital attendance and performance. Laboratory observation of performance media, literature, and recital techniques. Elective 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. 256 or instructor’s consent.


Mus. P. 210-211-212-213-214. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Symphonic Wind Ensemble; (D) Gospel Ensemble; (F) A Cappella Choir; University Singers; Concert Chorale; (H) Banda Hispanica; (J) Piano Accompaniment; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) Beginning String Ensemble and String Chamber Ensemble; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble; (W) International Choir; (X) New Music Ensemble. Prerequisite: audition required. Repeatable for credit.

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. 217. Instrumental Conducting. (2). Fundamentals of baton technique, elementary score reading, and musical leadership. Practical experience 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. 281. 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 six 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 O/N/C 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 350 and Thea. 370E. An interdisciplinary practicum class with opportunities for the vocal performer to refine performance skills necessary to musical theatre. Students prepare songs and scenes and staging from the musical theatre repertory culminating in a work shop performance. Admission is by audition.

Mus. P. 340. Vocal Coaching. (1). Covers diction and the appropriate dramatic, stylistic, and musical interpretation of songs and arias from opera and musical theatre literature.

Mus. P. 400. Senior Recital. (1). Prerequisite: departmental consent.


Mus. P. 411E. Opera Lab. (1). See Mus. P. 211E.

Mus. P. 411K. Opera Theatre. (1). See Mus. P. 211K.
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. (1-1-1-1-1-1). (A) Orchestra; (B) Symphonic Wind Ensemble; (C) Gospel Ensemble; (D) A Cappella Choir; University Singers; Concert Chorale; Banda Hispanica; (E) Piano Accompaniment; (F) Majrigal Singers; Chamber Singers; Woodwind Ensemble; (G) Saxophone Quartet; (H) Brass Ensemble; (I) Percussion Ensemble; (J) String Ensemble and Chamber Ensembles; (K) Jazz Arts Ensembles I and II; (L) Guitar Ensemble; (M) International Choir; (N) 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. 715Y. Voice for Music Theater. (2). Basic repertoire and singing techniques with weekly master class devoted to music theater techniques and concepts. Restricted to persons other than vocal majors. Repeatable.


Mus. P. 762. Opera Styles. (2). A comprehensive study of the performance styles and practices in operatic singing, ranging from the seventeenth 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. (1-4). For individually or group instruction. Repeatable with departmental consent.

Mus. P. 790E. Opera/Musical Theatre Audition. (1). Cross-listed as Thea. 630. A practicum course which develops techniques and audition repertoire 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.

Courses for Graduate Students Only

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 technique; (2) advanced piano or private piano (college curriculums); (3) class piano in early childhood; (4) class piano for leisure-age students; (5) class piano in public (or private) schools, extending the advanced preparation of piano pedagogy students as needed. Repeatable for credit. Prerequisite: Mus. P. 580.

Mus. P. 852. Introduction to Bibliography and Research. (3). See course listing under musicology-composition area.

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 in-service 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 also will be required to perform a major piano work, prepared at acceptable recital level, during semester 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. 113Q. Introduction to Music Literature. (3). An introduction to the masterpieces of music literature. Includes comparison of contrasting styles of both Western and Non-Western music. For general students with some musical background to 160G. 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. 113Q or instructor's consent.

Mus. C. 127Q. 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. Prerequisite: 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. 127Q 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. 127Q 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 415-1-80, "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
Music Composition

MUS. C. 160G. The Heritage of Western Music. (3) General education introductory course. Acquaints the nonmajor with the choral tradition of Western music. Emphasizes the development of listening techniques by which the student may perceive and understand musical processes as they exist in the various styles within the Western heritage.

MUS. C. 161. Music through the Ages. (3) 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. Television course.

MUS. C. 162G. 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. 165. The Blues: Art and Culture. (3) Cross-listed as Anthr. 165. The blues is a uniquely American musical form that has made an immense contribution to world popular culture. The history of the blues also reflects 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.

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. Prerequisite: MUS. C. 128 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 gl-1-80: "the ability to teach reading skills appropriate to the level of the student and to the subject content." Prerequisite: MUS. C. 129.

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 gl-1-80: "the ability to teach reading skills appropriate to the level of the student and to the subject content." Prerequisite: MUS. C. 229.

MUS. C. 245. Jazz Improvisation. (2) Explores rhythmic aspects of this music, as well as basic rhythmic creation emphasizing the relationship of scale patterns and seventh chords. Repeatable for credit. Prerequisites: MUS. C. 128 and 130 or instructor's consent.

MUS. C. 259 & 260. Applied Composition. (2-3) 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. 127Q 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 composser, and stylistic and formal characteristics. Primarily for the nonmusic major who has musical interest and background.

MUS. C. 320G. Movie Musicals. (3) Covers the unique development of the musical within the media genre of film. Focuses on historical development, emphasizing technical progress, music, cinematography, and the genre as a reflection of American life.

MUS. C. 325. Periods of Music History. (3) Focuses on nonmajors. Content changes from semester to semester. Focuses on topics within the Western classical musical tradition, such as periods, places, and styles. Prerequisite: MUS. C. 160G.

MUS. C. 334Q. History of Music I. (3) A survey of the evolution of musical styles and practices in the Western world through ca. 1750. Includes lectures, reference readings, and the study of representative examples of music. Prerequisites: MUS. C. 113Q and 228 or instructor's consent.

MUS. C. 335Q. 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. 113Q 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. 346Q. Styles of Jazz. (3). General education further study course. 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 nonmajors.

MUS. C. 400. Composition Recital. (1) Presentation for public performance of a selection of compositions representing large and small forms, totaling a minimum of 20 minutes performance time. May be concurrently enrolled in MUS. C. 359/360 or 659/660. Prerequisite: departmental consent.

MUS. C. 493G. 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. 510. Interrelated Arts. (3) Presents an aesthetic analysis of the fine arts. Emphasizes art, music, drama, literature, and dance. Emphasizes style and commonality among the arts disciplines.

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. 564. Collegium Musicum. (1) Study and performance of early music (generally written before 1700). Repeatable for credit.

MUS. C. 597-598. Organ Literature and Practice. (1-1). Performance and discussion of works for the instrument of all periods; study of organ design and construction; and practice in aspects of service playing, such as hymn playing, modulation, accompanying and improvisation. Required of all organ majors. Repeatable. Prerequisite: MUS. C. 228 or departmental consent.

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. 344Q and 355Q.

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. 660. Applied Composition. (2) Individual study in musical composition emphasizing writing for both small ensembles and large groups in the larger forms. Repeatable. Prerequisites: Mus. C. 580 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. 226.

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. 726. Voice Literature. (3) A comprehensive survey of early Italian aria. French chansons, German lieder, contemporary English songs and Russian and Spanish literature.

Mus. C. 750. Musicology-Composition Workshop (1-4). Repeatable for credit. Prerequisite: instructor's consent.

Mus. C. 753. Choral Literature I. (2) A historical and stylistic survey of choral literature of the Renaissance and Baroque eras

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. (2-2) Survey of the historical eras of professional piano repertory.

Mus. C. 790. Special Topics in Music. (1-4) For individual or group instruction. Repeatable with departmental consent.

Mus. C. 797. Music of the 20th Century. (3)

Mus. C. 791-792. Seminar in Music History. (3-3) 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 as defined 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. 841-842. Special Project in Music (1-3; 1-3). Individual 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. 650-660. Prerequisite: Mus. C. 660 or equivalent.


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

Bela Kiralyfalvi, 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 the following core courses: Theatre 253, Costuming for the Stage; and Theatre 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 kinesiology; repertory; 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 42 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 dance faculty feels 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/WSU DE productions. Students accepted in WSU DE 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. 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. 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.

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Dance 201, Modern Dance Technique I; Dance 301, 401, 501, Modern Dance II, III, IV. (Placement and advancement by audition and/or faculty consent only)</td>
<td>24</td>
</tr>
<tr>
<td>Dance 210, 310, 410, Ballet I, II, III. (Placement and advancement by audition and/or faculty consent only)</td>
<td>18</td>
</tr>
<tr>
<td>Dance 105, 205, 505, Choreography I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>Dance 225Q, Survey of Dance History</td>
<td>3</td>
</tr>
<tr>
<td>Dance 130B, Tap I. (2)</td>
<td>2</td>
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<tr>
<td>Dance 315, Music for Dance</td>
<td>3</td>
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<tr>
<td>Dance 320, Performance</td>
<td>3</td>
</tr>
<tr>
<td>Dance 415, Dance Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>Thea 253, Costuming for the Stage</td>
<td>4</td>
</tr>
</tbody>
</table>

Thea 345, Stage Lighting .......................... 4
Total .................................................... 78

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Thea. 143, The Art of the Theatre; 243Q, Acting I; 244, Stagecraft; 254, Stage Makeup; 623Q, Development of the Theatre I; or 624Q, Development of the Theatre II</td>
<td>9</td>
</tr>
<tr>
<td>Mus. C. 160G, The Heritage of Western Music; 315, Music of the 20th Century; or 346Q, Styles of Jazz</td>
<td>9</td>
</tr>
</tbody>
</table>

Art H. 122G, 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 I
Dance 130Q Advanced Tap; 227 Mime, 230, Theatre Dance I; 330, 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, 225Q, 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, motivation, sequencing, phrasing, movement qualities, and transitions. Prerequisites: one semester of modern dance and equivalent to intermediate technical level. Concurrent enrollment in appropriate-level modern dance or ballet technique class required.

Dance 120, Jazz I. (2-3). Introduces jazz technique, emphasizing work in body isolations, rhythmic patterns and directions, basic steps, and history and development of jazz dance in America. Repeatable for credit.

Dance 130B, Tap I. (2). Introduces the principles of tap dancing including rhythm, clarity of sound, syncopation, and weight shift.

Dance 130Q, Tap II. (2). 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 style. Prerequisite: Dance 130B and/or instructor’s consent.


Dance 150, Dance Workshop. (1-4). Repeatable for credit.

Dance 150L, Musical Theatre Workshop I. (2). Cross-listed as Mus. P. 330 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.

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. Prerequisites: Dance 105 and concurrent enrollment in 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 etiquette and ballet vocabulary. Repeatable for credit.

Dance 220, Jazz II. (1-2). Continuation of Dance 120 at intermediate level. Repeatable for credit. Prerequisite: instructor’s consent or by audition.

Dance 225Q, Survey of Dance History. (3). General education further study 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, the origins of classical ballet, dance in the Americas, the development of modern dance and current trends in “world dance.”

Dance 227, Mime/Physical Theatre I. (2). An introductory course in crafting non-verbal theatre to create conceptual statements, short plays, and abstract movement art. Student experiences gesture, isolations, flexibility, strength, emotional expression, genuine acting, and fundamental mime theatre skills to see the range and possibilities in communicating nonverbally. Enhances both acting and dancing skills.

Dance 230, Musical Theatre Dance I. (2). Introduces various musical theatre dance styles from different historical periods including social dance styles from 1900s through...
124. 

Upper-Division Courses

Dance 301. Modern Dance II. (2-3). Continuation of the course emphasizing performance. Intermediate level. Repeatable for credit. Prerequisite: Dance 201 or instructor's consent.

Dance 310. Ballet II. (2-3). Continuation of Dance 300. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

Dance 315. Music for Dance. (3). General education further study course. Study of music for dance. Prerequisite: Dance 301 or instructor's consent.

Dance 320. Dance Performance. (1). Perform in Mid-Contemporary Dance Theatre, Senior and/or Concerts, musical theatre, or outside performances approved by the faculty. Prerequisite: Dance 300. May be repeated for credit.

Dance 330. Musical Theatre Dance II. (2). Continuation of Dance 320 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 or instructor's consent.

Dance 335. Jazz Dance III. (2). Continuation of Dance 220 at a higher level of technical skill. Includes advanced kinetic memory, flexibility, improvisation, and reflex. Prerequisite: Dance 201 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. Stress structural and neuromuscular analysis of the human body as it responds to the demands of dance.

Courses for Graduate/Undergraduate Credit

Dance 501. Modern Dance IV. (3). Continuation of Dance 401. Advanced level. 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 more than one dance utilizing elements studied in Choreography I and II and exploring different choreographic approaches. Further exploration may include environmental, chance, and collaborative choreographies and multimedia approaches. Prerequisites: Dance 504 and concurrent enrollment in appropriate-level modern dance or ballet technique class.


Dance 543. 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 605. Choreography for the Musical Theatre. (3). Produces the process of choreography for the musical theatre from casting the chorus in a musical to staging a solo to choreographing an ensemble of 30 dancers/performers. Includes interpreting the score and script for dance, staging non-dancers, and other projects to develop the craft of choreography for the musical stage. Prerequisites: Dance 330 or instructor's consent.

Dance 645. Practice in Teaching Dance. (3). Actual placement in teaching situation with responsibility of teaching ballet, modern and/or jazz in private studios, elementary, high schools, Y's or recreation centers. Prerequisite: Dance 545.

Dance 690. Special Topics in Dance. (1-6). For individual or group instruction. Repeatable for credit with departmental consent.

Dance 750. Dance Workshop. (1-4). Repeatable for credit.

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 only. The theatre program is a collaborative one in which students participate in productions presented as part of the Theatre Series and the Opera 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 consultation with the faculty and student. Students may choose one of four options: a BFA in performing arts/theatre performance, a BFA in performing arts/dance, 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 Theatre 143G, 180, 221Q, 222, 225, 230, 241, 243Q, 244, 253, 254, 272, 342, 345, 359, 380, 450, 455, 629Q, 642Q, 643, 651, 728; with 4 hours chosen from the following: Theatre 102, Dance 201, Dance 210; and 6 hours chosen from the following: Theatre 202, 517, 559, 590, 675, or 725.

Technical Theatre and Design Track

A minimum of 80 hours, including Art 145, Theatre 143G, 180, 243Q, 244, 253, 254, 272, 344, 359, 380, 450, 451, 544, 546, 629Q, 642Q, 647, 649, 653, 657, 728; with 4 hours chosen from the following: Theatre 201, 517, or 675, and with 5 hours chosen from theatre electives.

Musical Theatre

The BFA in musical theatre requires a minimum of 92 hours in three disciplines: 28 credits in theatre, 30 in music, 26 in dance, and 8 in interdisciplinary courses. Theatre courses include: Theatre 145, 147, 149, 243Q, 244, 253, 254, 272, 344, 345, 359, 380, 450, 451, 544, 546, 629Q, 642Q, 647, 649, 653, 657, 728; with 4 hours chosen from the following: Theatre 102, 201, 210, 220, 301, 310, 330, and at least 4 hours from the following: Theatre 130, 225Q, 335, 605. Music requirements include: Applied Music 223Y, 415Y, 432Y; Music Performance: 113P, 114P, 212E, 213F, 340; and Music Composition: 129, 130. Interdisciplinary courses include: Theatre 710, 330, 380E, 530, 555, 630. In addition, musical theatre majors will be expected to complete the 42 general education credits including Theatre 260 as their Introduction to Fine Arts course and Theatre 629Q as a Fine Arts Further Study course. Total credit needed for graduation is 134.

Bachelor of Arts in Theatre

A minimum of 42 hours in theatre, including the following required classes: Theatre 221Q, 243Q, 253, 392, 629Q, 642Q, 628, and 1 credit each of 180 and 380; 6 hours of Theatre 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 minor in theatre consists of the following required classes: Theatre 243Q, 244, 272, 359, 253, or 345 and 3 hours from the following: Theatre 450, 623Q, or 624Q.

Communication/Theatre
For the Master of Art in Communication/Theatre, see Communication.

Lower-Division Courses
> Thea. 143G. 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 unarmored combat on the stage, including the safe execution of falls, rolls, punches, kicks, and the knock.

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 conception 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. 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. 221Q, Oral Interpretation. (3). General education further study course. Cross-listed as Comm. 221Q. 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. 225, Expressive Voice for the Stage. (3). Develops the individual's ability to express thought and emotion on the stage through the effective use of the voice. Uses exercises, drills, and poetic and dramatic readings to improve the quality, flexibility and effectiveness of the speaking voice. Prerequisite: Thea./Comm. 222.

Thea. 230, Dialects 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. 241, Improvisation and Theatre Games. (3). General education further study course. For the beginning student in theatre. Through exercises, analyses, and readings, the course addresses the training of the student actor's imagination, his/her sense of stage presence, and ability to explore basic components of playtexts.

Thea. 243Q, 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. 253, Costuming for the Stage. (4). R: Lab arr. Introduces principles of costume design and construction. 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 dying. Practical experience with University Theatre Mainstage and Second Stage productions. Includes a two-hour lab.

Thea. 254, Stage Makeup. (2-3). 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 present day. Explores the collaboration of composers, directors, choreographers, and performers that make this a uniquely American art form.

Thea. 272, Stage and Theatre Management. (3). Acquaints 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, oblique, sectional) and standard drawings used in theatre floor plans, sections, 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 score in a variety of musical theatre styles that will 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 Workshop I. (2). Cross-listed as Dance 150L and Mus. P. 330. An interdisciplinary practicum class with opportunities for students to refine their performance skills in rehearsal and performance performance necessary to musical theatre. Students prepare songs and scenes and stage from the musical theatre offerings culminating in a workshop performance. Admission is by audition.

Thea. 342, Advanced Acting. (3). Continued development of methods established in Thea. 243Q with additional emphasis on contemporary vocal and movement techniques. Prerequisites: Thea. 243Q and sophomore standing.

Thea. 344, Scene Design. (3). Fundamentals of scene design. Emphasizes strong work in perspective rendering, drafting techniques and scale, and play script and spatial analysis.

Thea. 345, Stage Lighting. (4). Lab. Lab arr. Light design and its relation to the production process and other design elements. Emphasizes working knowledge of lighting equipment towards creative implementation. Includes practical work on University Theatre Mainstage and Second Stage productions.

Thea. 359, Directing I. (3). R: Lab arr. Basic theories and principles of stage directing and problems of producing the play with practical experience gained by use of the project methods. Prerequisite: Thea. 243Q, 244, 272 or department consent.

Thea. 375, Directed Projects in Theatre. (2-4). Independent research or practical projects in the various areas of theatre including performance, design, technical theatre, management, and dramatic literature. Repeatable for credit to a maximum of four 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, or properties; the design and execution of stage lighting or makeup; the organization and practice of theatre management; and performance. May be repeated once for credit.


> 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, feminists, gays and lesbians. Examines how today's theatre portrays these groups, how it affects 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. 450. Contemporary Theatre and Drama: Topics. (3). General education further study course. Investigates the major developments and directions in 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 technical theatre and design student prepare a portfolio in one or a combination of the design areas, a resume, and a presentation as an application suitable for either graduate school or future employment. Prerequisite: must be taken in graduating year.

Thea. 455. Senior Jury. (1). For the graduating student in the performance track of the BFA in Performance 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. Total of internship activity applicable toward graduation is 15 credits.

Courses for Graduate/Undergraduate Credit

Thea. 510. Design Project. (1). Advanced work in the problems of stage lighting design, costume design or scenic design. With the permission and supervision of the appropriate faculty member, the student designs for specific productions for either Mainstage or Experimental Theatre. Repeatable twice for credit if taken in different design areas. Prerequisite: instructor's consent.

Thea. 516 & >Thea. 517. Playwriting I and II. (3 & 3). General education further study courses. Cross-listed as Eng. 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 Workshop II. (2). Cross-listed as Mus. P. 530. An interdisciplinary course with opportunities for student performers to refine techniques in a variety of musical theatre genres, including opera, musicals, and rock musicals. Provides opportunities for student directors and choreographers to gain experience in their discipline with faculty guidance and supervision. Admission is by audition.

Thea. 544. Advanced Stagecraft. (3). R; L arr. 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 labs. Prerequisite: Thea. 244.

Thea. 546. Scene Painting. (3). Presented with a lecture demonstration-studio arrangement. Explores various theatre painting materials and techniques enabling the student to develop skill as a scenic artist. Prerequisite: Thea. 244.

Thea. 553. Costume Construction. (3). A study of costume construction techniques at beginning and intermediate levels. Sometimes involves both skill levels; in other parts students work at different paces and on separate projects. Expands the knowledge of costume students to help build a stronger base of technical expertise. Prerequisite: Thea. 253.

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 of show demonstrating their talents in singing, dancing, acting, directing, and choreography. For majors only. Prerequisite: instructor's consent.

Thea. 559. Directing II. (3). R; L arr. Staging and rehearsals emphasizing the problems of the period and stylized play. Prerequisites: 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 will give students a much richer preparation for their field of study. Topics include new technology, new materials, contemporary explorations in performance, and in-depth study of production methods.


Thea. 610. Directing the Musical. (3). An interdisciplinary course 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 the research, directing and performing skills. Enrolled students, functioning as a company, produce and perform for various disciplines on campus. Repeatable once for credit.

Thea. 623Q. Development of the Theatre II. (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. 630. Opera/Musical Theatre Audition. (1). Cross-listed as Mus. P. 780E. A practical course which develops techniques and auditions for professional employment and/or successfully competes 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, Restoration styles. Prerequisites: Thea. 243Q, 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 scenographic techniques and exercises in model building. Student design settings for a production having a single set, a production requiring a simultaneous setting, and a production using multiple settings. Requires no laboratory work in theatre production. Prerequisites: Thea. 244 and 344.

Thea. 649. Stage Lighting II and Theatre Sound. (3). Continues the study and application of the principles of the courses of Thea. 345, 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 to present the fully realized characterizations in the scenes studied, integrating the elements of the actor's craft learned in the prerequisite courses. Prerequisites: Thea. 643 and junior standing.

Thea. 653. History of Costume. (3). R; L arr. Historical survey and individual research of dress from ancient Egypt to present day emphasizing social, political, economic and religious influences. Theory and practice of adapting period styles to the stage. Prerequisite: 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. Prerequisite: Thea. 623Q, 624Q 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. 623Q or 624Q.

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 six hours.


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 four hours of lecture and two hours of lab.
The College of Health Professions was established in 1970. Programs of study are offered in dental hygiene, health services organization and policy, medical technology, nursing, physical therapist assistant, 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, 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, and the National Accrediting Agency for Clinical Laboratory Sciences.

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.

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, pediatrics, and psychiatric/mental health nursing; nurse practitioner in acute care, family, pediatrics, and neonatal; nurse midwifery; 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 sensorimotor functions.

More information on graduate programs is available in the Wichita State University 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.

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.
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.

**Prohibition and Dismissal**

Students are placed on probation for the next term in which they enroll if their 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 WSU cumulative grade point average is not at least 2.000. Probation is removed when a student's 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 five hours in the Summer Session, excluding one 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 2.000. Dismissal will not occur until students fail to achieve a 2.000 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 degrees being sought. 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 nonmajors by the chairperson/director of the program offering the course with the approval of the College of Health Professions Admissions-Exceptions Committee and the dean.

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 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 other specific requirements for enrollment. To enroll in the program or for more information, students should contact the college cooperative education coordinator or the program 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 Wichita State University Office of Student Financial Planning and Assistance 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. It cooperates with the College of Education in offering a certificate program for school nurses (see Nursing). 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 Organization and Policy, the Bachelor of Science-
Medical Technology, and the Bachelor of Science-Physician Assistant.

In addition, the Associate of Science is awarded in dental hygiene and physical therapist assistant. The school also offers a certificate in basic Emergency Medical Training (EMT) and a program for the training of Mobile Intensive Care Technicians (MICT) or paramedics.

The School of Health Sciences offers the Master of Public Health and Master of Science-Physician Assistant awarded in dental hygiene and 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.

**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. The Wichita State 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. 103Q, General Chemistry; Eng. 101, College English I; Psy. 111Q, General Psychology; Biol. 220Q, Introduction to Microbiology; and PHS 331Q, Principles of Dietetics and Nutrition

2. Maintain a minimum grade point average of 2.500 in all college work

3. Have a minimum grade of C in all prerequisite courses

4. Complete Wichita State University and College of Health Professions general admission requirements.

Students must also have their admission approved by the program’s committee on admissions.

**Curriculum.** The following courses, totaling 81 hours, must be taken by dental hygiene students.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td><strong>Pre-requisite courses for admission to the dental hygiene program:</strong></td>
<td></td>
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<tr>
<td>Biol. 223, Human Anatomy and Physiology</td>
<td>5</td>
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<tr>
<td>Chem. 103Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
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<tr>
<td>Psy. 111Q, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 220Q, Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>PHS 331Q, Principles of Dietetics and Nutrition</td>
<td>3</td>
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</tbody>
</table>

Plus the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 111Q, Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>DH 101, Preclinical Dental Hygiene</td>
<td>5</td>
</tr>
<tr>
<td>DH 104, Clinical Radiology</td>
<td>4</td>
</tr>
<tr>
<td>DH 201, Dental Hygiene Concepts</td>
<td>3</td>
</tr>
<tr>
<td>DH 202, Clinical Dental Hygiene I</td>
<td>3</td>
</tr>
<tr>
<td>DH 206, General and Oral Pathology</td>
<td>3</td>
</tr>
<tr>
<td>DH 290, Oral Anatomy</td>
<td>1</td>
</tr>
<tr>
<td>DH 295, Oral Histology and Embryology</td>
<td>2</td>
</tr>
<tr>
<td>DH 301, Dental Materials</td>
<td>2</td>
</tr>
<tr>
<td>DH 302, Clinical Dental Hygiene II</td>
<td>2</td>
</tr>
<tr>
<td>DH 303, Dental Hygiene Concepts II</td>
<td>2</td>
</tr>
<tr>
<td>DH 304, Dental Hygiene Concepts III</td>
<td>2</td>
</tr>
<tr>
<td>DH 314, Introduction to Periodontics</td>
<td>2</td>
</tr>
<tr>
<td>DH 315, Advanced Periodontics</td>
<td>1</td>
</tr>
<tr>
<td>DH 307, Ethics and Jurisprudence</td>
<td>2</td>
</tr>
<tr>
<td>DH 310, Community Dental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>DH 316, Pain Management</td>
<td>2</td>
</tr>
<tr>
<td>DH 323, Clinical Dental Hygiene III</td>
<td>3</td>
</tr>
<tr>
<td>DH 324, Clinical Dental Hygiene IV</td>
<td>4</td>
</tr>
<tr>
<td>DH 409, Introduction to Research for the Health Professions</td>
<td>1</td>
</tr>
<tr>
<td>PHS 301, Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>PHS 315, Head and Neck Anatomy</td>
<td>2</td>
</tr>
</tbody>
</table>

Special Requirements

Students are required to purchase uniforms and instruments needed during clinical learning experiences. Students also are 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.**
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Additional Basic Skills requirements:</strong></td>
<td></td>
</tr>
<tr>
<td>Eng. 102, College English II</td>
<td>3</td>
</tr>
<tr>
<td>Math 111, College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Electives from the following categories:</td>
<td></td>
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<tr>
<td>Introductory Fine Art (1)</td>
<td>3</td>
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<tr>
<td>Introductory Humanities (2)</td>
<td>6</td>
</tr>
<tr>
<td>Further Study or Issues and Perspectives in Fine Arts or Humanities (1)</td>
<td>3</td>
</tr>
<tr>
<td>Further Study or Issues and Perspectives in Social or Behavioral Science (1)</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Natural Science and Math (1)</td>
<td>3-5</td>
</tr>
<tr>
<td>Further Study or Issues and Perspectives in Natural Science and Math (1)</td>
<td>3-5</td>
</tr>
</tbody>
</table>

**Professional Curriculum Core:**

| DH 420, Educational Methodology in Dental Hygiene | 3 |
| DH 452, Community Dental Health Management | 3 |
| DH 466, Field Internship | 3 |
| PHS 320, Overview of Health Services Delivery | 3 |
| CESOP 704, Introduction to Educational Statistics (or equivalent) | 3 |

**Electives (6 hours)**

| DH 470, Issues in Dental Hygiene | 3 |
| DH 462, Community Dental Health Management | 3 |
| DH 481, Cooperative Education | 3 |
| PHS 343, Program Planning/Development in Health Service Organizations | 3 |
| PHS 400, Paraphysiology | 3 |
Lower-Division Courses

DH 101. Preclinical Dental Hygiene. (5). 3R; 7L. Fall semester only. A presentation of the basic philosophy of dentistry and dental hygiene. Considers measures that can be employed to prevent oral disease and promote dental health. Gives laboratory instruction in instrumentation for removal of deposits from the teeth. Prerequisite: program consent.


DH 201. Dental Hygiene Concepts I. (3). 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: departmental consent.

DH 202. Clinical Dental Hygiene I. (3). 12L Spring semester only. Emphasizes providing patient care in a clinical setting and nutritional counseling. Stresses basic instrumentation techniques as well as the prevention of dental disease. Develops patient evaluation and treatment planning skills. Prerequisite: program consent.

DH 206. General and Oral Pathology. (3). Spring semester only. Surveys general pathology of tissues and organs of human anatomy. Discussions on dental pathology of the teeth, dental pulp, and oral tissues. Considers the signs, symptoms, and manifestations of oral lesions through lectures and visual aids. 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; 5L. Studies tooth morphology, arrangement, function, and characteristics. Emphasizes the role of tooth morphology as it influences the practice of dental hygiene. Prerequisite: departmental consent.

DH 295. Oral Histology and Embryology. (2). Studies the developmental and microscopic anatomy of the oral cavity including hard and soft tissues. Prerequisite: departmental consent.

Upper-Division Courses

DH 301. Dental Materials. (2). 1R; 2L. 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 explanation 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 health context, as well as in-depth study of certain aspects of dental public health such as fluoridation, epidemiology, and program development. Students develop dental health education materials and give presentations in the community.

DH 314. Introduction to Periodontics. (2). Spring semester only. Lecture and visual aid presentation of the etiology and classification of periodontal disease. Studies the treatment of the periodontally involved patient emphasizing appropriate treatment planning for specific periodontal conditions. Prerequisite: program consent.

DH 315. Advanced Periodontics. (1). A continuation of DH 314. Discusses supplemental diagnostic methods of assessment of periodontal diseases; treatment of unusual periodontal diseases including HIV periodontitis; adjunctive periodontal therapies including antibiotics and antimicrobial agents; implant maintenance and surgical therapies. Emphasizes the evaluation of periodontal case studies resulting in comprehensive treatment planning. Prerequisite: DH 314.

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. Prerequisites: PHS 301 and 315.

DH 323. Clinical Dental Hygiene III. (3). 12L. Fall semester only. Continued development 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 which will enrich their knowledge and skill above that offered in the dental hygiene core curriculum. Emphasizes identification of clinical level, dental hygiene, clinical 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 405. 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 innovation, 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 materials and protocols that enhance the student's ability in assessment, diagnosis, and treatment planning skills. Prerequisites: DH 314 and 315 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. Prerequisite: DH 310 or equivalent.

DH 455. Personnel Management in Dental Hygiene. (3). Analysis of personnel management and completion of a personnel simulation, including job analysis, recruitment, interviewing, 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 466. 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). Analysis of 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 endeavor 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.

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 becoming 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, or research.

HP 201. Orientation to Health Professions. (2). An examination of the health team concept, the role and relationship of the various providers of health care, and the criteria for the selection of a health career. Emphasizes the health team concept.

HP 203. Medical Terminology. (3). 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). This course is designed to provide a foundation of medical terminology and its application in the health care environment. This course is ideal for preprofessional students preparing for one of the health professions or a student currently in a health professions program. Emphasis will be placed on accurate interpretation and analysis of patient, hospital, and other medical records. Students will not be able to 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.

Courses for Graduate/Undergraduate Credit

HP 570. 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 750. Workshop in Health Professions. (1-4). An opportunity for intensive study of special topics related to health professions practice, education, or research.

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; and veterinary medicine.

Bachelor of Science in Medical Technology

The Bachelor of Science program in medical technology, requiring a total of 128 hours, includes 72 hours of premedical technology curriculum in the basic sciences, clinical sciences, mathematics, 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'Neill Veterans Hospital and St. Francis Medical Center, Topeka. 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                         6

Engl. 101 and 102, College English 6

I and II                              6

Comm. 111, Public Speaking          3

Math. 111, College Algebra          3

Fine Arts and Humanities            12

One Introductory course from a      3

Fine Arts discipline

One Introductory course from each   6

two Humanities disciplines

A Further Study course from same    9

discipline as Introductory course

or Issues and Perspectives course   3

in Fine Arts or Humanities

Social and Behavioral Sciences      9

Psy. 111Q, General Psychology       3

One Introductory course from a       3

different Social and Behavioral

Sciences discipline

A Further Study course from same    3

discipline as Introductory course

or Issues and Perspectives course   3

in Social and Behavioral Sciences
Chern. Course coverage in organic chemistry (10 hours), if prerequisites are met.

BioI. for fall entry, October 1 for spring entry, and March 1 for summer entry.

To qualify as a candidate for admission to the professional phase, the student must:
1. Be admitted to Wichita State University
2. Be in the process, or have completed, the professional phase
3. Submit application to department
4. Submit three letters of recommendation
5. Have a minimum GPA of 2.500
6. Complete professional goal statement

Acceptance into the professional phase of the program is determined by the Medical Technology Admissions Committee.

Professional Curriculum

Course Hrs.
Med. T. 400, Clinical Laboratory Management/Education 3
Med. T. 406, Foundations of Laboratory Practice 2
Med. T. 450 and 451, Clinical Chemistry I and lab 4
Med. T. 452, Analysis of Body Fluids 3
Med. T. 456 and 457, Clinical Chemistry II and lab 4
Med. T. 459, Applied Clinical Chemistry 3
Med. T. 460 and 461, Hematology I and lab 4
Med. T. 466 and 467, Hematology II and lab 4
Med. T. 469, Applied Hematology 3
Med. T. 470 and 471, Immunohematology I and lab 4
Med. T. 476 and 477, Immunohematology II and lab 3
Med. T. 479, Applied Immunohematology 3
Med. T. 486, Clinical Laboratory Instrumentation 3
Med. T. 489, Applied Clinical Techniques 2
Med. T. 490 and 491, Clinical Microbiology I and lab 4
Med. T. 494, Special Topics in Clinical Microbiology 3
Med. T. 496 and 497, Clinical Microbiology II and lab 3
Med. T. 498, Applied Clinical Microbiology 3

MLT to BSMT Progression

Graduates of a NAACLS-accredited MLT-AD program with documentation of a passing score on a national certification exam and who have met other admission requirements for the Department of Medical Technology program should contact the department office for information concerning degree completion. Other MLT graduates who do not meet the above criteria should contact the department chairperson.

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, rubella titer, and hepatitis immunization prior to their clinical assignments in the affiliate laboratories.

Lower-Division Courses

Med. T. 160Q, 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 with consideration of the role of the clinical laboratory in the health care system. Suitable for majors to explore career selection and nonmajors who come in contact with clinical laboratories either as a health professional or 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 coordinators. 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.

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 Physcian Assistant students in professional program.

Upper-Division Courses

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. 405Q, 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 Practice. (2). An introduction to clinical laboratory 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 six hours. Prerequisite: program director’s consent.

Med. T. 411A, Special Topics in Clinical Chemistry. (1). Review of current quality control procedures, biological variables, interactions, and 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. (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 bacilly, enterobacteraceae, nonfermentors, 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, reviews coagulation abnormalities using a case study approach. Emphasizes the laboratory tests used in diagnosing various coagulopathies. Prerequisites: BSMT or equivalent and MT/CLS certification.

Med. T. 450. Clinical Chemistry I. (3). The study of basic clinical chemistry encompassing the study and application of clinical chemistry calculations, quality control, and the study of colorimetric, spectrophotometric, and ultraviolet principles and techniques for the analysis of serum and other body fluids. Prerequisites: Chem. 531 and Biol. 223.


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, synovial fluid, amniotic fluid, ascitic fluid, duodenal fluid, salivary fluids, 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 procedures and techniques in the analysis of body fluids in a clinical laboratory setting. Prerequisites: Med. T. 457 and program consent. Offered Cr/NCr 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. 223 and program consent.

Med. T. 461. Hematology I Laboratory. (1). 3L. Emphasizes performance of the basic procedures used in the hematology laboratory, including complete blood counts, normal and abnormal differentials, and miscellaneous hematology tests. Prerequisite: 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 cell disorders such as leukemia. Prerequisites: Med. T. 460 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. 462, 467, and program consent. Offered Cr/NCr only.

Med. T. 470. Immunohematology I. (3). An introduction to blood banking theory pertinent to assurance of 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. 405Q or equivalent or instructor's consent.

Med. T. 471. Immunohematology I 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. 405Q or equivalent and Med. T. 470 or concurrent enrollment or instructor's consent.

Med. T. 476. Immunohematology II. (2). A problem-solving, theoretical course in blood banking, covering HLA, disputed paternity, forensic testing, antibody identification techniques, and resolution of serological incompatibilities encountered in blood types, compatibility testing, hemotherapy, hemolytic disease of the newborn, Rh immune globulin, and hemolytic anemia workups. Prerequisites: 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, hemotherapy, hemolytic disease of the newborn, Rh immune globulin, and hemolytic anemia. Prerequisite: Med. T. 476 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 Cr/NCr only. Prerequisites: Med. T. 467, 477, and program consent.


Med. T. 486. Clinical Laboratory Instrumentation. (3). Discussion and application of the principles, concepts, and techniques of clinical laboratory instrumentation such as atomic absorption, flame emission, spectrophotometry, nephelometry, fluorometry, chromatography, electrophoresis, densitometry, and mass spectrometry. Also covers automation in clinical chemistry, microbiology, hematology, immunology, and immunochemistry. Prerequisites: Med. T. 406, 450, 451, or instructor's 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. Prerequisites: Biol. 330 and concurrent enrollment in Med. T. 491.


Med. T. 494. Special Topics in Clinical Microbiology. (3). 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.


Classes at Wichita State University are designed to provide a solid foundation in the areas of microbiology, chemistry, hematology, and immunology. These classes are essential for students entering the health care field and learning to manage infectious patients in clinical laboratories and other hospital settings.

**Antimicrobial Susceptibility Testing Techniques.**
Prerequisites: Med. T. 490 and 491 and concurrent enrollment in Med. T. 496.

(3). Application of theoretical and practical aspects of clinical microbiology in a commercial laboratory and operating hospital laboratory. Offered Cr/NCr only. Prerequisites: Med. T. 496 and 497.

**Courses for Graduate/Undergraduate Credit**

Describes endocrine hormone functions and the practical application of modern clinical laboratory methods for the diagnosis of functional hormonal disorders. Open to nonmajors in medical technology. Prerequisites: Biol. 223 or equivalent and Chem. 103Q or 111Q or equivalent or instructor's consent. An understanding of biochemistry is recommended.

Med. T. 752. Method Evaluation and Selection. (3). Presents an objective, practical approach to the evaluation of laboratory methodologies. This approach incorporates the use of statistical analysis evaluation of technology and clinical application. Prerequisites: Med. T. 459, 469, 479 and 498, or equivalent, PHS 705 or instructor's consent.

Med. T. 760. Hematologic Neoplasms. (3). Deals with the etiology, pathophysiology, and morphology of hematologic neoplasms and the health care practitioners' interactions with persons with those disorders.

Med. T. 765. Advanced Clinical Hemostasis. (3). Advanced studies in the mechanisms of hemostasis, pathological changes that can occur in the hemostatic mechanism and the laboratory evaluation of those changes. Prerequisite: Med. T. 452 or instructor's consent.

Med. T. 775. Advanced Clinical Pathophysiology. (3). Advanced studies in the mechanisms of the disease process and pathological changes that can occur in various pathophysiological states. Prerequisites: PHS 400 or 15 hours of biology or instructor's consent.

Med. T. 780. Issues in Immunohematology. (3). In-depth analysis of current issues in a modern transfusion service emphasizing responding to changes in patient care through application in technology, research and supervision. Prerequisites: Med. T. 479 and PHS 701 or instructor's consent.

Med. T. 800. Seminar in Laboratory Sciences. (1). 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 resource material. Prerequisite: program 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 will allow the student to achieve a foundation in liberal arts and sciences as well as gain an education in the profession of physical therapy. Graduates will 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.

**Physical Therapist Assistant (PTA) Associate of Science**

Physical therapist assistants work under the supervision of a physical therapist in the delivery of physical therapy services. Their duties include assisting the physical therapist in implementing treatment programs according to the plan of care, educating patients in exercises and activities of daily living, conducting treatments, using special equipment, administering modalities and other treatment procedures, and documenting the patient's response.

The Commission on Accreditation of the American Physical Therapy Association accredits physical therapist assistant programs. Wichita State University received full accreditation in May 1996.

Upon completion of the professional program, students receive the Associate of Science (AS) in physical therapist assistant and are eligible to take the state board examination for certification in the state of Kansas.

**Admission Requirements**

Admission to the program requires that the student:

1. Have a minimum cumulative grade point average of 2.500 and a 2.500 GPA in math and science prerequisite courses.

2. Show evidence of completing the following:

   **Course**  
   **Hrs.**

   **Mathematics and Science**

   Biology and laboratory or prerequisite to Anatomy .......................... 4-5
   Physics without laboratory ........................................ 4
   Human Anatomy and Physiology .................................. 4-5
   College Algebra .................................................. 3

   **Social Science**

   Introduction to Sociology .......................................... 3
   General Psychology .................................................. 3

   **Humanities**

   Ethics or Introduction to Philosophy .................................. 3
   Speech ............................................................... 3

**Basic Skills**

College English ................................................. 3
Contact the Wichita State University Department of Physical Therapy for additional information.

Application packets are available in October—and are accepted in February—for consideration for the class starting the following June. The program accepts 24 students per year.

**Professional Curriculum**

The professional curriculum takes 14 months. All physical therapy procedure and clinical courses must be taken sequentially. Professional course work taught in the classroom will be offered during evening hours. Clinical course work is a full-time activity (eight hours per day for two-, four-, or six-week periods, 8 a.m.-8 p.m.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>PHS 400, Introduction to Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>PT 200, PTA Procedures I</td>
<td>4</td>
</tr>
<tr>
<td>PT 205, PTA Procedures II</td>
<td>4</td>
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<tr>
<td>PT 208, PTA Procedures III</td>
<td>4</td>
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<tr>
<td>PT 210, PTA Procedures IV</td>
<td>4</td>
</tr>
<tr>
<td>PT 215, PTA Procedures V</td>
<td>4</td>
</tr>
<tr>
<td>PT 217, Functional Anatomy for the Physical Therapist Assistant I</td>
<td>2</td>
</tr>
<tr>
<td>PT 220, PTA Procedures VI</td>
<td>3</td>
</tr>
<tr>
<td>PT 222, PTA Clinical I</td>
<td>3</td>
</tr>
<tr>
<td>PT 223, PTA Clinical II</td>
<td>5</td>
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<tr>
<td>PT 225, PTA Clinical III</td>
<td>6</td>
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<tr>
<td>PT 227, Functional Anatomy for the Physical Therapist Assistant II</td>
<td>2</td>
</tr>
<tr>
<td>PT 240, Independent Study</td>
<td>2</td>
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</tbody>
</table>

Contact the Department of Physical Therapy for complete course descriptions.

**Special Requirements**

Students will be required to purchase lab jackets and other clinical apparel, professional liability insurance, health insurance coverage, and specified immunizations as well as submit evidence of an annual physical examination while in the program. Students must also be certified in cardiopulmonary resuscitation (CPR) prior to entering the clinical rotations.

Students are expected to provide their own transportation and pay all living and travel expenses.

Students are referred to the Department of Physical Therapy **Student Handbook** for more details on special departmental policies and procedures.
Lower-Division Courses

PT 200, PTA Procedures I. (4). Features theory and skill development for basic physical therapy skills. Emphasizes range of motion, aseptic technique, posture, bed positioning, massage, goniometric measurements, manual muscle testing, bandaging, wheelchairs, architectural barriers, ambulation, safety, and vital signs. Includes psychosocial aspects of patient care and a self-directed study of medical terminology. All skills are reinforced and practiced in supervised scheduled laboratories. Discusses basic instruction in SOAP format note writing. Prerequisite: admission to PTA program.

PT 205, PTA Procedures II. (4). Emphasizes the theory and practical application of the skills learned in Procedures I. Opportunities to observe and work with a variety of patients in a supervised capacity and to begin developing a working knowledge of the skills and tasks of the physical therapist. Prerequisite: PTA 200.

PT 210, PTA Procedures III. (4). Emphasizes the theory and practical application of all skills learned in Procedures I and II. Reinforces all skills through combined application during supervised laboratory sessions. Prerequisite: PTA 200.

PT 215, PTA Procedures IV. (4). Emphasizes therapeutic exercise, orthotics, prosthetics, and rehabilitation programs for various patient populations including amputees, spinal cord injury, sports medicine, geriatric, pediatric, neurological, orthopedic, and cardiopulmonary conditions. Prerequisite: PTA 200.

PT 217. Functional Anatomy for the Physical Therapist Assistant I. (2). 2R; 2L. Provides a well-rounded scientific foundation of biomechanical principles as related to movement of the human body. Includes introduction to human movement; the physical factors involved in biomechanics such as forces, lever arms, resistance, and gravity; joint and muscle structure and function with different types of muscle contractions; classifications, and the principles of tissue repair.

PT 220, PTA Procedures V. (3). Emphasizes professional aspects of the physical therapist assistant, including topics such as reimbursement, legislation, continuing education, code of ethics, professional relations, research, employment, and current developments in the field. Broadens students' understanding of professional responsibility and motivates them toward personal involvement, commitment, and continuing competence in the physical therapy profession. Includes a special topic section covering TMJ dysfunction, basic pharmacology, and orthopedic radiography. Prerequisite: PTA 210.

PT 225, PTA Clinical I. (2). Involves observation of various types of patients in local clinical settings with some practive of skills learned in Procedures I. Entails ongoing communication among the clinical coordinator, student, and academic coordinator. Gives opportunities to observe and work with a variety of patients in a supervised capacity and to begin developing a working knowledge of the skills and tasks of the physical therapist. Prerequisite: admission to PTA program.

PT 230, PTA Clinical II. (4). A practicum of skills learned in Procedures I to III. Opportunities to be placed in a variety of health care settings within and outside the city and to practice the application of all skills in a directly supervised manner. Prerequisite: PTA 225.

PT 235, PTA Clinical III. (6). Allows the student to be placed in health care facilities across the United States. Opportunities to practice application of all skills with indirect supervision on a variety of patients. Prerequisite: PTA 230.

PT 237. Functional Anatomy for the Physical Therapist Assistant II. (2). 2R; 2L. Builds upon PT 217 with the foundation of biomechanical principles as it relates to each joint of the body. Discusses the physical factors involved in biomechanics such as forces, lever arms, resistance, and gravity in relation to movement of the body in both isolated movements as well as body movements. Highlights the components of normal and abnormal human gait.

PT 240. Independent Study. (1). In consultation with a faculty member, the student selects for intensive study a specific problem or area of concern related to physical therapy, allowing student to focus on specific subject matter of interest to him/her and to collect and investigate materials related to that subject. Student develops an area or topic of expertise by exploring and compiling information. Prerequisite: PTA 210.

Master of Physical Therapy

The program prepares individuals to enter beginning practice as a physical therapist. The graduates are prepared to evaluate neuromuscular, musculoskeletal, sensorimotor, and related functions to determine the degree of muscle strength, motor development, motion, respiratory ventilation, or peripheral circulatory efficiency of individuals. Following referrals from physicians, podiatrists, or dentists, the physical therapist plans and implements appropriate treatment programs for their clients. Graduates are prepared to work in preventive health care as well as rehabilitative care. The program requires a 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 3.000 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—two semesters of introductory biology (which would lead to a biology major) with a laboratory
   Anatomy and Physiology—eight to 10 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, sociology, plus four more courses in any social science area
   Humanities—ethics, plus four more courses in any humanities area

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.

2. Submit the designated Application form for Admission and supporting transcripts to the Graduate School.

Applications will be accepted for review only if they are postmarked by the department's deadline. Applications received at any other time will be returned to the sender unreviewed. Applicants will be notified of their admission status by the Graduate School. Applicants should be aware that their records can only be reviewed when all materials have been submitted and they have met eligibility requirements. Once an applicant has been admitted, he or she will be asked to submit a $100 nonrefundable tuition deposit to reserve a spot for the summer admission. Once the student enrolls, this money will be counted toward payment of tuition.

Students are advised to contact the department for any changes in the program course requirements or in prerequisite requirements.
Degree Requirements

The student must maintain a 3.000 grade point average and a C or better in each of the following courses:

Course                                      Hrs.

Summer I
PT 715, Professional Issues and Ethics.....3
PT 705, Clinical Medicine I................2
PT 707, Introduction to Basic Patient Management...........................2

Fall I
PT 701, Research Methods and Statistics.....2
PHS 700, Gross Human Anatomy................6
PT 710, Foundations for Evaluation and Treatment of Musculoskeletal Conditions........3
PHS 711, Clinical Biomechanics..............3
PT 726, Clinical Medicine II................2

Spring I
PT 841, Directed Research........................1-3
PHS 720, Neuroscience..........................2
PT 745, Clinical Medicine III.................2
PT 730, Therapeutic Exercise..................1
PT 747, Assessment and Intervention in Acute Conditions......................4
PT 735, Physical Agents in Physical Therapy..........................4

Summer II
PT 800, Clinical Education I................6

Fall II
PT 841, Directed Research........................1-3
PT 816, Administration I.......................2
PT 809, Orthopedic Assessment and Intervention I.........................3
PT 832, Neurological Assessment and Intervention........................3
PT 865, Lifespan Assessment, Intervention, and Prevention.............2
PT 824, Education Methods in Physical Therapy..........................4
PT 840, Directed Study, elective.............1-3

Spring II
PT 841, Directed Research........................1-3
PT 818, Administration II......................2
PT 811, Orthopedic Assessment and Intervention II........................3
PT 802, Cardiopulmonary Assessment and Intervention....................2
PT 850, Clinical Education II................6
PT 840, Directed Study, elective.............1-3

Summer III
PT 860, Clinical Education III................6
PT 870, Clinical Education IV................6

Total hours                                   82-88

Special Requirements

Students will be required to purchase uniforms and other clinical apparel, professional liability insurance, health insurance coverage and specified immunizations as well as submit evidence of an annual physical examination while in the program. Students must also be certified in cardiopulmonary resuscitation (CPR) prior to entering the clinical rotations.

Students are expected to provide their own transportation to and from the health care facilities used for clinical experiences. During clinical assignments outside Wichita, students may be required to pay all living and travel expenses.

Students are referred to the Department of Physical Therapy Student Handbook for more details on special departmental policies and procedures.

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.

Courses for Graduate/Undergraduate Credit

PT 711. Clinical Biomechanics (3). Presents a biomechanical foundation for 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 care services changes. Prerequisite: departmental consent.

PT 726. Clinical Medicine II. (2). Presents the causes, diagnoses, effects, treatment, and prognoses for orthopedic conditions seen by physical therapists. Coordinated by department faculty and organized around the medical model. Prerequisite: departmental consent.

PT 730. Therapeutic Exercise. (1). Gives basic skills for assisting movement in patients with neurological impairments. Prerequisite: departmental consent.

PT 745. Clinical Medicine III. (2). Presents the causes, diagnoses, effects, treatment, and prognoses for neurological, pulmonary, and cardiac conditions seen by physical therapists. Coordinated by department faculty and organized around the medical model. Prerequisite: departmental consent.

Upper-Division Course

PT 481. Co-op Education. (1-3). See PT 281.

Courses for Graduate Credit 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). Begins the study to basic patient care and medical terminology. Through case observation, students become familiar with various types of clinical therapy settings. 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 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 care services changes. Prerequisite: departmental consent.

PT 726. Clinical Medicine II. (2). Presents the causes, diagnoses, effects, treatment, and prognoses for orthopedic conditions seen by physical therapists. Coordinated by department faculty and organized around the medical model. Prerequisite: departmental consent.

PT 735. Physical Agents in Physical Therapy. (4). Presents the causes, diagnoses, effects, treatment, and prognoses for orthopedic conditions seen by physical therapists. Coordinated by department faculty and organized around the medical model. Prerequisite: departmental consent.

PT 745. Clinical Medicine III. (2). Presents the causes, diagnoses, effects, treatment, and prognoses 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 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 750. 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.

Courses for Graduate Credit Only


Courses for Graduate Credit Only

PT 824. Education Methods in Physical Therapy. (1-3). See PT 481.

Courses for Graduate Credit Only

PHS 720, Neuroscience..........................2
PT 816, Administration I......................2
PT 809, Orthopedic Assessment and Intervention I.........................3
PT 832, Neurological Assessment and Intervention........................3
PT 865, Lifespan Assessment, Intervention, and Prevention.............2
PT 824, Education Methods in Physical Therapy..........................4
PT 840, Directed Study, elective.............1-3

Spring II
PT 841, Directed Research........................1-3
PT 818, Administration II......................2
PT 811, Orthopedic Assessment and Intervention II........................3
PT 802, Cardiopulmonary Assessment and Intervention....................2
PT 850, Clinical Education II................6
PT 840, Directed Study, elective.............1-3

Summer III
PT 860, Clinical Education III................6
PT 870, Clinical Education IV................6

Total hours                                   82-88
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). (2R; 3L). 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 735.

PT 840. Directed Study. (1-3). Individual study with a faculty member. Includes a departmental faculty member. Allows students to pursue an area of special interest. Prerequisite: departmental consent.

PT 841. Directed Research. (1-3). Individual study with objectives developed in collaboration with a departmental faculty member. Repeatable for credit with program consent. Prerequisite: program consent.

PT 850. Clinical Education I. (3). Continuation of PT 809. Prerequisite: program consent.

PT 856. Life Span Assessment, Intervention, and Prevention. (2). Incorporates specific areas of physical therapy as they are applied to individuals throughout their lifetime. Includes embryology, normal growth and development, healthy lifestyles for children, teens, and adults, obstetrics, and gerontology. Emphasizes prevention. Prerequisite: departmental consent.

PT 860. Clinical Education III.* (6). 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 throughout their lifetime. Includes embryology, normal growth and development, healthy lifestyles for children, teens, and adults, obstetrics, and gerontology. Emphasizes prevention. Prerequisite: departmental consent.

PT 870. Clinical Education IV.* (6). Continuation of PT 860. Prerequisite: program consent.

PT 890. Thesis. (1-6). Repeatable to a maximum of six hours. Prerequisites: enrollment in graduate studies and consent of thesis advisor.

*In the series of three clinical courses, students experience four different settings: general and rehabilitation practice 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 confers 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 will 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 Wichita State University Physician Assistant Program is fully accredited by the Commission on Accreditation of Allied Health Education Programs.

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 compiled 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. 203Q (5 hours), Biol. 220 (4 hours), Biol. 223 (5 hours)
   b. Chem. 111Q (5 hours), Chem. 112Q (5 hours)
   c. Math. 111, College Algebra or equivalent (3 hours)

3. All others complete the following:
   a. The GEC requirements
   b. Biol. 203Q (5 hours), Biol. 220 (4 hours), Biol. 223 (5 hours)
   c. Chem. 111Q (5 hours), Chem. 112Q (5 hours)
Additional academic requirements:
1. An overall college grade point average of 3.0/4.0
2. A grade point average of 3.0/4.0 for prerequisite course work
3. A grade of C or better in all Division C courses

Course  | Hrs.
--- | ---
Basic Skills  | 9
Engl. 101 and 102, College English | 6
Comm. 111, Public Speaking | 3
Fine Arts and Humanities | 12
One Introductory course from a Fine Arts discipline | 3
One Introductory course from each of two Humanities disciplines | 6
A Further Study course from same discipline as Introductory course or Issues and Perspectives course in Fine Arts or Humanities | 3
Social and Behavioral Sciences | 9
One Introductory course from each of two different Social and Behavioral Sciences disciplines | 6
A Further Study course from same discipline as Introductory course or Issues and Perspectives course in Social and Behavioral Sciences | 3
Natural Sciences and Mathematics | 24
Introductory courses:
Chem. 111Q, General Chemistry | 5
Biol. 203Q, Organismal Biology | 5
Further Study course:
Chem. 112Q, General and Inorganic Chemistry | 5
Additional requirements:
Biol. 220, Microbiology | 4
Biol. 223, Human Anatomy and Physiology | 5
Math. 111, College Algebra | 3

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 obtained from the department for a $20 fee. 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 is based on many factors. Each applicant is evaluated in terms of academic performance, health care experience, references, communication skills, and so forth.

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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS 388, Clinical Anatomy I</td>
<td>3</td>
</tr>
<tr>
<td>PHS 390, Clinical Pathology</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, Physician Assistant Professional Issues</td>
<td>1</td>
</tr>
<tr>
<td>PA 320, Assessment and Management of the EENT Systems</td>
<td>3</td>
</tr>
<tr>
<td>PA 325, Preventive Medicine and Community Health</td>
<td>2</td>
</tr>
<tr>
<td>PA 420, Applied Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 310, Clinical Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS 389, Clinical Anatomy II</td>
<td>2</td>
</tr>
<tr>
<td>PHS 711, Applied Clinical Pharmacology</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>4</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>2</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
</tr>
</tbody>
</table>

Graduation Requirements

Students who meet the course requirements specified in the physician assistant curriculum will 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 clinical assignment.

Lower-Division Course

PA 281, Cooperative Education Field Study (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 enrolled in Co-op 281 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six 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: 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 theoreti-
and practical knowledge that can be utilized to obtain an appropriate medical history and/or conduct a proper physical examination (complete/perinent). 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 philosophy 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 hypothalamus; 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 322. 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 health and clinical courses designed 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, roentgenology of the GI tract, GI manifestations of psychic disturbances, and demonstration of special diagnostic instruments. Prerequisite: admission to PA professional program.

PA 330. Assessment and Management of the Gastro-Intestinal System. (3). A theory, laboratory, and clinical course designed 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, roentgenology 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 balance, hypertension, tumors of the genito-urinary (GU) system, infectious diseases, trauma, calculi, and special diagnostic procedures. Examines common venereal 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 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 normality and abnormalities; medical terminology, evaluation of related patient and professional conduct. Emplows lecture, simulation, and clinical application. Prerequisite: admission to PA professional program.

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 physical examination data, become familiar with common diagnostic procedures and are involved in the selection of therapeutic regimens. 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 regimens 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.


PA 425. Clinical Rotation VII. (3). See PA 410. Emphasizes integrating the skills and knowledge obtained in previous rotations, as well as health promotion, disease prevention, and patient education. Graded S/U.

PA 430. Clinical Conference I. (1). 1R; 2L. Major focus on synthesis of didactic and clinical education and training as it applies to advanced cardiac life support. Graded S/U. Prerequisite: student in PA professional program.

PA 432. Clinical Conference II. (3). 1R; 3L. Spring semester only; for clinical physician assistant students. Major focus on issues affecting the graduate physician assistant, which include legislative issues, professional associations and responsibilities, practice limitations, malpractice issues, etc. Includes review sessions for the National Board Examination utilizing lecture, demonstration, and computer-assisted instruction. Prerequisites: admission to PA professional program.

PA 440. Clinical Preceptorship. (6). Eight-week course; culmination of the student’s clinical training. Students are placed with a primary-care physician to enable them to function as members of the health-care team in a setting similar to that in which they would be encountered by the graduate physician assistant. Graded S/U.


PA 525. Special 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. Open to non-majors; requires department consent.

**Public Health Sciences (PHS)**

The Department of Public Health Sciences offers the Bachelor of Science in Health Services Organization and Policy and the Master of Public Health degrees. A graduate certificate program in public health is available for individuals whose primary goal is core public health training. The Master of Public Health (MPH) degree is fully accredited by the Council on Education for Public Health. Qualified seniors are encouraged to apply to take the certificate or MPH courses under Senior Rule.

**Bachelor of Science in Health Services Organization and Policy**

The program in health services organization and policy (HSOP) seeks to develop professionally competent individuals to serve in various capacities in the health care industry. The mission of the HSOP program is to provide tomorrow's health care leaders with core managerial, analytical, social, and behavioral science competencies necessary for working effectively in the rapidly changing health care system.

Achieving competency in these core areas prepares students for entry-level management positions in such settings as public and community health organizations, long-term care, group practice/insurance, managed care, not-for-profit organizations, public sector or government agencies, and pharmaceutical and medical supply sales.

The HSOP program offers a generalist area of study and two focused areas of study—community health and health administration. The HSOP degree also provides a foundation for advanced degrees in both non-clinical and clinical professional areas, such as public health, physical therapy, medicine, dentistry, social work, gerontology, and other related areas.

The HSOP Community Health Focus addresses the needs of students who are interested in gaining entry-level competencies in such areas as planning and assessment of health programs; designing and implementing community health surveys and interventions; developing strategies for health promotion, health education, and health communication; designing and implementing culturally competent health care services; and building politically helpful relationships with those who make health policy. Recommended General Education courses are those that emphasize: a) communication skills, b) critical thinking, c) the importance of ethnocultural factors in a community, d) an understanding of the public sector, and e) the use of appropriate analytic tools. Courses in communication, anthropology, psychology, sociology, gerontology, and statistics are recommended as free electives. Suggested HSOP electives include, but are not limited to: PHS 433, 458, 490, 619, 631, 641, and 686.

The HSOP Health Administration Focus prepares individuals for entry-level management positions in the many types of organizations currently in place and provide a sound footing for those who wish to continue their education with a view to providing leadership in future organization changes. As the health care system changes, placing increased reliance on Managed Care Organizations (MCOs), the need for innovative administrators with a thorough grounding in the management sciences is becoming imperative. Although the organization types may differ in the plethora of MCOs that have evolved since the relatively simple concept of Health Management Organizations, the management science principles remain the sine qua non for leadership in this burgeoning field. Students with a health administration focus area may want also to obtain a minor in business through the Barton School of Business. Courses in accounting, law, public administration, MIS, economics, marketing, and communication are recommended as free electives. Suggested HSOP electives include, but are not limited to: PHS 433, 458, 638, 641, 647, and 652.

The HSOP Generalist Area of Study is for the person who wants a good general knowledge of health services and organizations. It is appropriate for the pre-clinical professional student or as a course of study that combines a health services emphasis with a minor. Certificate and associate degree health professionals, such as physical therapy assistants, radiologists, mobile intensive care technicians, dental hygienists, and respiratory therapists who wish to strengthen their skills with a baccalaureate degree may pursue the HSOP degree.

**Undergraduate Minor**

A minor in health services organization and policy is available to any student not pursuing a degree in health services organization and policy. A minor consists of 15 hours of health services organization and policy courses. The required courses are PHS 320, Overview of Health Services Delivery; PHS 325, Dynamics of Community Health; and PHS 328, Health Care Organization. Six hours of elective PHS courses are also required for completion of the minor.

**Admission**

In order to be admitted to the health services organization and policy program, students must fulfill the following requirements:

1. Be enrolled in or admitted to Wichita State University.
2. Have completed Engl. 101 and 102, Comm. 111, and Math. 111, each with a C or better.
3. Have an overall grade point average of 2.000 or above in all course work.
4. Submit a completed application to the director of the program and be accepted into the program. Application forms may be obtained from the College of Health Professions advising office in 402 Ahlberg Hall.

**Progression**

Students in the health services organization and policy major are required to maintain a cumulative grade point average of 2.250 in course work required in the major, including those courses chosen for elective credit toward the major, with no individual course grade 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.

**Degree Requirements**

In addition to the WSU general education and basic skills requirements, the student is required to complete 33 credit hours for the major. The following courses will constitute 24 hours toward the major. An additional 9 semester hours of public health science electives can be distributed across the catalog listings for public health services to match the student's interest in a particular area of HSOP study. Other courses will be considered on an individual basis with approval by the department chair or the HSOP program coordinator. In some cases there may be courses available from other colleges in the University which would serve to enhance the student's special area of interest. Advisors will work with each student to develop the best selection...
of electives to meet the student's academic and professional goals.

The student may choose between PHS 460, Practicum, and PHS 461, Special Project. In addition, the student may choose to extend the practicum to 6 or 9 hours. However, the additional hours beyond the 3 hours required may not count toward the 9 hours of elective credit.

**Lower-Division Courses**

**Required Core Courses**

- PHS 320, Overview of Health Services Delivery (3)
- PHS 325, Dynamics of Community Health (3)
- PHS 328, Health Care Organization (3)
- PHS 333, Organizational Behavior and Leadership in Health Service Organizations (3)
- PHS 343, Program Planning/Development in Health Services (3)
- PHS 442, Financing Health Care Services (3)
- PHS 454, Health Politics (3)

**Approved Electives**

- (9)

**Required Practicum or Special Project**

- PHS 460, Practicum (3-9)
- PHS 461, Special Project (3)

Total hours required for HSOP major: 33

**Upper-Division Courses**

**PHS 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. 105Q or 111Q or equivalent or instructor's consent.

**PHS 315. Head and Neck Anatomy.** (2). An in-depth study of the landmarks, muscles, nerves, vascular supply, etc., of the head and neck region. Prerequisites: Biol. 223 and enrollment in Dental Hygiene Program.

**PHS 320. Overview of Health Services Delivery.** (3). Examines the nature of the health care delivery system: the structure and facilities through which care is provided, the personnel who administer the care, the consumers served by the system, the fiscal mechanisms which enable the system to operate, and the public sector factors which shape and regulate the outcomes. Pays particular attention to the underlying influence of money, power, and politics which often links personal illness experience with patterns of the health care industry.

**PHS 325. Dynamics of Community Health.** (3). Introductory course to study the multiple dimensions of public health. Presents the foundations and structure used to resolve medical and environmental health problems. Focuses on the health of populations and sub-populations, emphasizing prevention. Prerequisites: Biol. 106Q or equivalent.

**PHS 328. 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 organizational environments, and evaluation and planning. Prerequisites: PHS 320 and 325 or concurrent enrollment.


**PHS 331Q. Principles of Dietetics and Nutrition.** (3). A study of human dietetic and nutritional needs in the clinical setting. Covers composition and classification of foods, vitamins, and their function; food and public health laws; and nutrition under special conditions. Gives a detailed application of dietetic and nutritional knowledge applied to various clinical conditions.

**PHS 333. Organizational Behavior and Leadership in Health Service Organizations.** (3). Introduces the concepts of leadership in health care organizations with a focus on the differing leader roles with peers, subordinates, superiors, patients, professional and trade organizations, and volunteers. Applies general concepts of leadership from behavioral sciences and management to the special case of health care organizations, emphasizing leadership styles and roles, organizational communication, interpersonal and group relationships, motivation, and implementation of organizational change. Prerequisite or corequisite: PHS 320 or 325.

**PHS 343. Program Planning/Development in Health Service Organizations.** (3). Presents the range of planning methods currently used in health service organizations including strategic and operational planning as well as program and project development. Provides a conceptual framework for planning to allow application of skills which will facilitate student understanding of the importance of planning in order to give management direction in decision making in an environment characterized by a high degree of risk and uncertainty. Students use these methods to plan a program or project. Prerequisites: PHS 325 or concurrent enrollment, and PHS 328.

**PHS 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 Physician Assistant Program or instructor's consent.

**PHS 389. Clinical Anatomy.** (2). Spring semester. A continuation of PHS 388 emphasizing human anatomy of the thorax, gastrointestinal, and genital-urinary systems. Prerequisites: PHS 388 and enrollment in the Physician Assistant Program, or instructor's consent.

**PHS 390. 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.

**PHS 400. Introduction to Pathophysiology.** (3). 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.

**PHS 411. Special Projects.** (1-6). Supervised intensive study of special topics and problems related to health professions. By arrangement. Prerequisite: Program Chairperson's consent.
PHS 433. Introduction to Research and Evaluation Methods for Health Care Professionals. (3). Deals with methods, statistical procedures, and designs that health professionals must understand in order to intelligently analyze research and evaluation in the health care field and to conduct evaluations of health care programs and interventions. Covers issues of planning, data collection, and evaluation of health programs, including needs assessment, determining objectives, issues in program implementation and monitoring, and evaluation of program outcomes. Prerequisites: PHS 320 and 325 or concurrent enrollment.

PHS 442. 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 the health setting; considers financial organization, sources of operating revenue, capital, and cost allocation methods. Uses examples for various types of health service organizations. Prerequisite: PHS 325 or concurrent enrollment and PHS 328.

PHS 450. Workshop in Health Sciences. (1-4).

PHS 454. 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. Prerequisite: PHS 320 or equivalent or instructor's consent.

PHS 458. 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 services 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 320, 325, or 328.

PHS 460. Health Services Organization and Policy Practicum. (3-9). Provides an opportunity for field experience in the health care system. Students may select, with the consent of an advisor, an internship in an appropriate health service organization. Requires a written report of the experience. Prerequisites: senior standing and program consent.

PHS 461. Special Project. (3). Supervised study of special topics and problems related to health care organizations or policy. By arrangement. Prerequisites: senior standing and program consent.


PHS 490. Independent Study in Health Services Organization and Policy. (1-6). Supervised intensive study of special topics and problems relating to health care delivery. Repeatable up to six hours. Prerequisite: program consent.

Courses for Graduate/Undergraduate Credit

PHS 510. Clinical Departmental Management. (3). Presents concepts and methods of clinical department management through lectures, discussion, group interaction, and individual problem solving and situational analysis projects. Provides information pertinent to management majors, department directors, shift supervisors, and staff personnel who need an understanding of departmental management of clinical revenue generating departments. Prerequisites: senior standing or greater in health professions and Mgmt 360 or instructor's consent.

PHS 575. Special Topics or Selected Topics. (1-4). Lecture/discussion; focuses on a discrete area of research and development. Emphasis is on in-depth study of particular topic or concept, including didactic and current research findings and technological advances relevant to the topic. Open to nonmajors. Repeatable up to six credit hours with program consent.

PHS 583. Anatomy of the Body Cavities. (3). The gross anatomy of the human body cavities presented in a four-week summer term using a regional approach. Teams of eight students dissect the thoracic, abdominal, and pelvic cavities on human cadavers, emphasizing cardiovascular, respiratory, gastrointestinal, and urologic systems. Prerequisite: Biol. 210 or 223.

PHS 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, case planning, care planning, and client communications. Prerequisites: general chemistry, anatomy, and physiology.

PHS 638. Concepts of Quality. (3). For health care personnel. Covers issues of quality assurance and improvement in health care provision, including definition and measurement of quality. Prerequisite: PHS 320 or departmental consent.

PHS 641. Health Care for Special Populations. (3). Analyzes societal factors that influence the kinds of care made available to population groups with increased risk of disease, disability, or premature death. Examines how cultural differences affect lifestyle choices, attitudes toward health, help-seeking behavior, and service utilization. Takes an applied approach, engaging each student in a significant problem-solving effort. Fieldwork is conducted from our community-based laboratory in partnership with residents of one of the area's most culturally diverse neighborhoods. Prerequisite: PHS 320 or 325 or instructor's consent.

PHS 647. Health Care Operations Analysis. (3). An examination of methods for measuring the operational efficiency and effectiveness of health care and medical care programs. Includes methods to analyze and evaluate current operations and approaches to plan better manpower, facility, technology, financial planning and management control systems in a health setting. Prerequisites: PHS 320 and 328 or Mgmt 360 or departmental consent.

PHS 652. Strategic Management in Health Service Organizations. (3). Provides an analysis of business problems seen in health care organizations from a strategic management perspective. Uses a series of case studies which require that the student integrate the functional areas of business, including management, marketing, finance, and operations. Discusses all types and sizes of health service organizations in the context of the current environment for these organizations. Prerequisite: PHS 320 or departmental consent.

PHS 666. Seminar in Health Services Organization and Policy. (3). In-depth discussion and analysis of selected topics in health care administration. Topics vary from semester to semester and include examination of specific financial, managerial, and operational problems and characteristics of health service organizations and agencies.

PHS 700. Gross Anatomy. (6). 3R; 9L. For students in the physical therapy program. Study of the structure of the human body emphasizes integration of anatomical information with human functional abilities. Prerequisites: four semesters of biological sciences or program consent.

PHS 710. Applied Clinical Pharmacology. (3). Introduces pharmacology and clinical application of specific categories of drugs. Presents mechanism of action, pharmacokinetics, indications, dosages, side effects, and monitoring parameters of selected drug categories. Facilitates clinical application of this knowledge through case studies. Includes patient specific dosage modification, drug selection, patient education, compliance, and economic issues. Prerequisite: admission to PA professional program.

PHS 711. Pharmacological Management of Acute and Chronic Diseases. (3). Discusses the clinical application of specific categories of drugs used in the treatment of several common acute and chronic diseases. Presents pharmacokinetics, mechanisms of action, dosages, side effects, and monitoring parameters of medications as they are used in these diseases and in various patient populations. Facilitates clinical application of this knowledge through case studies, class discussions, and reviews of the latest medical literature. Prerequisite: admission to graduate nursing program and department consent or completion of PHS 710 and admission to PA professional program.

PHS 720. Neuroscience. (3) 3R; 2L. Integration of neuroanatomy and neurophysiology of the central and peripheral nervous systems with
human functional abilities. Prerequisite: PHS 700 or program consent.

PHS 750. Workshop in Health Related Professions. (1-4). An examination of relevant topics directly and/or indirectly related to the delivery of health care service.

Courses for Graduate Students Only

PHS 800A. Seminar in Health Science. (1). Recent developments and issues affecting the financing, organization, and management of health care resources in both the public and private sector of our nation's medical care system. Prerequisite: PHS 701 or program consent.

PHS 800B. Seminar in Health Education. (1). Covers current trends and directions in allied health education in both patient care and academic settings. Prerequisite: program consent.

PHS 802. Introduction to Public Health. (3). Introduction to the organization and activities of the public health system, its roles and problems. Introduction to administrative problem-solving as a structured process. Prerequisite: instructor's consent.

PHS 804. Principles of Statistics in the Health Sciences. (3). An introductory graduate-level course concerning the concepts of statistical reasoning, statistical principles, and their role as the scientific basis for clinical research, and public health research and practice.

PHS 805. Public Health Biostatistics Laboratory. (1). A laboratory to complement PHS 804. Emphasizes the application of statistical methodology to public health practice and public health research. Prerequisite: concurrent enrollment in PHS 804.

PHS 808. Principles of Epidemiology. (3). An introductory graduate-level course concerning epidemiologic principles and how these form the scientific basis for public health.

PHS 809. Management of Public Health Data. (3). Covers basic computing skills necessary for any advanced epidemiologic or administrative quantitative methods. Includes basics of variable and dataset creation, building, maintenance, and basic descriptive (not interpretative) analysis. For students entering a variety of research, administrative, and public health settings in public health, clinical, or other fields. Software covered includes SAS, SPSS, Epi Info, Kansas Integrated Public Health System Software (KIPHS), Microsoft Excel, and ACCESS. Course can stand alone or prepare students for biostatistics and epidemiology courses. Stresses public data presentations to prepare students to communicate about data with the lay public.

PHS 810. Workshop in Biostatistics. (1-3). Topics in biostatistics selected each year according to the needs of the graduate program in public health. Explores methods in depth in a workshop-style format that promotes active learning. Open to non-majors. Repeatable up to 6 credit hours with program consent. Prerequisite: PHS 804 or introductory course in statistics or instructor's consent.

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. Includes health policy, trends in the health care system, and administrative issues. Critical topics 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 the ways people react to perceived symptoms, how they respond as they do to patients in different social settings, the factors which predispose individual reactions to illness and its correlates, and the effects on health of societal agreements and expectations.


PHS 817. Clinical Epidemiology. (3). Involves the application and elaboration of epidemiologic principles, including evidence-based medicine and critical appraisal of the literature in the context of clinical decision-making: design and interpretation of studies relating to diagnosis, prognosis, prevention, and therapeutics; techniques of economic analysis and meta-analysis; use of clinical epidemiology to develop practice guidelines. Prerequisite: instructor's permission.

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. Emphasizes 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 Health Assessment and Development. (3). Focuses on three areas: (1) Value issues related to community health assessment and development, including value choices, clarification of choices, trade-offs, and public judgement. Explores the value and belief systems of libertarians, classic liberals, and communitarians. (2) Development of tools, both conceptual and technical, needed to conduct community health assessments. Includes measurement of health status and development of health care information systems. (3) Policy issues related to community development including allocation of health resources by comparing benefits of competing interventions. Addresses major allocation issues, such as who allocates resources, using the Health Resource Allocation Strategy.

PHS 822. Advanced Research Methods. (3). Advanced topics in health services research; advanced descriptive analysis, advanced multivariate analysis, modeling, causal interpretation, issues in evaluation, proposal writing, special issues in research in health care settings, and problems encountered on research projects. Prerequisite: PHS 818.

PHS 823. Social Epidemiology. (3). Examines the patterns and explanations for diversity in mortality and morbidity in populations, focusing on social factors including subjective class, race, ethnicity, culture, stress, and social relationships, both formal and informal. Explores current thinking about the explanations for mortality and morbidity patterns.

PHS 824. Advanced Epidemiological Methods. (3). Presents additional statistical techniques and their application in the analysis of public health data emphasizing the analysis of cross-sectional, retrospective, longitudinal, and case-control data. Prerequisites: PHS 804 and 808.

PHS 825. Health Care Marketing. (3). An examination of marketing principles as applied in the health care sector. Recognize, discuss, and apply marketing principles to health care environments. Prerequisite: Mkt. 800.

PHS 826. Health Policy. (3). Examines the forces shaping key aspects of health care policy. Analyzes the political, economic, social, clinical, and scientific factors which result in given policy decisions. Pays particular attention to the pivotal role that health services research plays in the process, including its centrality to the link between policy and the management of public health problems.

PHS 827. Reproductive Epidemiology. (3). Applies epidemiologic concepts to problems in reproductive health of men and women. Critical analysis of epidemiologic studies of the sociocultural, individual, and pregnancy-specific risk factors to reproduction. Explores methods to reduce adverse reproductive health outcomes in populations, including work and family policy initiatives. Uses literature synthesis skills in a project focused on preventing adverse reproductive outcomes in a defined population. No prerequisites but PHS 804 and 808 are recommended.


PHS 829. Clinical Trials. (3). The design, implementation, analysis, and assessment of controlled clinical trials. Emphasizes basic biostatistical concepts and models. Explores issues of current concern to trialists. Prerequisite: PHS 804 or instructor's permission.
PHS 830. Issues in Health Services. (3). An in-depth look at current issues facing health professionals. Topics, presented in lecture and student presentations and discussed in small groups, include health reform, access to care, other system issues, and organizational trends and strategies. Critiques topics with regard to public and private goals, consumer and provider interests, and ethics.

PHS 832. Quality Assurance of Health Care. (3). Covers issues of quality assurance in health care provision, including definition and measurement of quality.

PHS 833. Health Economics. (3). An application of classical economic theories, principles, and concepts to the traditional U.S. medical care. Considers both the traditional and unique determinants of demand and supply, emphasizing the role of need for care, provider-induced demand, and health insurance. Also considers the legitimate role of government in health care.

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. Emphasizes understanding and application of general financial concepts to the health setting and includes consideration of financial organization, sources of operating revenues, budgeting, and cost allocation methods.

PHS 835. Organization, Financing, and Delivery of Health Care. (3). Introduces the organization, financing, and delivery modalities of the U.S. medical care system. Examines the development and application of hospital reimbursement methodology (DRG-based PPS) and physician reimbursement methodology (RBRVS). Introduces the principles of health insurance and examines the role of private and public (Medicare, Medicaid) health insurance in health care utilization. Also explores health status outcomes and quality of life measures.

PHS 836. Maternal and Child Health in a Social Context. (3). Explores the effects of the social context on maternal and child health. Emphasizes the family and the social values and beliefs that affect it since it is the most immediate context of mothers and children. Includes other contextual influences such as race and ethnicity, social class, work, and community resources, and support. Develops and assesses models of influence. Discusses the effect of public policies on maternal and child health.

PHS 837. Community-Oriented Primary Care Epidemiology. (3). Overview of how population-based epidemiological concepts are applied to primary care settings, within the framework of community-oriented primary care (COPC). Emphasizes community and clinical populations, chronic illness and disability, and primary care research applications. Prerequisite: PHS 808 or instructor's permission.

PHS 838. Applied Data Analysis. (3). Guides students through the data analysis and data management aspects of population-based research and evaluation studies. Includes managing data on personal computers using SPSS for Windows95, preparing data for computerization, cleaning and assessing the quality of data, developing and assessing measures, choosing appropriate statistical methods, reading and analyzing computer printouts, and reporting the results in research papers or technical reports. Requires application of statistical methods learned in introductory biostatistics as well as regression analysis. Students learn to use SPSS for Windows95. Uses population-based data, both survey and administrative. Analytic portion of course is organized around specific research questions and the statistical tools appropriate for answering them.

PHS 840. Practicum. (1-6). Links academic studies 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. Graded CR/NC only.

PHS 842. Public Health Applications to the World Wide Web. (2). 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.

PHS 843. Health Program Planning. (3). An introductory course for students interested in developing health programs. Provides a conceptual framework of program planning and development. Develop and practice skills in the planning and evaluation of health programs by developing a program plan for a health program in a community of interest.

PHS 844. Health Promotion Methods and Materials. (3). Develop competency in selecting and evaluating appropriate methods and materials for effective health promotion programs. Includes foundations of health communication, adult education theories and practice, community health education, and health promotion materials development and evaluation. Integrates theory into practice by developing the methods and materials for a health promotion program.

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. Prerequisite: instructor's consent.

PHS 885. Thesis. (1-3). Repeatable to a maximum of six hours. Prerequisite: consent of thesis advisor.

Basic Emergency Medical Care Training (EMT)
A certificate in basic emergency medical care training is offered. The certificate is obtained with successful completion of EMT 110. Students who would like to enroll in this course must fulfill all requirements for admission to Wichita State University and be at least 18 years old.

EMT 110 encompasses classroom instruction and ten hours of in-hospital observation. Successful completion of the course meets the educational prerequisite for taking the state and/or national registry examinations for emergency medical technicians.

Lower-Division Course
EMT 110. Basic Emergency Medical Care Training. (10). 8R; 4L. Identifies principles of basic emergency medical care. Includes anatomy, physiology, and emergency recognition and care of medical emergencies and trauma-related injuries. Practicum and discussion provide the opportunity to apply these principles. Students also spend ten hours in hospital observation. Prerequisite: program or instructor's consent.

Mobile Intensive Care Technicians (MICT) A program for the training of mobile intensive care technicians (MICT) or paramedics is offered at Wichita State University in Ablah Hall. The basic program consists of 47 credit hours in 18 months. Students may be awarded an Associate of Applied Science with an emphasis in emergency medical training by Cowley County Community College by combining the 47 credit hours from the successful completion of the MICT training program with 9 hours of course work from Cowley County Community College (offered in Wichita) and 18 additional general education hours from WSU or another accredited institution. 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
MIC 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 triage. Prerequisites: instructor and department approval.

MICT 220. Clinical Internship. (9). Receive in-hospital training with physicians, nurses, and technicians in their area of expertise including the ER, SICU, PICU, MICU, OR, IV Team, LDR, and other areas where skills learned can be applied to pre-hospital care. Prerequisites: instructor and department approval.

MICT 222. Clinical Correlation. (1). Review and discussion of experiences gained during the clinical internship and the application of this information to the pre-hospital setting. Prerequisites: instructor and department approval.

MICT 224. Field Internship. (11). Pre-hospital training with local emergency medical services which are supervised by certified MICT's. Prerequisites: instructor and department approval.

MICT 226. Field Correlation. (1). Review all material and skills gained during the program and apply this information to the field experience. Prerequisites: instructor and department approval.

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 Wichita State University 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills</td>
<td></td>
</tr>
<tr>
<td>Math. 111, 112 or 211</td>
<td>3</td>
</tr>
<tr>
<td>Engl. 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>Engl. 102, College English II</td>
<td>3</td>
</tr>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and Fine Arts</td>
<td></td>
</tr>
<tr>
<td>Fine Arts Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 100G, The Meaning of Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Course in humanities other than philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td></td>
</tr>
<tr>
<td>Psy. 111Q, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 334Q, Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 111Q, Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences and Mathematics</td>
<td></td>
</tr>
<tr>
<td>Biol. 220, Introduction to Microbiology</td>
<td></td>
</tr>
<tr>
<td>(applies as an Introductory General Education course for the BSN degree only)</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 103Q/111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Other Prerequisites</td>
<td></td>
</tr>
<tr>
<td>Biol. 223, Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Nurs. 285, Introduction to Nursing Practice</td>
<td>2</td>
</tr>
<tr>
<td>PHS 301, Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>PHS 400, Introduction to Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>CS 105, Introduction to Microcomputers or Nurs. 331, Nursing and Computer Technology</td>
<td>3</td>
</tr>
<tr>
<td>Statistics with approval</td>
<td>3</td>
</tr>
</tbody>
</table>

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, 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 Nurse Entrance Test (NET) with a minimum composite percentage score of 60.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 5</td>
<td></td>
</tr>
<tr>
<td>Nurs. 300, Care Manager I</td>
<td>3</td>
</tr>
<tr>
<td>Nurs. 310, Primary Health Care</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 320, Health Alterations I</td>
<td>3</td>
</tr>
<tr>
<td>Nurs. 325, Research</td>
<td>2</td>
</tr>
<tr>
<td>Nurs. 345, Health Assessment</td>
<td>4</td>
</tr>
<tr>
<td>Semester 6</td>
<td></td>
</tr>
<tr>
<td>PHS 631, Normal and Clinical Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 360, Secondary Care (8 weeks)</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 370, Health Alterations II</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 380, Maternal-Newborn Nursing (8 weeks)</td>
<td>4</td>
</tr>
<tr>
<td>Semester 7</td>
<td></td>
</tr>
<tr>
<td>Nurs. 402, Care Manager II</td>
<td>2</td>
</tr>
<tr>
<td>Nurs. 410, Tertiary Care</td>
<td>5</td>
</tr>
<tr>
<td>Nurs. 420, Mental Health (8 weeks)</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 430, Nursing of Children (8 weeks)</td>
<td>4</td>
</tr>
<tr>
<td>Semester 8</td>
<td></td>
</tr>
<tr>
<td>Nurs. 450, Care Manager III (11 weeks)</td>
<td>3</td>
</tr>
<tr>
<td>Nurs. 470, Critical Care (11 weeks)</td>
<td>6</td>
</tr>
<tr>
<td>Nurs. 499, Clinical Capstone (5 weeks)</td>
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</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
<tr>
<td>Upper-division philosophy/ethics</td>
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</tr>
<tr>
<td>Issues and Perspectives</td>
<td></td>
</tr>
<tr>
<td>General Education course</td>
<td>3</td>
</tr>
</tbody>
</table>

RN to BSN Progression Plan

The RN to BSN plan offers advanced placement to registered nurses seeking...
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 nurse students 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 nursing credits at the upper-division level.

**Course**

**Prerequisite and General Elective Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Biol. 220Q, Introduction to Microbiology</td>
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</tr>
<tr>
<td>(applies as an Introductory General Education course for the BSN degree only).</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 103Q/111Q, General Chemistry</td>
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**Other Prerequisites**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Biol. 223, Human Anatomy and Physiology</td>
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</tr>
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<td>Statistics with approval</td>
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</tr>
<tr>
<td>General electives*</td>
<td>13</td>
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</table>

**Total** 60

**Upper-Division Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Philosophy/Ethics Electives*</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total**

*Three hours of general or upper-division electives must be an Issue and Perspectives course to meet General Education requirements.

**Professional Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>HHS 301, Clinical Pharmacology</td>
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<tr>
<td>Nurs. 325, Research</td>
<td>2</td>
</tr>
<tr>
<td>Nurs. 334, RN Bridge Course</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 345, Health Assessment</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 456, Primary Prevention</td>
<td>2</td>
</tr>
<tr>
<td>Nurs. 461, Care Manager</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 495, Clinical Capstone Course-RN</td>
<td>2</td>
</tr>
<tr>
<td>Nurs. 531, Nursing and Computer Technology</td>
<td>3</td>
</tr>
<tr>
<td>Career enhancement electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total** 30

Upper-division nursing credits awarded retroactively on the basis of associate degree in nursing or credit by exam... 25

**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/$3 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, lab experiences, etc., may be required throughout the program. CPR certification is required. Information related to these requirements is available from the School of Nursing.

**Lower-Division Course**

**Nurs. 285. Introduction to Nursing Practice.**

(2). Introduces the discipline and scope of nursing as practiced in diverse settings. Examines dimensions of current and emerging roles of nursing within the context of the student's self-awareness of personal and professional goals. Prerequisite: sophomore standing.

**Upper-Division Courses**

**Nurs. 300. Care Manager I.**

(3). An introduction to the nursing role as it relates to legal, ethical, professional, and economic issues in the current health care system. Emphasizes interpersonal skills related to individual and group communication. Prerequisites: Nurs. 285 and concurrent enrollment in Semester 5 classes.

**Nurs. 310. Primary Health Care.**

(4). 2T; 6P. Focuses on teaching health promotion concepts and providing preventive care to the individual, family, and community. Introduces the nursing process as a problem-solving tool. Uses the technology lab and various primary care settings for clinical learning. Prerequisites: Nurs. 285 and concurrent enrollment in Semester 5 classes.

**Nurs. 320. Health Alterations I.**

(3). Emphasizes alterations in the health status of adults. Studies major preventable and acute conditions with interventions directed toward health promotion. Prerequisites: Nurs. 285 and concurrent enrollment in Semester 5 classes.

**Nurs. 325. Research in Nursing.**

(2). Presents an overview of the research process and its relationship with theory. Emphasizes identifying clinical problems, critiquing research findings, and applying those findings to practice. Prerequisite: Concurrent enrollment in Semester 5 classes.

**Nurs. 334. RN Bridge Course.**

(4). Enhances the knowledge base of the RN-BSN student in leadership and management theory and application in professional nursing, therapeutic communication, and nursing theory. Prerequisite: admission to WSU School of Nursing.

**Nurs. 335. Transitions to Professional Nursing.**

(2). Introduces the licensed practical nurse (LPN) to the study of nursing as a practice discipline and professional nursing roles. Emphasizes the nursing process and the self-care concept of nursing and its use in professional practice, education, and scholarship. Prerequisites: current license as an LPN in Kansas and admission to the School of Nursing.

**Nurs. 345. Health Assessment.**

(4). 3T; 3L. Emphasizes multiple methods of data collection relevant to the health status of individuals and families across the lifespan. Focuses on holistic assessment of individuals and families from diverse populations. Prerequisites: Nurs. 285 and concurrent enrollment in Semester 5 classes.

**Nurs. 350. Workshops in Nursing.**

(1-4). Intensive study of special topics related to nursing practice, education, or research. Open to nonmajors.

**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 health potential in individuals from the young adult to the frail elderly. Prerequisites: Semester 5 courses. Corequisite: Semester 6 courses.

**Nurs. 370. Health Alterations II.**

(4). 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 5 courses. Corequisite: Semester 6 courses.

**Nurs. 380. Maternal Newborn Nursing.**

(4). 3T; 14P (8 weeks). Studies maternal newborn nursing with clinical applications in various health care settings. Focuses on family-centered nursing care from preconception through the postpartum period. Prerequisites: Semester 5 courses. Corequisite: Semester 6 courses.

**Nurs. 402. Care Manager II.**

(2). Explores leading and managing as essential components of professional nursing practice. Examines the implication of ethical, legal, and economic issues as they impact nursing practice. Prerequisites: Semester 5 courses. Corequisite: Semester 6 courses.
Nurs. 404. Survival Skills for Health Care Professionals. (3). 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 change; ways to adapt to economic, ethical, and political issues; assertive communication; stress management techniques; and ways to find professional satisfaction in less than satisfactory circumstances. Emphasizes adopting and promoting life styles conducive to optimal health. Health care background recommended.

Nurs. 410. Tertiary Care. (3). 11P. 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 6 courses. Corequisite: Semester 7 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. 432. Educational Supportive Nursing Systems. (3). 2R; 3L. Elective. Lecture/clinical course focuses on the planning and implementation of patient education. The nurse's role in patient education includes assisting the patients in decision-making, behavior control, and acquiring knowledge and skills. Emphasizes the development of the nurse's ability to use teaching methods in clinical nursing situations. Builds upon the knowledge and clinical experiences of identified prerequisite courses. Enhances the knowledge and abilities of the student to educate individuals and small and large groups in a clinical setting. Prerequisite: instructor's consent.

Nurs. 434. Perioperative Clinical Management: Workstudy. (5). 2T; 9P. Elective. Lecture/clinical course examines the nursing needs of individuals in small groups that have various health problems requiring surgery. Focus is 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: Nursts 310, 320, 345, 360, 370, 380, or completion of 30 hours of a professional nursing program.

Nurs. 450. Care Manager III. (3). 2T; 7P. Explores the role of the professional nurse in a population-based setting. Student completes 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. (2). 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). Web-based course. Explores the role of the professional nurse in the community setting. Students select an area of focus for community nursing enhancement and complete a community assessment project. Includes topics related to management and financial implications for nursing. Prerequisite: admission to School of Nursing.

Nurs. 470. Critical Care. (6). 3T; 18P. Emphasizes the provision of care for critically ill clients across the lifespan. Focuses on complex nursing interventions and clinical decision making. Prerequisites: Semester 7 courses. Corequisite: Semester 8 courses.

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 coursework program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Students enrolled in Co-op 481 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six 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. Enhances the registered nurse's skills in the community and other settings. Provides opportunity to perform therapeutic nursing interventions in student-selected settings. 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 socialization into the professional nursing role. Student focuses on a selected area of practice within the current health care environment. Prerequisites: Semester 7 courses and Nursts 430 and 470.

Courses for Graduate/Undergraduate Credit
Nurs. 505. Directed Study in Nursing. (1-4). Elective. Individual study of the various aspects and/or problems of professional nursing. Repeatable. Prerequisite: departmental consent.

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 enhances nursing assessment and care. Course examines the cultural influences on health and illness in a variety of groups, emphasizing developing more sensitive and effective nursing care. Prerequisites: admission to School of Nursing or instructor's consent.

Nurs. 530. Concepts of Loss. (2). Elective. Strategies for helping clients and families cope with broad aspects of loss, from temporary to permanent, from illness to death. Includes human response, through the life span, to changed body image, disability and disfigurement, chronic illness, dying and death. Includes grief and mourning. Open to nonnursing majors.

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 multiple computer programs. 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. 543. Examines the history of the women's health movement, focuses on current issues relevant to women and 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 nonnursing majors.

Nurs. 566. Perspectives on Self-Help Groups. (3). Cross-listed as Psy. 566 and Sc. Wk. 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 experience 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). 2R; 3L. 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. (2). Designed to assist students to refine history taking, psychosocial assessment and physical assessment skills. Focuses on assessment of individuals throughout the life span. Emphasizes detailed health history taking, dif-
ferentiation, 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. Corequisite: Nurs. 702.

Nurs. 702. Advanced Health Assessment Laboratory. (1) Companion course for Nurs. 701. Apply history taking and assessment skills within a laboratory setting. Emphasizes differentiation, interpretation and documentation of normal and abnormal findings. Requires a complete history and physical examination of a client. Prerequisite: admission to graduate nursing program. Corequisite: Nurs. 701.


Nurs. 704. Health Maintenance of the School Age Child. (3). Examines and applies major theories, clinical concepts and research studies related to school health nursing. Open to RN and graduate students.

Nurs. 705. Scientific Inquiry II. (3). Builds on Nurs. 703. Discusses the research process in relationship to concepts, frameworks/theories. Explores various methodological approaches to research. Considers current issues in nursing research. Demonstrates the research process in a preliminary proposal related to the 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 focuses 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 nonnursing 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 role and its 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 practitioner students practice these skills in laboratory and/or clinical settings. Prerequisite: admission to one of the NP options and departmental consent. Enrollment is limited.

Nurs. 733. Diabetes Mellitus Nursing. (3). Exploration of clinical theories; identifies and studies appropriate nursing systems for clients with diabetes mellitus. Emphasizes attaining and maintaining optimal levels of functioning and the psychological adjustment of the client and family to a potentially devastating disease. Open to nonnursing 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 nonnursing majors.

Nurs. 740. Workshops in Nursing. (1-4). An opportunity for intensive study of special topics related to nursing practice, education or research. Open to nonnursing majors.


Nurs. 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 corequisite: 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. Alterations form the basis for understanding a variety of pathophysiological conditions and the manifestations and impact of abnormal physiological functioning on neonates. Addresses both general and specific concerns and major system dysfunctions. Prerequisite: admission to NNP track or department consent.

Nurs. 781. Pathophysiology for Acute and Critical Care. (3). Examines pathophysiological 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. Brain Disorders in Mental Illness Assessment and Nursing Interventions. (3). For the student preparing for advanced practice in psychiatric nursing. Considers neurotransmitters, neuroanatomy, neuropsychology in the assessment and intervention approaches to the brain disorders of major mental illnesses. 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. Graded S/U. 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 track 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. 795. Advanced Pathophysiology. (3). Explore in-depth scientific knowledge base relevant to selected pathophysiological states confronted in primary care. This provides the basis for the foundation of clinical decisions related to diagnostic tests and the initiation of therapeutic regimens. Age specific and developmental alterations are correlated with clinical diagnosis and management. Application is made through age appropriate examples. 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 drugs. The role of nurses in the identification of 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 areas related to the profession and practice of nursing. Prerequisites: 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.

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 wellness, and positive behaviors. Prerequisites: all core courses, Nurs. 718, 786 and admission to the FNP option. Prerequisites or corequisites: Nurs. 715, 793 and 795. Corequisite: 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. Corequisite: Nurs. 803.

Nurs. 805. Health Promotion through the Life Span. (3). Focuses on the wellness of 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 wellness, and positive behaviors. Prerequisites: all core courses, Nurs. 718, 786 and admission to the FNP option. Prerequisites or corequisites: Nurs. 703 and 705.

Nurs. 808. Advanced Role Practicum. (3). 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 strategies to improve nursing practice. Prerequisites: all core courses, Nurs. 791A or 795, 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 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 complex patient problems in urban and rural patients, interventions to restore individual and family levels of wellness, and positive behaviors. Prerequisites: all core courses, Nurs. 803, 804 and admission to the FNP option. Corequisite: 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 analysis and evaluation of clinical situations and case studies. Prerequisites: admission to the FNP option. Corequisite: Nurs. 809.

Nurs. 811. Foundations of Nursing Administration. (3). Assists the student in acquiring theoretical knowledge of organizations. Considers current issues and research in nursing administration and impact on nursing practice. Prerequisites: Nurs. 703 and 705. Prerequisite or corequisite: Nurs. 715.

Nurs. 812. Nursing Administration Practicum. (3). Practicum in a nursing administration setting; student, under professional guidance, becomes directly involved. Special emphasis is placed on the development of leadership skills as the student assimilates the field experience. Types of experiences may include roles in nursing education or service, mid-level nursing administration, staff development or community health. May be repeated twice. Prerequisite: 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 corequisite: 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 evidenced-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. Prerequisite: Nurs. 711, 796, 703 and 705. Prerequisite or corequisite: Nurs. 715.

Nurs. 821. Thesis. (1-6). Graded S/U 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 or family members. Seminar accompanies practicum. Prerequisites: admission to graduate nursing program and departmental consent.

Nurs. 823. Graduate Project: Alternative to Thesis. (1-3). Graded S/U 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 another type project developed in conjunction with the student's faculty advisor. Prerequisites: admission to graduate nursing program and departmental consent.

Nurs. 825. Independent Study. (1-6). Provides opportunity for the student to develop, in collaboration with a school faculty member, an independent project, or for the student to pursue an independent research project. Prerequisites: admission to graduate nursing program and departmental consent.

Nurs. 827. Resource Management in Nursing. (3). Focuses on the assessment of human and material resources and informational systems needed to manage nursing care delivery. Emphasizes Nursing Personnel Management, patient classification systems, cost of nursing services, strategic planning and marketing. Prerequisites: Nurs. 703 and 705. Prerequisite or corequisite: Nurs. 715.
Nurs. 829. Health Care during Growth and Development of Children and Families. (1-4). Focuses on physical and psychosocial developmental changes from infancy through young adulthood. Considers factors that facilitate or interfere with healthy development. Provides an introduction to family theories including family development, family systems, and family stress. Emphasizes the role of the Advanced Practice Nurse in assisting children and families during the developmental years. Modular format allows students to select specific units: Unit One: Growth and Development: The Infant and Young Child (1 credit); Unit Two: Growth and Development: The Adolescent and Young Adult (1 credit); Unit Three: Family Issues: Part I and II (1 credit each). Prerequisites: Nurs. 703 and 705.

Nurs. 832. Pediatric and/or Women's Health Nursing: Practicum I. (3). Prepares students for a concentrated clinical experience; student focuses on the process of systematic developmental, psychosocial and health assessment of individuals within a family system environment based on student's clinical interests. Prerequisite: All core courses. Prerequisite or corequisite: Nurs. 829.

Nurs. 834. Adult Nursing Practicum. (3). An intensive clinical experience; student designs, implements and evaluates nursing care for adults. Selects specialized areas of study; may involve health maintenance or illness care of acutely or chronically ill adults. Prerequisites: All core courses, Nurs. 781 and 791A. Prerequisite or corequisite: Nurs. 805 or 839.

Nurs. 836. Pediatric and/or Women's Health Nursing: Practicum II. (3). An intensive clinical experience; student analyzes, prioritizes and designs therapeutic interventions in the management of common health problems affecting individuals and family systems. Experiences based on student's clinical interests. Prerequisites: All core courses, Nurs. 805 or 839.

Nurs. 839. Management of Acute and Chronic Health Problems of the Adult. (3). Examines clinical concepts and issues related to major disruptions in the health status of adults. Emphasizes assessment, measurement and interventions related to acute and chronic health problems. Prerequisites: All core courses, Nurs. 781 and 791A. Prerequisite or corequisite: Nurs. 805.


Nurs. 847. Pediatric Primary Care I: Management of Common Health Issues. (3). Focuses on comprehensive assessment, diagnosis, and management of health and common health problems seen in children and families during the infant, childhood, and adolescent years. 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 children's and family's levels of pre-illness health, and positive behaviors. Prerequisites: Nurs. 801, 702, 703, 705, 719, 786, 829 and admission to the PNP option. Prerequisite or corequisite: Nurs. 715, 793 and 805.

Nurs. 848. Pediatric Primary Care I Practicum: Clinical Management of Common Health Issues. (3). Concentrated clinical practice in a primary care setting that addresses individuals and families during the infant, childhood, and adolescent age span, within the context of the community. Emphasizes history taking: cultural, developmental, nutritional, and physical assessment; and documentation skills. Seminars focus on analysis and evaluation of clinical situations. Prerequisites: admission to the PNP option. Prerequisite or corequisite: Nurs. 847.

Nurs. 849. Nurse Practitioner Preceptorship. (3 or 6). A concentrated clinical practicum in an acute or primary health care setting that emphasizes the management of care for individuals. Students synthesize concepts and principles from previous classes and clinical experiences, applying theoretical and research content to clinical situations. Prerequisites: admission to the PNP option. Prerequisite or corequisite: Nurs. 847.

Nurs. 850. Clinical Data Management. (3). Management of clinical data and its relationship to advanced nursing practice. Existing data from clinical practice settings identified and analyzed for presentation both verbally and in report form. Emphasizes using existing data both to determine health care outcomes and to evaluate delivery of care. Communication of findings will occur. Prerequisites: All core courses and at least 6 hours of clinical concentration. Computer literacy is an expectation.

Nurs. 852. Adult Case Management Practicum. (3). Applies case management principles in this intensive clinical experience as the student designs, implements, and evaluates nursing care for adults. Emphasizes measuring clinical outcomes and management of resources. Prerequisites: All core courses, Nurs. 781 and 791A. Prerequisite or corequisite: Nurs. 805 or 839.

Nurs. 853. Reproductive Health of Women. (3). Examines women's health issues and promotes positive self-care practices for common health problems. Includes epidemiology, assessment data, diagnostic methods and self-care interventions. Encompasses health education and counseling to women during the life cycle and health care resources for women's health. Prerequisite: All core courses and Nurs. 829 and 832.

Nurs. 855. Management of the Acutely and Critically Ill Adult. (3). Examines advanced nursing interventions focused on client stabilization and management of complications in the acutely/critically ill adult. Emphasizes the management of the adult with complex health problems. Emphasis is on application of advanced practice nursing care to the restoration of health/well being. Prerequisites: Nurs. 805, 834, 839, 852, admission to the ACNP option and departmental consent.

Nurs. 857. Pediatric Primary Care II: Management of Common Health Issues. (3). Examines advanced 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. Considers children with developmental and learning disabilities and children with selected complex and chronic health problems. 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. 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 settings and interventions to restore children's and family's levels of pre-illness health, including secondary and tertiary prevention. Prerequisites: Nurs. 847 and 848.


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 m<the<, reviews 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, economical and environmental factors 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...

Nurs. 861. Neonatal Nursing II. (4). Continuation of Nurs. 815. 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; this one is 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 applying findings from research relevant to comprehensive care of neonates. The client system is the neonate and family. Prerequisites: Nurs. 815 and 861.

Nurs. 864. Neonatal Nurse Practitioner Preceptorship II. (6). Continuation of Nurs. 862; this one is 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 measure 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.

School Nurse
The following curriculum plan is recommended for registered nurses who desire school nurse certification but who do not wish to pursue a degree.

Students generally take three courses in the College of Education and three courses in the School of Nursing. The total program requires 14-18 credit hours. Contact the School of Nursing for details.

The following abbreviations are used in the course descriptions; T stands for theory and L for laboratory. For example, 4T; 2L means four hours of theory and two 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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Fairmount College of Liberal Arts and Sciences is committed to the living traditions of the liberal arts and sciences, which recognize and affirm the dynamic nature of the world, the dignity and importance of all societies, and the need for citizens to be prepared for a changing future. The members of our richly varied disciplines are united in our mission to enhance the quality of life, for individuals and the community.

Fairmount College of Liberal Arts and Sciences offers undergraduate majors in the natural sciences, social sciences, and humanities, and programs of professional training. An education in these disciplines helps students develop critical thinking skills, knowledge and appreciation of our physical and biological world, the arts, and different cultures, and an awareness of civic responsibilities, as well as professional preparation. The college also provides courses in basic skills, as well as general education, and other courses required for graduation from other colleges at WSU. These provide students with skills that are intrinsically valuable and often fundamental to professional training and the needs of the workplace.

Degrees Offered

Undergraduate

The Associate of Arts degree requires completion of a minimum of 65 credit hours including 15 hours in residency at Wichita State University and 50 of the 65 credits from liberal arts and sciences departments. This degree must include the 42 credit hours required in the University's General Education Program (described in the introductory section of this Catalog), and students must be enrolled in one of the University's degree-granting colleges. A cumulative grade point average of 2.000 is required for the degree as well as a 2.000 for WSU academic work.

The Associate of Applied Science degree in electrical engineering technology is offered jointly with the Wichita Area Technical College. Sixty-two credit hours are required in this program including ten hours of residency at WSU. WSU instructs general education classes, and WATC provides technical courses. Cumulative and WSU grade point averages must be at least 2.000 for this degree.

Bachelor of Arts degrees are offered in anthropology, biological sciences, chemistry, communication, communicative disorders and sciences, computer science, economics, English, French, geology, history, mathematics, minority studies, philosophy, physics, political science, psychology, social work, sociology, Spanish, and women's studies.

The Bachelor of Science is available in biological sciences, chemistry, computer science, criminal justice, geology, gerontology, 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, political science, psychology, social work, sociology, and Spanish. The Master of Science (MS) may be obtained in biological sciences, chemistry, computer science, environmental science, geology, mathematics, and physics.

The Master of Computer Science (MCS) is awarded in computer science; the Master of Fine Arts (MFA) in creative writing; the Master of Education (MED) in speech; the Master of Arts in Liberal Studies (MA) in interdisciplinary studies; and the Master of Public Administration (MPA) in public administration.

The Doctor of Philosophy (PhD) degree is offered in chemistry, applied mathematics, and psychology—human factors and community/clinical.

For more information, consult the Wichita State University Graduate 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 the 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. Nondegree-bound. These students enroll in classes or programs for purposes other than achieving a degree.

See University admissions details in the introductory section of this Catalog.

Probation and Dismissal Standards

Students are placed on probation whenever their cumulative WSU grade point average falls below 2.000. Probation is removed when the overall WSU grade point average reaches the required 2.000 level. Students continue on probation when they earn a 2.000 or better semester average and their overall WSU grade point average remains below 2.000. If students on probation fail to earn at least a 2.000 semester average, and if their WSU overall grade point average remains below 2.000, they will be dismissed. Students on probation will not be academically dismissed unless they have attempted at least 12 hours after being placed on probation. 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 the college’s Admissions and Exceptions Committee. Fairmount College requires petitioners to meet with an academic counselor for a personal interview and to prepare a written petition. Cases for readmission must be developed by the student after consultation with an advisor. The petition is then considered by the 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 secure their recent academic records, complete the petition satisfactorily, and conclude their final readmissions interview at least ten days before the first day of enrollment. Interviews are not conducted during any of the scheduled registration sessions.

Enrollment Limits
Students in good academic standing may enroll for a maximum of 19 hours during fall 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 college dean’s office or 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 degree-bound students within the college, exploratory, and nondegree-bound students.

Degree-Bound Students in Fairmount College Programs
Degree-bound students who have declared interest in any of Fairmount College’s programs receive advising from department faculty. Students with early and sustained involvement in their major departments develop methods of inquiry, peer and mentoring relationships, and intellectual and social perspectives which deepen and enrich their 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) faculty and staff 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 high school 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 who have not declared a major area of study are assigned to members of the faculty and staff with academic advising responsibility in the LASAC. Exploratory students should declare a major or a degree preference within the first 48 hours of enrollment.

Nondegree-Bound Students
LAS Advising Center (LASAC) faculty and staff advisors provide nondegree-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, general updating, or professional certification. Programs, policies, and procedures emphasize ease of access to WSU and its resources and opportunities for individual assistance. College and high school guest students and high school concurrent enrollment students also fall in this category. The LASAC will connect a nondegree-bound student with an appropriate academic advisor upon request. Those 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 college’s advising, records, and information services staff offer students assistance in becoming acquainted with departmental requirements, programs, and faculty, and assist 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 preregistration and registration, the departmental undergraduate advisor will fill out a graduation plan with each student who has completed 90 credit hours. Completion of this plan 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 below). The plan of study must be approved by the BGS Policy Committee, a subcommittee of the Curriculum and Academic Planning Committee of Fairmount College. This plan will be submitted along with other application for graduation materials to the LAS Advising Center. Thirty credit hours must be completed after the student’s declaration to pursue the Bachelor of General Studies degree is filed.

Applications and degree cards may be obtained from any college department office.

Assessment of Academic Programs
Fairmount College of Liberal Arts and Sciences participates in a University-wide program to assess the effectiveness of all curricula and instruction within the university. Individual departments within the 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 pro-
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
Fairmount College of Liberal Arts and Sciences offers credit for life experience when a student's learning from life experiences would duplicate the content of a course offered in the Catalog, when the student has worked with the faculty member authorized to teach that course to document the learning from that life experience, and when the faculty member has ascertained that the documentation supports the award of credit.

While some other universities fit college credit to the student's experience, Fairmount 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 be admitted to Wichita State University and must pay a nonrefundable assessment fee to the Office of the Controller. Students will be advised of fees upon entering the program. The faculty member sends a memo authorizing the (ungraded) credit to the college office. Credit is awarded and is noted on the student's transcript.

Cooperative Education
Fairmount College of Liberal Arts and Sciences participates in the Cooperative Education program which finds paid internships for undergraduates and graduates who wish to combine their classroom studies with academically related employment.

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 are available in Fairmount College of Liberal Arts and Sciences to professionals in the community, to students who have already earned degrees, and to students pursuing degrees in Fairmount College or other degree-granting colleges. A certificate is awarded acknowledging a student's completion of a disciplinary or interdisciplinary focus consisting of courses which provide thematic coherence in a unique area of applied or theoretical work. Specific requirements for the following certificate programs may be reviewed in the departmental sections that follow:

- Applied Communication (graduate and undergraduate) - Elliott School of Communication
- Corrections; Forensic Criminology; Law Enforcement - School of Community Affairs
- Public Management - Hugo Wall School of Urban and Public Affairs
- Film Studies - English
- Computer Competency; Information Technology - Computer Science
- Substance Abuse Counselor Training - Psychology
- Women's Studies - Women's Studies

Academic Honesty and Code of Conduct
The faculty of Fairmount College of Liberal Arts and Sciences 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 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 the 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:
1. Basic skills—The following courses must be completed in the first 48 college hours with a grade of C or above.
   - Engl. 100 or 101 and 102, English Composition
   - Comm. 111, Public Speaking
   - Math. 111 (or higher), College Algebra, or Math 131, Contemporary Math
2. Upper Division—at least 40 semester hours of credit in courses numbered 300 or above.
3. 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.
4. Four-year institution—a minimum of 60 credit hours must be completed in a four-year degree-granting college or university.
5. D Grades—no students are allowed credit toward graduation for D grade work in excess of one-quarter of the total hours.

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 a fine arts discipline listed below; 2) one introductory course from two different humanities disciplines listed below; and 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 three 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 History 131Q or 132Q (humanities) or Political Science 121Q (social sciences) 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 from 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 within the college.

Candidates for the BS degree must take a minimum of three courses (nine 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
(approved for the University general education program): anthropology, criminal justice, economics, geography, minority studies, political science, psychology, social work, sociology, other approved discipline for an Issues and Perspectives class.

Other Social and Behavioral Sciences for elective use: gerontology.
The Schedule of Courses produced each semester before enrollment outlines specific courses approved in each of the above categories.

VI. 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 210Q classes, although approved to count towards humanities requirements in the general education program, will not fulfill a humanities course requirement for Fairmount College of Liberal Arts and Sciences students. All language course from the 220 or above level will count as general education humanities credit if on the approved list of classes published in the University 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.

Students with sufficient high school background in language study to merit placement in a 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.

Candidates for the BS within the division of natural sciences and mathematics have no foreign language requirement unless it is required by the department.

VII. Natural Sciences and Mathematics. Candidates for any BA degree and for the BS degrees in criminal justice and gerontology must demonstrate proficiency at a level equivalent to five 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 either of 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.

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 department majors:

1. A 2.000 grade point average is required in the major

2. No more than six hours from the major may be used to satisfy college distribution requirements

* 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 nine 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
(approved for University general education program): biology, chemistry, geology, physics, other approved discipline for an Issues and Perspectives class.

Other Natural Sciences and Mathematics for elective use: Anthr. 101Q and 106 (counts as biology); Geog. 201 and 235 (count as physical science).

The Schedule of Courses produced each semester before enrollment outlines specific courses approved in each of the above categories.

VI. 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 210Q classes, although approved to count towards humanities requirements in the general education program, will not fulfill a humanities course requirement for Fairmount College of Liberal Arts and Sciences students. All language course from the 220 or above level will count as general education humanities credit if on the approved list of classes published in the University 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.

Students with sufficient high school background in language study to merit placement in a 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.

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 department majors:

1. A 2.000 grade point average is required in the major

2. No more than six hours from the major may be used to satisfy college distribution requirements
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. At least 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. Field Major. Field majors in biochemistry, chemistry/business, classical studies, and international studies are available. Other field majors may be designed by students who wish to select three or more correlated areas of study and develop an acceptable plan of course work. Field majors must adhere to the following rules:

1. At least 18 hours must be taken in one department and nine hours in each of two allied departments (36 hours total) with at least 12 of these hours upper division.

2. A plan of study must be developed in consultation with and approved by an advisor in the major area of study and the LAS Advising Center.

XI. Minor. Minors are offered in geography and all fields of study in which a major may be earned. 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 that college.

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 Bachelor of General Studies degree may allow 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 Bachelor of General Studies advisor in the department of primary interest, each student pursuing a Bachelor of General Studies 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 (“G” courses) will count toward the “primary” portion of the concentration but will be included 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. Nonliberal Arts and Sciences Courses. Students may count only 24 hours of nonliberal arts and sciences courses toward either the BA or BS degree. 30 hours of nonliberal arts and sciences courses may count toward the BGS degree. (This includes courses taught outside of departments in the liberal arts and sciences.) Any nonliberal arts and sciences courses required by a major within the college will apply to LAS hours required for the degree.

Field Major

Students may select a major that correlates three or more fields of study to receive a broad appreciation of the cultural and dynamic factors of human conduct. The selection of courses must be made with an advisor from the primary department of interest and with the dean’s 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 nine 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 predesigned field majors indicated below. Students must meet BA graduation requirements for all field majors except biochemistry and chemistry/business which lead to the BS degree.

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 the chairperson of 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 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 Option A should
contact the international studies advisor in the history department.

**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 of Liberal Arts and Sciences 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.

**Prelaw**

The Association of American Law Schools states that students interested in pursuing a law degree should get a broad undergraduate education that provides “comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and creative power in thinking.” These qualities are to be achieved through disciplined study in fields of the student’s choice. Requirements for the bachelor’s degree provide students with both a general education and a concentration in a major field of study.

Law school admission requires completion of a baccalaureate degree. Many majors provide appropriate foundation for the study of law, and college advising staff offer prelaw 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 include 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 94 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 medical professions program and qualified for admission to the second year. Candidates must apply for the degree through the LAS Advising Center.

Academic advising for premedical professional programs is provided in the student’s major department. Professional program application information is coordinated through the LAS Advising Center.

**Preparation for Secondary Education**

Students planning to teach in high school may pursue a Fairmount College of Liberal Arts and Sciences degree program while preparing to meet State Board of Education requirements for secondary education certificates. 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 certification. For further details and information, contact a major department advisor in Fairmont College of Liberal Arts and Sciences or a teaching field advisor in the College of Education.

**Anthropology (Anthr.)**

Anthropology is the comprehensive study of humanity in all of its manifestations and in all times and places. Anthropology is holistic and it examines aspects of human action—psychological, biological, social, and cultural—including technological, economic, religious, political, and artistic. Anthropologists explore 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.

Anthropology combines the perspectives of the sciences and the humanities. Its traditional four subfields (archaeological anthropology, biological anthropology, cultural anthropology, and linguistic anthropology) study human beings and human societies from an interdisciplinary perspective and from both evolutionary and humanistic points of view. The department offers a broad range of courses for majors and minors and for general education requirements. These courses provide students with opportunities to learn about, appreciate, and understand the values and perspectives of people from cultural traditions other than their own, and to improve their ability to interact successfully with them.

A major in anthropology consists of at least 30 semester hours, 15 hours of which must be chosen from a required list of courses. These 15 hours include an introductory course in biological anthropology, Anthr. 101Q; a course in cultural or general anthropology, 102Q or 124Q; a method and theory course, 647; an area course (choose from Anthr. 303Q, 307, 312, 506, 511, 515Q, 516Q); and one course in archaeology (choose from Anthr. 305Q, 313, 335, 508Q, 538, 611, or 613). An additional 15 semester hours of anthropology electives can be distributed across the catalog listings for anthropology to match the student’s interest in a particular sub-discipline(s).

A maximum of 6 semester hours of certain courses in related departments may be counted toward an anthropology major if they meet the particular needs of students and are approved by the anthropology department.

**Minor**

A minor 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. 101Q, either 102Q or 124Q, and 126Q.

**Field Major**

A field major in anthropology enables undergraduate students to combine studies from three separate departments. The anthropology field major consists of 18 credit hours in anthropology, including at least 6 hours of upper-division work and 9 hours of related credit in each of two departments other than anthropology. Students seeking a field major in anthropology must take Anthr. 101Q, either 102Q or 124Q, and 126Q. All remaining anthropology and non-anthropology hours for the field major are chosen in consultation with the student’s anthropology advisor.

**Lower-Division Courses**

- Anthr. 100G. Anthropology of Modern Life.
- Anthr. 101Q. General education introductory course. Introduces anthropological perspectives on the behavior and institutions of contemporary people, emphasizing the mass culture of the United States.
that complements the student's academic program. Consultation with and approval by an appropriate faculty sponsor are necessary. Offered Cr/NR only.

Upper-Division Courses

>Anth. 303Q. World Cultures. (3). General education further study course. Comparative case studies of the cultures of varying types, including nonliterate peoples, Third World nations, and modern industrialized countries.

>Anth. 307. Peoples of Africa. (3). General education further study course. A description and analysis of the cultural areas of Africa south of the Sahara Desert from ethnographic and ethnographic sources.

>Anth. 310. Asia Pacific Cultures. (3). General education further study course. Studies of 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.

>Anth. 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.

>Anth. 318. Psychological Anthropology. (3). General education further study course. The relationship of psychological anthropology (personality, emotion, cognition), both normal and abnormal, to group membership and cultural context.

>Anth. 327. Magic, Witchcraft, and Religion. (3). General education further study course. Cross-listed as Rel. 527. An examination of various concepts concerning the realm of the supernatural as held by various peoples both to their physical and sociocultural environments, including the effects of these relationships on economic activities, social organizations, and beliefs and behaviors emphasizing the evolutionary development of survival strategies.

>Anth. 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, theories, and contributors that shaped the modern discipline of anthropology. Prerequisites: Anthr. 100G, 101 or 102 or 104.

>Anth. 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. 101Q or Biol. 203Q or equivalent.

>Anth. 361. Law, Politics, and Society. (3). General education further study course. Studies legal and political systems in non-Western societies. Includes the origins of the state, pre-colonial law and politics, the impact of colonialism, and problems in state building.

>Anth. 388. Cognitive Anthropology. (3). General education further study course. Concentrates on a transcultural comparison of the cognitive constructions of life-space, social reality, and worldview in foraging, agricultural, and industrial societies focusing on the socioculturally conditioned aspects of intellectual functioning and perceptually based behavior.

>Anth. 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.


>Anth. 498. Readings in Anthropology. (2-3). Repeatable up to six 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 three hours. An introduction to the laboratory processing of archaeology 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. 305Q.

>Anth. 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.

>Anth. 508Q. Ancient Civilizations of the Americas. (3). General education further study course. A cultural survey of the Aztec, Maya and Inca. Prerequisite: instructor's consent.

tions north of Mexico from the protohistoric through the historic period. Prerequisite: Anthr. 102Q.

> 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. 515Q. China. (3). General education further study course. An introduction to the peoples of China and aspects of their culture: economy, government, society, religion and the arts. Historical attention on the many adjustments the Chinese have made during the 20th century following political revolutions, industrialization and expanding trade relations.

> Anthr. 516Q. Japan: People and Culture. (3). General education further study course. An introduction to the culture of Japan including its history and aspects of traditional culture and the 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 solving of social problems in industry, public health and public administration. Prerequisite: Anthr. 102Q.

> Anthr. 522Q. Art and Culture. (3). General education further study course. A survey of the visual and performing arts of nonwestern peoples with special attention to their relationships in the cultural setting. Prerequisite: Anthr. 102Q.

> Anthr. 526. Social Organization. (3). A survey of the varieties of social organization among nonindustrialized peoples throughout the world. Deals with family systems, kinship, residence patterns and lineage, clan and tribal organizations. Prerequisite: six hours of anthropology.

> 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 curative drugs and other agents, the roles of healers and therapists and the attitudes of the community toward the ill. A library or field research project is required. Prerequisite: three hours of nursing or three hours of anthropology or instructor's consent.

> Anthr. 538. 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 Archaic Tradition, and of the role of cultural contacts between eastern Asia and North America. Prerequisite: Anthr. 305Q.

> Anthr. 540. The Indians of the United States: Conquest and Survival. (3). An anthropological inquiry into four centuries of cultural contact, conflict, resistance, and renaissance. Prerequisite: Anthr. 102Q or instructor's consent.

> Anthr. 542. Women in Other Cultures. (3). A general education further study course. Cross-listed as Wom. S. 542. Dealing 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. Paleoanthropology and Human Paleontology. (3). A detailed examination of fossil remains and a survey of various interpretive explanations of the fossil record. Prerequisite: Anthr. 101Q or Biol. 203Q or equivalent.

> Anthr. 557. Human Osteology. (3). Deals with human skeletal and dental materials with applications to both physical anthropology and archaeology. Lecture and extensive laboratory sessions: includes bone and tooth identification, measurement, analysis and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: Anthr. 101Q or equivalent.


> Anthr. 597. Topics in Anthropology. (3). Detailed study of topics in anthropology with particular emphasis being established according to the expertise of the various instructors.

> Anthr. 600. Forensic Anthropology. (3). Cross-listed as CJ 600. Encourages 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. 101Q 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). Analyze biological anthropology materials including human and nonhuman skeletal material of both forensic contemporary or prehistoric origin according to standardized methods for recording and data collecting in biological anthropology. Learn methods of identification, analysis, and interpretation and prepare a standard technical report. Prerequisites: Anthropology 101Q, 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 and surrounding areas emphasizing the cultural continuities and changes covering 11,000 years. Prerequisites: one introductory course in anthropology or departmental consent.

> Anthr. 612. Indians of the Great Plains. (3). An introduction to the cultural dynamics of the Great Plains area from the protohistoric period to the present. Prerequisites: six 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: six hours of anthropology.

> Anthr. 651. Language and Culture. (3). Cross-listed as Eng. 651. An introduction to historical and descriptive linguistics. Deals with the ethnography of communications, lexicostatistics and linguistic determination. Prerequisites: six hours of anthropology.

> Anthr. 667. English Syntax. (3). Cross-listed as Eng. 667 and Ling. 667. Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisite: Eng. 315 or Ling. 577 or Anthr. 577 or instructor's consent.

> Anthr. 690. Field Methods in Anthropology. (3-6). A maximum of six 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. Prerequisites: instructor's consent.

> Anthr. 736. Advanced Studies in Archaeology and Ethnonistory. (3). Special area and theory problems in a historical approach to culture. Prerequisites: graduate standing and 6 hours of anthropology.

> Anthr. 746. Advanced Studies in Cultural Anthropology. (3). Entails 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. Prerequisite: graduate standing and 6 hours of anthropology.
Anthr. 848. Recent Developments in Anthropology. (3). A review of the latest discoveries and interpretations in the science of human beings. Repeatable up to six hours. Prerequisite: five hours of anthropology.

Anthr. 870. Independent Reading. (2-3). Repeatable up to six hours. Prerequisite: departmental consent.

Anthr. 871-872. Internship 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. 873-874. Advanced Project in Anthropology. (2-2). 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.


Biological Sciences (Biol.)

The biological sciences department offers a broad and flexible curriculum leading to the Bachelor of Arts (BA), the Bachelor of Science (BS), the field major in biochemistry (BS), and the bachelor degree programs (BA and BS) to teach in secondary education. Students interested in an interdisciplinary program with a biological focus are encouraged to consider the Fairmount College of Liberal Arts and Sciences field major (BA) program. 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.

Major. A major in biological sciences leading to the Bachelor of Arts (BA) 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 Bachelor of Science (BS) degree requires a minimum of 40 semester hours of biological science course work; up to 50 semester hours may be taken for credit. Candidates for either degree must complete Biol. 203Q, 204, 418, 419, 420, and either Biol. 497 or Biol. 499. Candidates for either degree must also complete Chem. 111Q, 112Q, 531, and 532. Candidates for the BS degree must also complete two semesters of physics (typically Phys. 213Q and 214Q). Candidates for either degree are required to take the Field Achievement Test in Biology during the senior year and contribute examples of their course work to the department's assessment program. All candidates must maintain a grade point average of 2.00 in all biological sciences course work.

Minor. Candidates for a minor in biological sciences must complete Biol. 203Q, 204, and any two of the following: Biol. 418, 419, or 420. Candidates for the minor must maintain a 2.00 grade point average in all biological sciences course work.

Biochemistry Field Major. The departments of biological sciences and chemistry participate jointly in this program. Required courses are Biol. 203Q, 204, 419, and 420; Chem. 111Q, 112Q, 531, 532, 662, 663, and 664; Phys. 213Q and 214Q; and Math. 112 (or 111 and 123). Also required are Biol. (Chem.) 666 and 669 (two enrollments); and 21 elective hours chosen from among those approved for the biochemistry field major (see academic advisor or departmental offices for approved courses).

Field Major (BA). Students interested in environmental biology or related areas of environmental science should consult with a departmental advisor early to design a curriculum that will satisfy Fairmount College of Liberal Arts and Sciences field major requirements and will include course work with a broad focus on environmental biology.

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 Bachelor of Arts (BA) in Biological Sciences: Secondary Education requires the completion of Biol. 203Q, 204, 330, 418, 419, 420, 524, one four-hour course in Botany, and one of the following: Biol. 503, 560, 575, or 578. Also required are Chem. 111Q, 112Q, 531, and 532; Phys. 213Q; Geol. 302Q; Math 123; CI 770P or 770M; CI 772M or 772P or 780S; and the
professional education requirements for majors in science as outlined by the College of Education. For the Bachelor of Science (BS) in Biological Sciences: 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 Physics 214Q.

Nonmajor Courses. The Department of Biological Sciences offers courses designed primarily to meet the needs of students in other departments. These are listed below as "Nonmajor Courses." These courses, or their equivalents at other institutions, cannot be used to satisfy the biological sciences course work requirements for the major.

Nonmajor Courses (May not be used to satisfy the requirements for the major)

Lower-Division Courses

*Biol. 104Q. Introducing Biology. (4). 3R; 2L. General education introductory course. A telecourse introducing basic concepts of biological science including characteristics of living organisms, structure and function of organisms with emphasis on human beings, mechanisms of inheritance, and interactions of humans with living and nonliving components of various environments in the living world. The laboratory component includes experiments and exercises to reinforce lecture presentations as well as provide elaboration of some subject areas. Recommended for the science major. Only one of the following may be taken for credit: Biol. 104Q, 105G (no longer offered), 106G and/or 107G.

*Biol. 106G. The Human Organism. (3). General education introductory course. Introduces the nonscience major to certain biological principles as they relate to the human organism, provides biological information and understanding of subjects which are relevant to the student's own well-being and role as a world citizen, and increases awareness of the human place in the biosphere. Concurrent or subsequent enrollment in Biol. 107G 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. 104Q, 105G, 106G and/or 107G. Students wishing to repeat Biol. 105G (no longer offered) should enroll in Biol 106G and 107G.

*Biol. 107G. The Human Organism Laboratory. (1). 2L. General education introductory course. For the nonscience major. Supplements and reinforces the material covered in Biol. 106G 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. 104Q, 105G, 106G and/or 107G. Students wishing to repeat Biol. 105G (no longer offered) should enroll in Biol 106G and 107G.

*Biol. 220. Introduction to Microbiology. (4). 3R; 2L. For students in allied health fields. Introduces eucaryotic and procaryotic microorganisms and viruses and develops an understanding of microbial growth, including the use of antibiotics, disinfectants, and antivirals; DNA as the genetic material including DNA replication, protein synthesis, gene regulation, mutation and gene exchange in bacteria; applied and environmental microbiology including water and sewage treatment and food microbiology; resistance to infection, basic mechanisms of pathogenesis, and selected microbial diseases. The lab reinforce the 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. 101G or 103Q or 111Q.

*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. 101G or 103Q or 111Q.

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 for the terminally ill, and other concerns about the control of human reproduction. Prerequisite: any one of the following: Biol. 104Q, 105G, 106G, 203Q, or 223.

*Biol. 370Q. Introductory Environmental Science. (3). General education issues and perspectives course. Examines the relationship of the earth's human populations to resource use/depletion and to the impact of human activities on the environment. Introduces and uses basic concepts relating to energy, populations, and ecosystems as a basis for understanding environmental problems on the local, regional, national, and international levels.

Courses for Graduate/Undergraduate Credit

*Biol. 509G. Foundations of Human Heredity. (3). General education further study course. Introduces to the mechanisms and societal significance of developmental, transmission and population genetics of humans. Attention to inborn errors of metabolism and development and the roles of genetic counseling and genetic engineering in their management. For students majoring outside of the natural sciences and 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. 518Q. Biology of Aging. (3). Cross-listed as Gerion. 518Q. 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

(Used to satisfy the requirements for the major)

Lower-Division Courses

Biol. 150. Biology Workshop. (1-3).

*Biol. 203Q. Introduction to Organismal Biology. (5). 4R; 3L. General education introductory course. Introduces the fundamental concepts of biology as they apply to multicellular organisms. Includes the advantages and problems of a multicellular habit; homeostatic systems involving nervous and hormonal control; nutrient procurement, circulation, use, and cycling in plants, animals, and communities; and asexual and sexual reproduction and inheritance in plants, animals, and communities. The laboratory includes a survey of representative forms from the five kingdoms and stresses evolutionary trends in the plant and animal kingdoms. Prerequisite: concurrent enrollment in Chem. 111Q is recommended.

*Biol. 204. Introduction to Cellular Biology. (5). 4R; 3L. Continuation of Biol. 203Q. Presents the principles of cellular biology and fully develops the cellular and molecular bases of phenomena discussed in Biol. 203Q. Includes cellular structure as it relates to function; the concept of cells as organisms; the chemical basis of inheritance; nutrient procurement, use, and cycling in the cell via aerobic and anaerobic respiratory pathways and photosynthesis; regulation of cellular activities by protein synthesis, protein activity, and membrane mechanisms; and selected topics in cellular biology, such as the immune defense system, origin of eukaryotic organelles, biogenesis of life, and the role or prokaryotes in matter cycling in the biosphere. The laboratory demonstrates the principles of cell biology and develops the student's skill in the experimental method and the communication of scientific information. Prerequisites: Biol. 203Q and Chem. 111Q.
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 processes of photosynthesis and respiration, including variable mechanisms in plants adapted for particular environments; transport of organic nutrients; mineral assimilation and nutrition; and factors affecting the survival 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. Students who have completed Biol. 505 and/or 506 (no limit on number) may receive major credit for this course. Prerequisites: Biol. 204 and Chem. 112Q.


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. Prerequisite: Biol. 204.

Biol. 420. Molecular Cell Biology. (4) 3R; 2L. Concerned primarily with the molecular biology of eukaryotic cells. Coverage of individual cellular components (organelles) and processes includes the plasma membrane, mitochondrion, and energy transfer in the cellular system, the cell nucleus and genetic mechanisms, control of gene expression, cell signaling, cell growth and division, cancer, and cellular mechanisms of development. Reviews and demonstrates current techniques and experimental approaches for studying cells. Students who have completed Biol. 500 may not receive credit for prior enrollment in that course and subsequent enrollment in this course. Prerequisite: Biol. 204.

Biol. 419. Genetics. (3) The mechanisms of heredity and variation in animals, plants, and prokaryotes with a critical review of gene structure and function. Students who have completed Biol. 584 may not receive credit for prior enrollment in that course and subsequent enrollment in this course. Prerequisite: Biol. 204.

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. Prerequisites: 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 four 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 Cr/NCR only.

Biol. 497. Biology Colloquium. (1) S/U 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. (2-4) S/U grade only. Students perform laboratory and research under the direct supervision of faculty and write a report. No more than six 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; Directed Independent Study Abstract form; and departmental consent.

Biol. 499. Undergraduate Research. (2-4) S/U grade only. Students perform laboratory or field research under the direct supervision of faculty and write a report. No more than six 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; 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 living and extinct vascular plants. Includes an introduction to flowering plant systematics. Students earning graduate credit perform a primary literature survey on a topic selected in consultation with the instructor and deliver a 30-minute oral presentation to the class. Prerequisite: Biol. 204.

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 Hills, University of Kansas, and to Cimarron Hills provide an opportunity to collect specimens and to observe ecology and distribution of native species of flowering plants. Prerequisite: Biol. 204 or instructor's consent.

Biol. 524. Vertebrate Zoology. (4) 2R; 4L. Evolution, distribution, systematics, natural history and special characters of vertebrate animals. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with instructor. Prerequisite: Biol. 204, Biol. 527 also is recommended.

Biol. 525. Introduction to Ecotoxicology. (4). 2R; 2L. An overview of concepts and methodology for conducting tests in the field of ecotoxicology. Examines tests at the molecular, individual, population, and community level. Covers basic ecological assessments, such as Test of Biological Integrity, Index of Biological Well-Being, and Rapid Bioassessments. Prerequisites: Biol. 204 and 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, excluding 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. Prerequisites: Biol. 204.

Biol. 527. Comparative Anatomy. (5) 3R; 4L. An intensive study of representative chordates emphasizing vertebrate anatomy. Students earning graduate credit complete additional assignments chosen in consultation with the instructor, such as a term paper based on technical literature, dissection of additional animals, etc. Prerequisite: Biol. 204.

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. Prerequisite: Biol. 204.

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 the technical literature on a topic chosen in consultation with the instructor or develop proficiency in a specific taxonomy by performing an individual systems project. Prerequisite: Biol. 204.

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 produce a term paper based on the technical literature on a topic chosen in consultation and present it to the instructor. Prerequisites: Biol. 204 and Chem. 531 or instructor's consent.

Biol. 535. Mammalian Physiology Laboratory. (2-4) 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: concurrent or prior enrollment in 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. Prerequisite: Biol. 204. 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 catastrophes. It involves global climate change, habitat loss, acid rain deposition, reduced biological diversity, and the ecological impacts of pesticides and toxic chemicals. It uses measurements, testing, and mathematical models to quantify the relationship between the initiating event and the effects. Course is an overview of the basic framework for conducting an Ecological Risk Assessment, and a discussion of individual case studies involving several important environmental issues. An introductory class for students interested in assessing the effects of various stressors on environmental health. Prerequisites: Biol. 418 or equivalent and Chem. 531 or equivalent, or instructor's permission.

Biol. 560. Plant Ecology. (4). 2R; 6L. Principles and patterns of plant distribution and of adaptation of plants to particular habitats. Emphasizes the experimental approach to plant ecology. Field trips are an integral part of the laboratory. Prerequisite: Biol. 418 or instructor's consent.

Biol. 572. Computer Methods in Biology. (3). Includes mathematical modeling of biological systems, tools for recording and retrieving experimental results, computer-aided instruction, internet and on-line science resources, software for scientific publication including digital photo-documentation and reference managers for bibliographies. Students select a biology topic of interest, study non-statistical and computer approaches previously used, and develop their own approach. Half the course is lectures and demonstrations and half is individual student projects. Graduate students are expected to have had prior experience with the primary literature and be prepared to execute a more sophisticated laboratory research project. Prerequisite: one of the following: Biol. 418, 419, 420, or instructor's consent.

Biol. 573. Statistical Applications in Biology. (3). Supplements Stat. 370 by providing experience with practical applications of statistical theory to biological data. Includes computations on data derived from both the primary literature and from laboratory and research projects. Emphasizes the design of experiments to answer specific hypotheses, the treatment of non-normally distributed data sets and nonhomogeneous experimental test units and the use of packaged computer programs for certain statistical tests. Access to calculation by two large-scale interactive statistical packages is strongly encouraged. Students earning graduate credit complete an additional statistical analysis assignment involving the use of the computing facilities. Prerequisites: Stat. 370.

Biol. 575. 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. Prerequisites: 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 and Chem. 531.

Biol. 591. Immunobiology Laboratory. (3). 6L. Methods of immunization and techniques for qualitative and quantitative determinations of antibody production and antigen-antibody reactions. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites or corequisites: Biol. 590, Chem. 531 or instructor's consent.

Biol. 610. Topics in Botany. (3-4). Selected offerings in botany. Consult the Schedule of Courses for current offerings(s). Students wishing to enroll in courses not listed in the current Schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204 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 prepare 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 will 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 will be expected to conduct field studies on the master's of environmental science program and to present this in a class seminar. Prerequisite: Biol. 418.

Biol. 640. Topics in Zoology. (3-4). See Biol. 610. Prerequisite: Biol. 204 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. 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, Chem. 662 and 663.

Biol. 669. Research in Biochemistry. (2). Cross-listed as Chem. 669. 5/L 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 and Chem. 664 and instructor's consent.

Biol. 702. Environmental Science I. (4). (2R; 3L). 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, atmospheric chemistry, and physical chemistry of Earth, current problems in atmospheric chemistry, and physical chemistry of Earth, current problems in atmospheric chemistry, and physical chemistry of Earth, current problems in atmospheric chemistry, and physical chemistry of Earth, current problems in atmospheric chemistry, and physical chemistry of Earth, current problems in atmospheric chemistry, and physical chemistry of Earth, current problems in atmospheric chemistry, and physical chemistry of Earth, current problems in atmospheric chemistry, and physical chemistry of Earth, current problems in atmospheric chemistry, and physical chemistry of Earth.
Students in the master's of environmental science program 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: Biol. 702 and 703 or equivalent.

Biol. 710. Glycobiology. Introduction to glycoprotein biosynthesis, structure, and function. Covers the various roles of carbohydrates in modifying protein structure and function. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 420.

Biol. 720. Neurobiology. 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 will choose a topic, complete a written report, and give an oral presentation to the class. Graduate students will do more reading in the primary neuroscience literature. Prerequisites: Biol. 420 and 534 or equivalents and instructor's permission.

Biol. 737. Aquatic Toxicology. 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 permission.

Biol. 740. Research Methods. A lecture/laboratory course to introduce graduate students to basic methods and instrumentation used in biological research. Prerequisite: Biol. 420.

Biol. 750. Biology Workshop. A lecture/laboratory course to introduce graduate students to basic methods and instrumentation used in biological research. Prerequisite: Biol. 420.

Biol. 760. Experimental Molecular Biology. 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. Prerequisites: Biol. 419 or 420.

Biol. 767. Mechanisms of Hormone Action. The mechanism of action of several hormones is described and used to illustrate the major intracellular signal transduction pathways. Includes gonadotropin-releasing hormone, the glycoprotein hormones, luteinizing hormone, follicle-stimulating hormone, chorionic gonadotropin, thyroid-stimulating hormone, steroid hormones, thyroid hormone, activin/inhibin, prostaglandins, insulin, and growth hormone. Mostly lectures covering signal transduction pathways. Students will write brief summaries of recent research papers related to the current week's lecture topics. Each student will make an oral presentation of a research paper in journal club format. Students earning graduate credit will 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 permission.

Biol. 771. Evolutionary Ecology. 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, and group selection; (4) population demographic and gene flow regulation and dispersal; (5) 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. 3R; 2L. Studies of the physiological nature of genetic material and the mechanisms of genetic regulation of metabolism. Students earning graduate credit produce a term paper and deliver a class seminar based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 419 or 584.

Biol. 790. Advanced Immunology. 3R; 2L. 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. 1R. 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 will be the basis for their grade. One of these presentations may be their thesis defense. Prerequisite: acceptance into MS program.

Biol. 798. Biology Seminar. 2R. Reviews of current research in biological sciences. Repeatable once for credit.

Courses for Graduate Students Only

Biol. 890. Research. 2-5. S/U grade 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. 2-5. S/U grade 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 chemical science, 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. 505, 514, 524, 532, 545, 546, 551, 601, 615, 662, two credit hours of 690, and their necessary prerequisites, including Math. 344 and Phys. 313, 314, 315, and 316 or their equivalents. An additional four credit hours of professional elective courses must be taken. Courses that will satisfy the professional elective requirement are: (a) Chem. 620, 630, 650, 663, 664, 666, 669, and one additional credit hour of 690; (b) mathematics courses with Math. 344 prerequisite or Math. 555; (c) physics courses with Phys. 314Q 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 Committee on Professional Training, the chemistry department strongly encourages students studying for the BS degree to select courses in computer science, economics, marketing, and business and to 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 Chemical Science

Students in premedical, 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 242Q and one year sequence of physics courses above 200; six additional credit hours of chemistry courses numbered above 500 (Chem. 605 is recommended) and ten credit hours consisting of Biol. 203Q and 204Q.

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. 662 and 664, or Chem. 663, for Chem. 524 (then Chem. 523 is required) or by substituting Chem. 662 or 663 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, 546, 613, and 615 and six 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. 203Q, 204, 419, and 420; Chem. 111Q, 112Q, 523, 531, 532, 533, 534, 662, 663, and 664; Phys. 213Q and 214Q 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. Bues 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. 201Q and 202Q; B. Law 435; Fin. 340; Mgmt. 360; and Mkt. 300, 405, and 608. In addition, approximately 30 hours of chemistry and mathematics are required: Chem. 111Q, 112Q, 523, 561 or 662, 531, 532, and 603; and Math. 144 or 242Q.

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 four hours from Chem. 514, 523, 531, 533, 534, 545, and 546. Credit is not allowed for both Chem. 533/534 and Chem. 531. 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 in Chemistry Programs**

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**Bachelor of Science**

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**Course**

**Hrs.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
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<tr>
<td>Chem. 505</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 514</td>
<td>5</td>
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<tr>
<td>Chem. 531, 532</td>
<td>10</td>
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<tr>
<td>Chem. 523, 524</td>
<td>8</td>
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<td>Chem. 545, 546</td>
<td>6</td>
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<tr>
<td>Chem. 547</td>
<td>2</td>
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<tr>
<td>Math. 112, 242Q, 243, 344</td>
<td>18</td>
</tr>
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<td>Professional elective</td>
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**Typical Course Sequence**

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**Freshman**

**Hrs.**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Chem. 111Q, General Chemistry</td>
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</tr>
<tr>
<td>Math. 112, Precalculus Mathematics*</td>
<td>5</td>
</tr>
<tr>
<td>Engl. 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

*Not needed if two years of high school algebra, one year of high school geometry and one-half year of high school trigonometry taken.

**Second semester**

**Hrs.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 112Q, General and Inorganic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q, Calculus I</td>
<td>5</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**

**Hrs.**

<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. 313Q, University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>Engl. 220G, 230G, 232, or other, English Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

*Chem. 531, 514, and 523 all have Chem. 112 as a prerequisite and can be taken in any order.

**Second semester**

**Hrs.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 532, Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>Phys. 314Q, University Physics II</td>
<td>4</td>
</tr>
</tbody>
</table>

**Bachelor of Arts**

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**Course**

**Hrs.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</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>Physics (one year)</td>
<td>10</td>
</tr>
<tr>
<td>Math. 112, 242Q, 243, 344</td>
<td>18</td>
</tr>
</tbody>
</table>

*Combinations of Chem 662, 663, 664 and 665 may be substituted for Chem. 524 or 546 (see description above).
### Bachelor of Science in Chemical Science

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 514</td>
<td>3</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 242Q</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. 111Q, 112Q</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. 203Q, 204</td>
<td>10</td>
</tr>
<tr>
<td>Biol. 419</td>
<td>10</td>
</tr>
<tr>
<td>Biol. 420</td>
<td>4</td>
</tr>
<tr>
<td>Math. 112 or 111, 123</td>
<td>5-6</td>
</tr>
<tr>
<td>Phys. 213Q, 214Q</td>
<td>10</td>
</tr>
<tr>
<td>Biochemistry electives</td>
<td>21</td>
</tr>
</tbody>
</table>

### Chemistry/Business Field Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</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. 561 or 662</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 603</td>
<td>4</td>
</tr>
<tr>
<td>Math. 144 or 242Q</td>
<td>3-5</td>
</tr>
<tr>
<td>Acct. 210 and 220</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 201Q and 202Q</td>
<td>6</td>
</tr>
<tr>
<td>Mkt. 300, 405, 608</td>
<td>9</td>
</tr>
<tr>
<td>Fin. 340</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 360</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 435</td>
<td>3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;Chem. 101G, The Science of Chemistry.</td>
<td>(3). General education introductory course. Teaches the basic concepts of chemistry that will aid in understanding the physical world. No attempt to teach basic computational or laboratory skills; instead emphasizes such concepts as atomic and molecular theory, energy, structures, and theories regarding why reactions occur.</td>
</tr>
<tr>
<td>&gt;Chem. 103Q, General Chemistry.</td>
<td>(5). 3R; 4L. Lab fee. 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 the Chem. 111Q-112Q sequence. Credit is not granted for both Chem. 103Q and 111Q. Prerequisite: one year of high school algebra or Math. 011.</td>
</tr>
<tr>
<td>&gt;Chem. 110Q, Preparatory Chemistry.</td>
<td>(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. 103Q, 110, or 111Q. Prerequisites: one and a half units of high school algebra or Math. 011.</td>
</tr>
<tr>
<td>&gt;Chem. 111Q, General Chemistry.</td>
<td>(5). 3R; 4L. Lab fee. General education introductory course. An introduction to the general concepts of chemistry. Includes chemical stoichiometry, atomic and molecular structure, bonding, gas laws, states of matter, and chemical periodicity. Chem. 111Q-112Q meets the needs of students who may wish to take more than one course in chemistry. Credit is allowed in only one of the following: Chem. 111Q, 103Q, or 110. Prerequisites: a college-level chemistry course such as Chem. 110, 111, or 103, or high school chemistry or physics; and concurrent enrollment in Math. 111 or two units of high school algebra or Math. 011.</td>
</tr>
<tr>
<td>&gt;Chem. 112Q, General and Inorganic Chemistry.</td>
<td>(5). 3R; 4L. Lab fee. General education further study course. Continuation of Chem. 111Q. Includes thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative analysis, and an introduction to theories of bonding. Credit is not granted for both Chem. 533-534 and 531. Credit is not allowed for both Chem. 112Q and 114Q. Prerequisites: Chem. 111Q with a grade of C or better.</td>
</tr>
<tr>
<td>&gt;Chem. 201Q, General Chemistry.</td>
<td>(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. Credit is not granted for both Chem. 533-534 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: Chem. 112Q or equivalent.</td>
</tr>
<tr>
<td>&gt;Chem. 301, Issues and Perspectives in Chemistry.</td>
<td>(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. Credit is not granted for both Chem. 533-534 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: Chem. 112Q or equivalent.</td>
</tr>
<tr>
<td>&gt;Chem. 481, Cooperative Education in Chemistry.</td>
<td>(1-4). Prerequisites: one of the following: Chem. 111Q-112Q, 103Q, or 110. Credit is not granted for both Chem. 533-534 and 531. Credit is not allowed for both Chem. 112Q and 114Q.</td>
</tr>
</tbody>
</table>

### Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 505, Chemical Literature.</td>
<td>(3). A survey of chemical publications and the publication process. Gives the student the ability to conduct a proper search of the literature for chemical information. Also covers aspects of technical writing. Credit is not granted for both Chem. 533-534 and 531.</td>
</tr>
<tr>
<td>&gt;Chem. 514, Inorganic Chemistry.</td>
<td>(3). General education further study course. Basic inorganic chemistry emphasizing molecular symmetry and structure, fundamental bonding concepts, ionic reactions, periodicity of the elements, and the electronic structures of the elements, acid-base chemistry and non-aqueous solvents, classical coordination chemistry and introductory bioinorganic chemistry. Credit is not granted for both Chem. 533-534 and 531.</td>
</tr>
<tr>
<td>&gt;Chem. 523, Analytical Chemistry.</td>
<td>(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. Credit is not granted for both Chem. 533-534 and 531.</td>
</tr>
<tr>
<td>&gt;Chem. 524, Instrumental Methods of Chemical Analysis.</td>
<td>(4). 2R; 6L. Lab fee. Introduction to electroanalytical chemistry and optical methods of analysis and separation of complex mixtures, both inorganic and organic. Also discusses basic computer programming as it applies to analytical chemistry. Credit is not granted for both Chem. 533-534 and 531.</td>
</tr>
<tr>
<td>&gt;Chem. 531, Organic Chemistry.</td>
<td>(5). 3R; 6L. Lab fee. General education further study course. An introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry, and spectrographic analysis. Credit is not granted for both Chem. 533-534 and 531.</td>
</tr>
<tr>
<td>&gt;Chem. 532, Organic Chemistry.</td>
<td>(5). 3R; 6L. Lab fee. A continuation of Chem. 531 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Credit is not granted for both Chem. 533-534 and 531.</td>
</tr>
</tbody>
</table>

### Liberal Arts and Sciences

**Chemistry Laboratory.** (2). Lab fee. A basic laboratory course to provide pertinent experiences in the laboratory to fortify the survey lecture course. Credit is not granted for both Chem. 533-534 and 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 granted for both Chem. 533-534 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: Chem. 112Q 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. Credit is not granted for both Chem. 533-534 and 531. |

**Chem. 545, Physical Chemistry.** (3). General education further study course. Thermodynamics. Studies gases, first law, thermodynamics, second and third laws, phase equilibria, chemical solutions, chemical equilibria, electrochemistry and surface chemistry. Prerequisites: Chem. 112Q, 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. Prerequisites: 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: Chem. 545 or 546. |

**Chem. 602, Numerical Methods.** (2). Application of numerical methods to problems in chemistry and physics. Roots of equations; curve fitting; interpolation, extrapolation, and smoothing of experimental data; numerical differentiation and integration; and computer programming. Prerequisite: instructor's consent. |

**Chem. 603, Industrial and Polymer Chemistry.** (3). Bridges the industrial-academic gap. Includes petroleum refining processes and dis-
tiliation technology. Inorganic topics include glass technology, electro-refining and electro-plating, and battery chemistry. Discusses cellulose (biomass) based products such as gelling polysaccharides and natural fibers along with industrial adsorbents (clays, zeolites, ion exchange resins, carbon blacks), and emulsion technology. Topics in polymer chemistry include ways of making polymers, resins, elastomers, and synthetic fibers; methods of polymer analysis, structure-property correlations (how structure influences physical properties) plastics recycling, and methods of plastics and composites processing. Prerequisite: Chem. 532 or concurrent enrollment.

Chem. 605. Medicinal Chemistry. (3). For students interested in chemistry related to the design, development and mode of action of drugs. The primary purpose of the course is to describe those organic substances that are used as medicinal agents and to explain the mode of action and chemical reactions of drugs in the body; to illustrate the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenicity, etc; and to bring 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. 561 or 662) and a year of biology are strongly recommended.

Chem. 613. Inorganic Chemistry Laboratory. (2). 6L. Lab fee. Experimental methods of inorganic chemistry. Prerequisite: Chem. 514 or concurrent enrollment.

Chem. 615. Advanced Inorganic Chemistry. (3). Includes modern bonding theories, structure and spectra of inorganic compounds, coordination and organometallic chemistry, boranes, inorganic systems and polymers, inorganic environmental chemistry, mechanisms of inorganic reactions and solid state chemistry. Prerequisite: Chem. 514 and 546.

Chem. 641. Advanced Physical Chemistry. (3). Introduction to quantum chemistry, atomic and molecular spectra, statistical thermodynamics and reaction rate theory. Prerequisite: Chem. 546.

Chem. 642. Chemical Physics. (3). Topics in areas of overlapping interest for students of chemistry and physics, such as thermodynamics, kinetics, quantum mechanics, solids and various types of spectroscopy. A team of chemists and physicists discusses standard experimental and theoretical techniques used in research in chemical physics. Prerequisite: Chem. 641 or instructor's consent.

Chem. 661. Introductory Biochemistry. (3). General education further study course. An introductory course for chemistry majors including chemistry/biology 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, 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 carbohydrate, lipid, protein, nucleic acid, and macromolecular synthesis. Emphasis is placed on intermediary 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) 18; 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. S/I 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. 500 and Chem. 662 or 663 and 664.

Chem. 700. Environmental Chemistry 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 in the master's of environmental science program or instructor's consent.

Chem. 703. Environmental Science Colloquium. (1). Cross-listed as Biol. 704 and Geol. 704. Students in the master's of environmental science program 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 of environmental science program may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internship projects with local businesses, 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 oral presentation of internship activity and a written report. Prerequisites: completion of Environmental Science I and II.

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, and crystallography 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, 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. Prerequisite: Chem. 705 or equivalent.
Discussion of advanced topics in stereochemistry and conformational analysis and organic reaction mechanisms. Prerequisite: Chem. 532.

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.

A discussion of chiroptical 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 Helium-Feynman theorems. Prerequisite: Chem. 546, Math. 344 or equivalent. Corequisite: 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 in inorganic, organic, and biochemistry. 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 states. 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 Zeigler 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 conditions. Preparation of thermosets including relationships between structure, conversion and gelation. Discusses individual systems such as nylon, epoxy resin and polymides in some 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 organotransition 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, metabolism and the role of transition metals in metabolism. Prerequisites: Chem. 615 and 663 or equivalents.

Chem. 821. Equilibrium and Statistics in Analytical Chemistry. (3). Covers homogeneous and heterogeneous solution equilibrium calculations and statistical methods used in experiment design and data analysis. Prerequisite: Chem. 524 or equivalent.

Chem. 822. Analytical Separations. (3). The theory and practice of analytical separation methods including gas and liquid chromatography, ion exchange and electrophoresis. 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 artifact-free data. Prerequisite: Chem. 524 or equivalent.

Chem. 824. Electronanalytical Chemistry. (3).
Includes voltammetry, polarography, chromo- and coulometry; reversible and irreversible diffusion controlled processes; polarographic reaction before electrical reaction, EC (electrical reaction before chemical reaction) and catalytic reaction; and organic polarography and voltammetry. Prerequisite: Chem. 524 or equivalent.

Chem. 831. Advanced Physical Organic Chemistry. (3). Includes molecular orbital theory, sigma tropic rearrangements, electrocyclic reactions, cycloadditions, reactive intermediates and photochemistry. Prerequisite: Chem. 731.

Chem. 832. Modern Synthetic Methods. (3).
Discussion of retrosynthetic analysis, applications, asymmetric syntheses and stereochemistry. Prerequisite: Chem. 732.

Chem. 833. Natural Products Chemistry. (3).
Discussion of the structure, chemistry and biosynthesis of the alkaloids, steroids, terpenoids, carbohydrates and aromatic and aliphatic natural products. Prerequisite: Chem. 732.

Chem. 834. Heterocyclic Chemistry. (3).
An account of the physical and chemical properties of the main 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 determinate wave-functions, angular momentum coupling, time-dependent perturbation theory, relativistic 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 kinetics of solution reactions, heterogeneous reactions and selected topics of current interest. Prerequisite: Chem. 546 or equivalent.

Chem. 843. Statistical Thermodynamics. (3). Develops Boltzmann, Fermi-Dirac and Bose-Einstein statistical mechanics with applications to gaseous-state and solid-state chemical problems. Emphasizes the relationship of statistical mechanics and thermodynamics. Considers applications of statistical thermodynamics to polymers. Prerequisites: Chem. 546, 845 or equivalents.

Chem. 845. Chemical Thermodynamics. (3).
A presentation of the basic three laws of thermodynamics in a classical framework to increase understanding of real physical systems. Emphasizes theory and its application 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 atoms, 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.

Includes thermodynamics, statistical mechanics, quantum chemistry and structural determinations of condensed phase matters. Emphasizes metals, alloys, intermetallic compounds, composite materials and advanced materials. Prerequisites: Chem. 741 and 745 or equivalents.

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. 853. Polymer Properties. (3).
Kinetics and thermodynamics of the crystallization process and the influence of sample history on the gross morphology of the crystallites. Structural
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 applied 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, speaking, and visual communication—and must develop the ability to plan, organize, evaluate, and think strategically. Founded on the principle that communication specialists should also be communication generalists, this degree program combines disciplinary strengths in an inter-disciplinary matrix.
2. It is consistent with the mission of Wichita State University to offer programs that are responsive to the needs of the urban community that the University serves. The Kansas communication industry has its focus in Wichita, the major media center of the state.
3. Its location allows the program and its students to take full advantage of the communication opportunities afforded by the largest city in Kansas. The region of the state served by WSU includes one public and four commercial television stations, more than 15 radio stations, nine daily and 32 weekly newspapers, more than 25 advertising agencies, and a range of international, national, regional, and local industries, businesses, and public agencies, many with substantial communication operations. This setting allows students to combine academic and professional interests in a program that matches concept with example, education with experience.

Degree Requirements

Major. Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), complete a minimum of 40 credit hours in communication, including 22 credit hours in the communication core, and submit a portfolio of their work during their senior year (see portfolio requirement below).

All students must take the communication core courses: Comm. 130Q, 301, 305, 325, 472, 535, and two courses from 430, 630, and 631. At least 18 credit hours must be in either a structured or an open emphasis area. Specific course require-

ments in the emphasis areas are listed below:

a. Applied Communication: Comm. 360; choose two courses from 302, 312Q, and 328Q (Interpersonal/Organizational Communication cluster), OR choose two courses from 311, 313Q, and 632 (Rhetorical/Political Communication cluster): 640 or 650; and six hours of upper-division communication elective credit.

b. Broadcast Journalism: Comm. 401, 422, 622, one course from 304, 500, 522, 604, and 609; and six hours of upper-division communication elective credit.

c. Electronic Media: Comm. 303, 304, 332, 604, 609, and three hours of upper-division communication elective credit.

d. Integrated Marketing Communications: Comm. 324, 502, 510, 525, 626, and three hours of upper-division communication elective credit.

e. Open Emphasis: Students can develop and propose an open emphasis more appropriate for their interests and needs than a structured emphasis area and which respects their backgrounds and experience. These proposals must be developed by students in consultation with a faculty advisor, be substantially different from the structured emphases available, and be coherent and justifiable to a faculty committee, which will review and act on these proposals at specified times during the academic year. Each student must submit for approval an Open Emphasis Plan of Study to the Undergraduate Admissions Committee of the Elliott School of Communication at the beginning of the student’s junior year or upon completion of 18 credit hours in the major.

Minor. A minor in communication consists of two courses from the communication core plus at least 12 hours of electives in communication chosen with the approval of a faculty advisor (6 of the 12 hours must be at the 300-level or above)

Field Majors. Students seeking a field major may elect either an 18-hour concentration in communication (as the major area of study) or a 9-hour concentration in communication (as one of two allied departments taken in addition to the
major area of study). Some or all of the upper-division course work may be in the communication core courses.

Bachelor of General Studies. Students seeking a BGS degree may elect either a 15- to 21-hour concentration in communication (as the focal or primary concentration) or a 6- to 12-hour concentration (as one of two secondary concentrations taken in addition to the primary concentration). Some or all of the upper-division course work may be in the communication core courses.

Certificate in Applied Communication. This certificate program is designed for supervisors, managers, and other professionals who interact with employees and coworkers. The six courses (18 hours) offered in this program concentrate on applied communication, a key component of successful management. These are standard college classes offering practical tools for professionals. Many are offered in the evenings, on weekends, or in condensed formats. The certificate program requires successful completion of the following courses: Comm. 302, 312Q, 325, 328Q, 360, and 650. Comm. 111, Public Speaking, or the equivalent is a prerequisite for the certificate program.

Teaching Certifications. The Elliott School of Communication offers secondary education teaching certifications (secondary field only) in two areas: speech communication and journalism. Students seeking the speech communication teaching certification must complete the following courses: Comm. 111, 130Q, 190G, 300, 311, 312, and 661; and Thea. 143G and 272. Students seeking the journalism teaching certification must complete the following courses: Comm. 130Q or 631, 301, 310, 510, 612, and 630; and one upper-division writing course in communication. Successful completion of either certification requires maintenance of a 2.5 GPA, both overall and in the student’s major field of study.

Advising Requirements
Students planning to pursue a major in communication must make formal application for admission to major status. To be admitted, applicants must be students in Fairmont College of Liberal Arts and Sciences; have an overall grade point average of 2.500 or better; pass a standardized departmental English Proficiency Test (the Grammar, Spelling, and Punctuation test, or GSP); and file an Application for Admission to Major Status form with the Elliott School of Communication. Additional information regarding the application process and procedures is available from the main office of the Elliott School.

Advising Requirements
The undergraduate coordinator will advise all pre-majors in communication to help students understand and attempt to meet the requirements for admission to major status in communication (see Admission Requirements above). Upon admission to major status, students will be assigned a faculty advisor who will help them select their emphasis area or develop an open emphasis, which requires preparation of an undergraduate plan of study. Students are strongly encouraged to meet with their advisors at least once a semester while they are enrolled.

Portfolio Requirement
Students majoring in communication must successfully complete Comm. 472, Senior Portfolio Seminar. The seminar will assist students to prepare a resume and portfolio that reflects their academic and professional work in communication, and which can be used in seeking employment. Some or all of the upper-division courses will be completed in the seminar upon achieving senior status (i.e., finished 90 hours of course work) and after completing at least 18 hours of communication course work.

Communication Core Courses
Comm. 130Q. Communication and Society. (3). Introduces the functions, processes, and effects of individual and mass communication in American society. Explores economic, social, and governmental impacts of such communication. Includes a survey of the media and communication industry.

Comm. 301. Writing for the Mass Audience. (3). A hands-on introduction to writing for the mass audience, including print and broadcast journalism, advertising, and public relations. In this survey-style course, students become acquainted with various news and promotional writing techniques and formats, develop reporting and interviewing skills, and learn to apply critical judgment and ethics. Course is a prerequisite to many specialized Elliott School courses. Prerequisites: grade of C or better in Eng. 101, Eng. 102, and Comm. 130Q; and pass the department's Grammar, Spelling, and Punctuation (GSP) exam.

Comm. 305. Visual Technologies. (3). Examines the importance and meaning of visual symbols in modern society. Explores the method 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 with a grade of C or better.

Comm. 430. Communication Research and Inquiry. (3). General education further study course. Introduces the processes 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. 130Q 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/Ncr. Prerequisites: Senior status, 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 aural elements of communication for the purpose of becoming 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.

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. 130Q 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 but 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 take higher level courses, and to enhance leadership potential by improving 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. 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. 190G. Introduction to Human Communication. (3). General education introductory course. Explores several alternative frameworks by which humans cope with and control the communication environment. Use observational and experiential opportunities to discover the variety of patterns used by humans to symbolically interact with themselves, each other, and entire cultures. Utilizes multimedia instructional procedures.

Comm. 202. Debate and Forensics. (2). Research and preparation for debate and individual speaking events. Participation in intercollegiate debate and/or forensic competition, and debate and forensic squads meetings. Repeatable for a maximum of four hours credit. May not be counted toward a major. Prerequisite: departmental consent.

Comm. 220Q. Oral Interpretation. (3). General education further study course. Cross-listed as Theater 221Q. Develops the mental, vocal and analytical techniques essential to the oral interpretation of literature.

Comm. 222. Improving Voice and Diction. (3). Cross-listed as Theater 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.

Comm. 290. Listening Strategies. (3). Provides an understanding of the process of listening in a variety of communication settings. Aids students in improving listening in the classroom, interpersonally, and professionally. Examines listening myths and barriers to effective listening, encourages growth in positive listening attitudes and behaviors. Prepares students for professional as well as personal lives in which they will spend more time listening than any other type of communication. Prerequisite: Comm. 111 or departmental consent.

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). 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 Journalism. (3). 2R; 2L. Lab fee. Basic photographic theory and technique emphasizing aspects of importance to journalists, writers, and editors. Students take, develop, and prepare pictures for publication. The department provides a limited number of cameras. Prerequisite: Comm. 301.

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. 111.

Comm. 312Q. 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. 111.

Comm. 313Q. 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 fallacious 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 viewed from the perspective of integrated marketing communications. Includes media research, the creation of specialized messages, and message delivery systems. Prerequisite: Comm. 301 or departmental consent.

Comm. 328Q. Teamwork, Leadership, and Group Communication. (3). Studies the nature and functions of groups and the development of skills for identifying and evaluating communication behavior in small group situations emphasizing the dynamics of teamwork and group leadership.

Comm. 332. Writing for Electronic Media. (3). Writing formats, commercials, continuity, and drama for the electronic medium, including basic audio and video programs and productions. Prerequisite: Comm. 301 with a C or better instructor's consent.

Comm. 340. Applied Photojournalism. (3). 3L; 2L. Lab fee. Covering photographic assignments for the campus newspaper and other publications, under the overall supervision of a journalism instructor. Prerequisite: Comm. 310.

Comm. 349. Hostage and Crisis Negotiation. (3). An introductory course focusing upon the study of negotiation management and techniques, and upon the scenarios of hostage, barricaded subject negotiations and other exigent situations such as suicide and violent domestic disturbances. Examines the use and training of special tactical and negotiation teams. Prerequisites: CJ 191Q and Comm. 302 or equivalent or instructor's consent.

Comm. 360. Applied Communication Strategies. (3). Surveys communication strategies as applied to interpersonal/organizational and rhetorical/political settings. Examines the connection between communication and technology, explores strategies for communication criticism, and identifies communication strategies relevant to issues such as human relations, ethical decision making, freedom of speech, and political rhetoric. Prerequisite: Comm. 130Q or instructor's consent.

Comm. 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.

Comm. 401. Beat Reporting. (3). Reporting and writing about events in the community. Stories assigned and handled under the instructor's direction may be used in various publications. Prerequisite: Comm. 301 with a C or better.

Comm. 402. Debate and Forensics. (2). Research and preparation for debate and individual speaking events. Participation in intercollegiate debate and/or forensic competition, and debate and forensic squads meetings. Repeatable for a maximum of four hours credit. May not be counted toward a major. Prerequisite: departmental consent.

Comm. 422. Broadcast News. (3). Theory and techniques of preparing news for the electronic media, including preparation of newscasts and
Comm. 500. Advanced Reporting. (3). 1R; 4L. For juniors and seniors; the techniques of reporting and writing the more complex and important types of news stories. Covers police beat stories, sports and economic reporting and includes the study and practice of journalistic interviewing. Prerequisites: junior standing, Comm. 301 with a C or better and either 401 or 422.

Comm. 502. Public Information Writing. (3). Uses basic journalistic skills of clear, precise writing to communicate effectively with various audiences. Students write press releases, speeches and popularizations of complex documents. Techniques learned in this course are valuable in writing grant proposals, committee reports, pamphlets and journal articles. Prerequisite: Comm. 301 with a grade of C or better, junior standing or departmental consent.

Comm. 510. Editing for Print. (3). Selection, evaluation and preparation of copy and pictures for publication. Covers copy editing, rewriting, headline and caption writing and page layout. Prerequisites: junior standing and Comm. 301 with a grade of C or better.


Comm. 525. Advertising Copywriting. (3). Detailed practice at writing various kinds of advertising copy, including print and broadcast forms. Emphasizes terse, precise writing that evokes response sought by advertiser. Prerequisite: Comm. 324 and Comm. 301 with a grade of C or better or departmental consent.

Comm. 526. Media Buying and Selling. (3). Principles, methods, and strategies of buying and selling media for advertising, including such topics as study of reach and frequency of the various mass media and specialized media, budgeting, research, rates, market share and other tools of current buying and selling strategies. Prerequisite: Comm. 324 or instructor's consent.

Comm. 550. Opinion Writing. (3). Studies editorial judgment, including practice in the writing of print, broadcast, and electronic opinion pieces, and the examination of traditional and new technology research materials available to opinion writers. Prerequisites: Comm. 301 with a C or better and junior standing.

Comm. 570. Magazine Production. (3). Magazine production, including the choosing of subjects, approaches and illustrations; the shooting and editing of photographic stories; layout; the handling of production and management concerns. Prerequisite: Comm. 301 and 510 or departmental consent.

Comm. 571. Feature Writing. (3). Writing features for newspapers and magazines. Nonfiction topics may include personal experience essays, consumer pieces, travel articles, and personality profiles. Prerequisites: Comm. 301 with a C or better and junior standing.

Comm. 581. Communication Practicum. (1-3). Application of theory, principles and practices to professional settings where students work under instructor supervision to continue their professional preparation in various areas of media and communication. Prerequisite: Comm. 301 and instructor's consent.

Comm. 604. Field Video Production. (3). Application of video equipment and techniques for field productions. Execution of visual and audio expression in relation to effective video productions in a field setting. Prerequisite: Comm. 304 or instructor's consent.

Comm. 609. Interactive Media Production. (3). Investigation and application of production techniques for educational and instructional broadcasting, emphasizing television. Prerequisite Comm. 304.

Comm. 611. Media Management. (3). A study of the business and management operations of the mass media to give journalism students an understanding of the interrelationships in mass media enterprises. Prerequisite: junior standing or departmental consent.

Comm. 612. School Publications Advising. (3). Assists those who are preparing to advise and teach who currently supervise a student newspaper or yearbook. Emphasizes techniques for teaching various forms of writing and design, duties relating to production and finance of school publications, and methods to help students become better communicators. Prerequisite: Comm. 301 with a C or better or instructor's consent.

Comm. 622. Studio B: Practicum in Broadcast Journalism. (3). Reporting and writing about events in the University and community. Story assignment and preparation under the instructor's guidance; story broadcast over WSU Cable Channel 13. May be repeated for credit with advisor's consent. Prerequisite: Comm. 422 or instructor's consent.

Comm. 626. Integrated Marketing Communications Campaigns. (3). Instruction and practice in planning and developing integrated advertising and public relations campaigns. Teaches students to perform a situation analysis, identify objectives, develop strategies and tactics, and write a plan book, as well as produce advertising and public relations campaigns materials. Prerequisite: Comm. 324 or instructor's consent.

Comm. 632. American Public Address. (3). General education further study course. A detailed study of notable American speakers and their public utterances. Their impact on the political, economic and social history of this nation from colonial time to the present is assessed.

Comm. 635. Leadership Techniques for Women. (3). Cross-listed as Wom. S. 635. Provides the woman student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

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. Course includes the application of these elements to formal instruction across disciplines and at various educational levels as well as in most professional training settings.

Comm. 660. Seminar in Communication. (1-3). Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

Comm. 661. Directing the Forensics Program. (3). A study of the methods and procedures in coaching and directing the high school and collegiate forensic programs (debate and individual events). The future teacher is made aware of the literature and professional organizations in the field.

Comm. 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 program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated, but limited to a total of four credits in Comm. 690 and Comm. 481. Graded Cr/NCr. 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. 715. International Communication Systems. (3). A comparative study of communication systems around the world, including print media, broadcasting, and new technologies. Examines the relationship between communication systems and the different social, cultural, and political contexts in which they exist, and explores some of the international conflicts that have arisen from these differences. Prerequisite: senior standing.

Comm. 720Q. Dimensions of Mass Communication. (3). A detailed study of mass media, their role as social institutions, their control, support, content and audience; and their standing or departmental consent.

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, communication 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. Course 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. (3). An introduction to empirical research methods in communication. Emphasizes both experimental and nonexperimental research, particularly those forms of research common to communication studies. Studies research design, methods and reporting techniques. Prerequisite: Comm. 801.

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 such phase of (a) speech communication, (b) electronic media or (c) speech education. Repeatable for credit up to a total of six 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. 831. Theories of Rhetoric: Renaissance to Early Modern. (3). Cross-listed as Eng. 826. 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, Fellenon, Bulwer, Sheridan, Steale, Rush, John Quincy Adams, Blair, Campbell and Whately.

Comm. 860. Seminar in Communication. (1-3). Special seminars dealing with current issues, questions and 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 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.

Comm. 870. Directed Study. (1-3). Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Comm. 875-876. Thesis. (2-5). 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 Fairmount College of Liberal Arts and Sciences listed in the College of Education section of the Catalog.

Community Affairs, School of

WSU's School of Community Affairs, created in 1999, brings together the departments of criminal justice, gerontology, and minority studies 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) and the Regional Community Policing Training Institute (RCPTI) provide opportunities to blend teaching, 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 will count toward the BS degree) with at least 21 semester hours of upper-division course work in criminal justice. English 210, an additional requirement, is 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 Fairmount College of Liberal Arts and Sciences requirements (including the foreign language requirement) and the University requirements for the Bachelor of Science degree. The curriculum is divided into two areas:

1. Core courses: CJ 191Q, 291, 292, 394, and 593; and CJ 407 or 597.
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: courses 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 191Q
2. A minimum of two and a maximum of three of the following courses: CJ 291, 292, and 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 and future career plans 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 191Q, 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 643, 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 humanistic 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 satisfy the core curriculum and one of the following:
- Min. S. 331, The Black Family
- Min. S. 332, The Native American
- Min. S. 333, Issues in the Chicano Community
- Min. S. 334, Ethnic American in the Twentieth Century

Also, students must take 12 additional hours in minority studies coursework, nine 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 191Q, is a prerequisite for all courses.

- CJ 291, Corrections
- CJ 310, Community-Based Corrections
- CJ 896, 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 191Q is a prerequisite for all courses.

- CJ 292, Law Enforcement
- CJ 895, Policing in America
- CJ 341, Criminalistics and Scientific Crime Detection or CJ 343, Special Investigations
- CJ 692, Community Policing
- CJ 861, Police Administration

Lower-Division Courses
CJ 191Q, unless otherwise noted, is a prerequisite or corequisite for all criminal justice courses.

>CJ 191Q. 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.

CJ 291. Corrections. (3). A survey course; presents an overview of the role, structure, and function of the correctional system in American society. Emphasizes the principal aspects of both institutional and community-based corrections. Prerequisite or corequisite: CJ 191Q.

CJ 292. Law Enforcement. (3). An examination of the interaction of police and citizens as regulated by constitutional provisions and other legal and social constraints. Prerequisite or corequisite: CJ 191Q.

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, furlough, study release, work release, and restitution. Discusses programs in terms of their definition, history, purpose, administration/process, problems, cost, and effectiveness. Prerequisite: CJ 191Q.

CJ 315Q. 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 191Q.

CJ 320. Criminal Procedure. (3). Criminal procedure in the criminal justice system, including rights of accused, initiation of prosecution, rules of arrest, search and seizure, and the exclusionary rule. Prerequisite: CJ 191Q.

CJ 341. Criminalistics and Scientific Crime Detection. (3). Studies the application of the natural sciences to assist law enforcement officers and the criminal justice system. Studies investigative procedures from the crime scene through laboratory analysis, to the presentation of evidence in court. Prerequisite: CJ 191Q.

CJ 343. Special Investigation. (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 191Q.

>CJ 351Q. The Victim in Criminal Justice. (3). General education further study 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 191Q.

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 191Q.

>CJ 355. Special Populations in the Criminal Justice System. (3). Cross-listed as Min. S. 251Q. General education further study course. Examines the role of women, minorities, juveniles, and elder citizens as individuals who commit crime and are apprehended and sanctioned by the criminal justice system. Considers the unique challenges of each of the four identified populations, including their interactions with law enforcement, the judiciary, and corrections. Prerequisite: CJ 191Q.

>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 191Q.

>CJ 382. Workshop in Criminal Justice. (1-3). Workshop. Prerequisite: CJ 191Q and instructor's consent.

>CJ 393. Serial Killers. (3). Examines the history, dynamics, causation, investigation, and control of the phenomenon of serial crimes in particular homicide. Emphasizes investigative techniques including psychological and geographic profiling. Prerequisite: CJ 191Q.

>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 191Q.

>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 management philosophy. Prerequisite: CJ 191Q.


>CJ 407. Introduction to Research Methods. (3). Cross-listed as Geron. 407, Min. S. 407, and P. Adm. 407. Introduces research methods emphasizing the methods most commonly used. Includes library and reference materials, government documents, and legal materials. Prerequisite: CJ 191Q, Geron. 100Q, or Min. S. 100Q.

>CJ 420. Criminal Evidence. (3). Concepts of criminal evidence rules as they pertain to kinds and degrees of evidence—procedure for admitting or excluding evidence; witnesses and privileged communications; the hearsay rule and its exceptions; and judicial notice, burdens of proof, and presumptions. Emphasizes the rules of evidence that govern the criminal justice process. Prerequisite: CJ 191Q.

>CJ 451Q. International Criminal Justice. (3). Acquaints students with the structural and functional aspects of law enforcement agencies, court systems, correctional facilities, juvenile treatment, and crime prevention strategies employed by different societies throughout the world. Incorporates the role of the United Nations in the treatment of offenders and crime prevention. Prerequisite: CJ 191Q.

>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 191Q.

>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. Individual programs must be formulated in consultation with and approved by the cooperative education coordinator. Prerequisites: Criminal Justice major, 15 hours of criminal justice courses, junior or senior standing and consent of the criminal justice agency. Offered Cr/NC 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 three hours credit, there is a maximum of six 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 six hours. Prerequisites: 15 hours in the criminal justice core and individual directed study coordinator's consent.

>CJ 497Q. Contemporary Issues. (3). An analysis of issues germane to criminal justice in a changing society. Explores topics relevant to issues and trends in law enforcement, courts, and corrections. Prerequisite: CJ 191Q.

Courses for Graduate/Undergraduate Credit

>CJ 501. Integrity in Public Service. (3). Cross-listed as Geron. 502, Min. S. 501, P. Adm. 501. Explores 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 nonprofit agency experiences. Students become aware of the moral and ethical issues which may arise in their professional and personal lives; begin to develop critical thinking and analytical skills regarding ethical behavior; and become more personally and professionally responsible. Prerequisite: junior or senior level or instructor's permission.

>CJ 541. Medical and Legal Aspects of Death Investigation. (3). Emphasizes the medical, 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 191Q.

>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 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 191Q.


>CJ 600. Forensic Anthropology. (3). Cross-listed as Anthr. 600. Encompasses the area of criminal investigation involving biological and environmental evidence. Includes methods, techniques, and interpretation of skeletal remains. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, identification, and interpretation. Emphasizes interpretation. Prerequisite: CJ 191Q.

>CJ 610. Correctional Counseling. (3). Analysis of the role of a correctional counselor. Emphasis is placed on current practices in community-based and institutional correctional counseling. Discusses application of theories of counseling which are widely used in correctional settings, rehabilitation programs, and special needs of offenders. Prerequisite: CJ 191Q.

>CJ 621. Environmental Law. (3). Cross-listed as Min. S. 621 and P. Adm. 621. An in-depth analysis of emerging federal, state, and local legislation; judicial relief and administrative policy and administrative processes of 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 191Q.

CJ 643. Forensic Science. (3). An overview of the various sciences used in the forensic investigation of crimes, including toxicology, drug identification, questioned documents, firearm and toolmark identification, trace evidence analysis, fingerprint identification, forensic pathology, forensic serology, forensic serology, forensic odontology, and forensic anthropology. Prerequisite: CJ 191Q.

CJ 651. Dispute Resolution. (3). Cross-listed as Geron. 651, Min. S. 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, and analysis of case studies.

CJ 652. Juvenile Justice and Social Policy. (3). General education further study course. Analyzes decision-making processes in juvenile justice and of the content of juvenile law and Supreme Court decisions affecting juvenile justice, and selected problems in juvenile justice. Reviews the juvenile justice reform movement. Covers delinquency prevention and control, and ethical issues associated with juvenile justice. Prerequisite: CJ 191Q.

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. Prerequisite: CJ 191Q.

CJ 702. Research Methods. (3). Cross-listed as Geron. 702, Min. 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.

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 the Academic and the Cooperative Education Coordinator. Open only to CJ graduate students. Offered Cr/NCr only.

CJ 782. Workshop in Criminal Justice. (1-6). Prerequisite: CJ 191Q 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 191Q 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 impacts. Prerequisites: an approved statistics class and an approved methods class.

CJ 802. Quantitative Methods for Public Sector Professionals. (3). Cross-listed as Geron. 804 and 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 graphics with quantitative evidence to real public sector policy questions. Assumes little or no background in statistics and software applications. Prerequisites: either CJ 702, Geron. 702, or P. Adm. 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 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. Intends 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 192 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 in the field of administration of 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 its assessment. Discusses consequences of varying degrees of community disorganization, particularly in terms of the various theories about crime and community organization. Reviews crime prevention strategies which focus on community organization. Students gain knowledge and practical skills related to community organization as it relates to crime. Students perform community organization assessments and relate the outcome to related crime rates.

CJ 893. Seminar on the Application of Criminological Theory. (3). An in-depth analysis of the major theories of criminology and of their importance to the criminal justice process. Emphasizes the student's development of a consistent and valid frame of reference.

CJ 894. Seminar in Criminal Justice Process and Institutions. (3). Familiarizes students with critical issues facing the criminal justice system. Reviews issues which face law enforcement, the courts, corrections, and the juvenile justice system, considering the integrity of the entire criminal justice system.

CJ 895. Seminar in Policing. (3). Familiarizes students on such law enforcement topics as the historical development of policing, the police role, occupational socialization, and problems of police work.

CJ 896. Seminar in Corrections. (3). Focuses on the major issues and dilemmas facing mod-
The gerontology program offers the Bachelor of Science 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 of Liberal Arts and Sciences 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  
- 100Q, Introduction to Gerontology ........3
- 401, Aging, Work and Retirement .........3
- 404, Psychology of Aging ...............3
- 501, Field Experience ..................6
- 513, Sociology of Aging .................3
- 518Q, Biology of Aging ..................3
- 560, Aging Network ......................3

Students who have professional work experience in aging may, with faculty approval, substitute three hours of elective credit for the second three hours of field experience.

Required research courses. Gerontology majors also complete three hours in approved statistics courses and three 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, Minority Aging; Geron. 520, Family and Aging; Geron. 715, Adult Development and Aging.

Cluster III. Physiology/Health. Geron. 537, Social Consequences of Disability; Geron. 550M, Long Term Care and Aging; PHS 331Q, Principles of Dietetics and Nutrition; Soc. 538, Medical Sociology.


Minor. The minor in gerontology consists of at least 15 hours of gerontology courses, including Geron. 100Q and 560, and nine hours selected from the following: Geron. 401, 404, 513, and 518Q.

Note: For other relevant/requisite courses, see P. Adm. 710, 725, 745, 775, and 865; Nurs. 789; Acct. 600; Mkt. 800; PhS 804, 812, 818, 822, 826, 834, and 858; and Psy. 813.

Lower-Division Courses

- Geron. 100Q, 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 nation; 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. 100Q.

Emphasizes availability and use of data sources, quantitative decision-making techniques, and interpretation of statistical analyses. Prerequisite: Math. 111 or equivalent.

Gerond. 404. Psychology of Aging. (3). Cross-listed as Psy. 404. An examination of the issues surrounding the adult aging process. Includes personality, and interpretation of statistical analyses. Prerequisite: Math. 111 or equivalent.

Gerond. 407. Introduction to Research Methods. (3). Cross-listed as CJ 407, Min. S. 407, and P. Adm. 407. Introduces research methods emphasizing the methods most commonly used. Includes library and reference materials, government documents, and legal materials. Prerequisite: CJ 191Q, Gerond. 100Q, or Min. S. 100Q.

Gerond. 481. Cooperative Education. (1-3). Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Repeatable up to six hours. Offered Cr/NCr only. Prerequisite: Gerond. 100Q and Instructor's consent.

Courses for Graduate/Undergraduate Credit

Gerond. 501. Field Experience. (3-6). 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 six hours credit. Prerequisite: 12 hours of gerontology credit and instructor's consent.

Gerond. 502. Integrity in Public Service. (3). Cross-listed as CJ 501, Min. 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. Emphasizes the need for a 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.

Gerond. 512. Issues in Minority Aging. (3). Cross-listed as Min. S. 512. Addresses the needs and interests of students who are interested in providing services to the minority elderly, exploring the 'issues' of concern to minority elderly, becoming familiar with the rights of older/minority Americans, learning the legal procedures for resolving specific problems of minority elderly, and offering tried and tested solutions to problems of minority elderly. Prerequisites: Min. S. 100Q, Gerond. 100Q, Soc. 111Q or instructor's consent.

Gerond. 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. 111Q.

Geron. 515. Women and Aging. (3). Introduces students to issues in aging that are unique to women, to women's diverse developmental patterns, and to research methods appropriate for studying aging women and their life experiences. Topics include physical change, role transitions, and adaptation from a lifespan perspective.

Geron. 518Q. Biology of Aging. (3) Cross-listed as Biol. 518Q. 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 biology that satisfies the general education requirements.

Geron. 520. Family and Aging. (3). Cross-listed as Soc. 520. An analysis of the family and family systems of older people. Special emphasis is placed upon demographic and historical changes, widowhood, caregiving and intergenerational relationships as they relate to the family life of older people. Prerequisite: Geron. 100 or junior standing.

Geron. 537. The Social Consequences of Disability. (3). Cross-listed as Soc. 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. 111Q.

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 up to six hours. Prerequisite: Instructor's consent.

Geron. 551. Workshop. (3). Specialized instruction using 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, Min. S. 651, and 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, and analysis of 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. 202Q 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 of proposal evaluation. Students write and evaluate proposals.

Geron. 702. Research Methods. (3). Cross-listed as CJ 702, Min. S. 702, P. Adm. 702. Emphasizes the application of methods, including types of funding sources and their purposes and the process of proposal evaluation. Students write and evaluate proposals.

Geron. 715. Adult Development and Aging. (3). Explores theory and research related to the development of adults and to the aging process. Emphasizes the interactive, interdisciplinary perspective, the course examines the process of change, transition, growth, and development across the adult lifespan. Prerequisites: Geron. 798 or six hours of gerontology.

Geron. 720. Independent Readings in Gerontology. (1-3). Directed study in a specialized topic in gerontology. Repeatable up to six 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 six hours. Prerequisites: 12 hours of gerontology and instructor's consent.

Geron. 798. Multidisciplinary Perspectives on Aging. (0). Introduction to the advanced study of the process of aging from a multidisciplinary point of view. Not open to students with undergraduate minor or major 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 partici-

pant observation and interview as approaches to understanding aging and the aged. Students gain practical experience in these methods through individual fieldwork projects. Prerequisite: Geron. 798, 12 hours of gerontology credit or instructor's consent.

Geron. 802. 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 policies, programs, and practices. Prerequisite: Geron. 798, 12 hours of gerontology or instructor's consent.

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 development and evaluation of program goals, objectives, and methods of implementation. Prerequisite: 12 hours of gerontology or instructor's consent.

Geron. 804. Quantitative Methods for Public Sector Professionals. (3). Cross-listed as CJ 802 and 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 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.

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 also is required. Prerequisite: 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 six hours. Prerequisite: instructor's consent.

Geron. 897. Advanced Research Methods. (3). Cross-listed as CJ 897 and 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, Geron. 597, Min. S. 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
help people relate better to minority women in America and understand their attitudes, sensitivities and emotions.

>Min. S. 251Q. 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 elder citizens as individuals who commit crime and are apprehended and sanctioned by the criminal justice system. Considers the unique challenges of each of the four identified populations, including their interactions with law enforcement, the judiciary, and corrections. Prerequisite: Min. S. 100Q.

>Min. S. 260. Prominent Minorities in the Making of America. (3). General education further study course. Explores, compares, and contrasts minority thought and processes for social, economical and political reform. Delves into the social concepts of prominent American minorities through the coverage of popular novels, biographies, autobiographies, rhetoric, etc. Prerequisite: Min. S. 100Q.

**Upper-Division Courses**

>Min. S. 330. Ethnic America, ca 1500-1924. (3). Cross-listed as Hist 332. General education further study course. 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 empowerment.

>Min. S. 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: Min. S. 100Q, 210Q, or instructor’s consent.

>Min. S. 332. The Native American. (3). General education further study course. Examines contemporary issues facing the Native American focusing on the Osage tribe. Prerequisites: Min. S. 100Q, 210Q, or instructor’s consent.

>Min. S. 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: Min. S. 100Q, 210Q, or instructor’s consent.

>Min. S. 334. Ethnic America in the Twentieth Century. (3). Cross-listed as Hist 333. General education further study course. An in-depth study of the ethnic experience in the twentieth century. Major historical topics include identity formations, inter-generational conflict, class differentiation and social mobility, the politics of ethnicity, resistance and civil rights movements, the racialization of immigration laws, and transnationalism.

>Min. S. 350. Workshop. (1-4). Focused on the nature and scope of minority studies. Emphasizes the unique nature of the experiences of a specific American minority group.

>Min. S. 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, paying particular attention to the global community.

>Min. S. 370. The Black Experience in America. (3). Examines the status of blacks in American society. Historical background is provided, but emphasizes the status of blacks in the current social, economic, and political framework of this country. Prerequisites: Min. S. 100Q, 210Q, or instructor’s consent.

>Min. S. 380. Native American Tribal Systems. (3). An overview of three tribes from different parts of the U.S. Covers historical background, discussion of governments, and information about culture and prominent individuals through lecture, discussion, and movies.


>Min. S. 400. The Black Child. (3). Examines the history and impact of the Black experience on black childhood, growth, and development. Emphasizes the social, educational, and psychological theories, perspectives, and interventions applied to black childrearing. Exposes student to good practices at home, school, and in urban communities that build a healthy sense of self among children. Focuses on contemporary issues and concerns of parents, professionals, and others assisting black children with the transition into adult life. Prerequisites: Min. S. 100Q, 210Q, or equivalent, or instructor’s consent.


>Min. 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. Prerequisite: Min. S. 100Q, 210Q or instructor’s consent.

>Min. 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 Cr/NCR only. Prerequisite: program consent.

>Min. S. 491. Urban Seminar. (3). Examines students to contemporary literature on urban problems in the context of the Wichita commu-
nity. Instructors and neighborhood leaders familiarize students with the history, demographics, and culture of the neighborhood. Students required to volunteer 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 successful completion of the course. Prerequisites: 2.0 GPA; must be currently enrolled in at least 3 hours in addition to Min. S. 491; Min. S. 100Q or 210Q or instructor's permission.

Courses for Graduate/Undergraduate Credit

Min. S. 501. Integrity in Public Service. (3). Cross-listed as CJ 501, Geront. 502, and 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 case study method, using cases and examples of problems and solutions from everyday life as a practical guide to applying ethical principles. Prerequisite: junior- or senior-level or instructor's permission.

Min. S. 512. Issues in Minority Aging. (3). Cross-listed as Geront. 512. General education further study course. Addresses the needs and interests of students who are interested in (1) providing services to the minority elderly; (2) learning about the “issues” of concern to minority elderly; (3) becoming familiar with the rights of the older/minority Americans; (4) learning the legal principles, the rights of older/minority Americans; (5) offering real-world solutions to the problems encountered by minority elderly. Prerequisites: Min. S. 100Q, Geront. 100, Soc. 111Q, or instructor's consent.

Min. 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 examination of the historical experiences of women of color across space and time in U.S. history. Extends the female-centered framework of analysis, course probes the intersections of race, class, gender, and sexuality in women’s lives.

Min. S. 540. Advanced Cross-Cultural Communications. (3). An advanced study on special topics in human relations. Prerequisite: Min. S. 380 or concurrent enrollment.


Min. S. 550. Working with Minority Families. (3). Examines the unique dynamics, forms, and interaction patterns of U.S. minority families within the larger cultural framework. Highlight strengths exhibited by these families and the challenges they face. Discusses intervention strategies to address such challenges. Focuses primarily on four minority groups: African Americans, Asian Americans, Hispanic Americans and Native Americans. Also discusses families from other cultures, domestic and international. Through research and service projects, students have a hands-on experience in working with minority families.

Min. S. 551. Workshop. (3). Specialized instruction using variable format in relevant minority studies subjects. Repeatable for credit up to 6 hours.

Min. S. 580. Individual Projects. (3). Student conducts independent research related to a specific minority group. Prerequisite: 50 hours of Wichita State credit or program consent. Repeatable for a total of 6 hours.


Min. S. 621. Environmental Law. (3). Cross-listed as CJ 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 a policy, enforcement processes, and environmental protection. Includes issues in the development and implementation of environmental policy. Prerequisite: an approved methods class.


Min. S. 651. Dispute Resolution. (3). Cross-listed as CJ 651, Geront. 651, and 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 ADR/ADR and inter-group and inter-organization relations. Emphasizes analysing and dispute resolution techniques and analysis of case studies.

Min. S. 702. Research Methods. (3). Cross-listed as CJ 702, Geront. 702, and P. Adm. 702. Prepares students with applied public policy research methods. Emphasizes locating, collecting, analyzing, 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.

Min. 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.

Min. S. 750. Workshop. (1-4). Focuses on the nature and scope of minority studies. Emphasizes the unique nature of the experiences of minority groups in this country.

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.

Major: Bachelor of Science (BS)
1. Computer science: The following computer science courses are required: 210, 211, 300, 319, 410, 440, 510, 540 and 560. This mix of theoretical and practical courses establishes a strong foundation for advanced courses in the discipline. In addition, students complete 15 hours of required courses in advanced electives in computer science. These 15 hours provide students with a depth and breadth of knowledge, beyond what they receive in core courses, by exposing them to advanced topics in some of the major areas of computer science. Advanced courses fall in seven areas: artificial intelligence, software engineering, theoretical computer science, computer systems, computer hardware, information systems, and symbolic and numeric computation. The choice of advanced electives should span at least three of these areas.


3. Science: 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. 203 (5)
Biol. 204 (5)
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. 101Q (3) or Biol. 203 (5)

C. Chem. 111 (5)
Chem. 112 (5)
Anthr. 101Q (3) or Biol. 203 (5)
D. Geol. 111 (4)
Geol. 320 (3)
Anthr. 101Q (3) or Biol. 203 (5)
One additional course chosen from any option
E. Phys. 213 (5)
Phys. 214 (5)
Anthr. 101Q (3) or Biol. 203 (5)

4. Additional required course for CS majors:
Phil. 354, Ethics and Computers, gives
students an ethical context for their pro-

Major: Bachelor of Arts (BA)
1. Computer science: The following
required core computer science courses
provide a good foundation for the disci-
pline: 105, 210, 300, 312, 320, 410, 440, 510,
540.
2. Mathematics: The following required
mathematics courses add strength to the
major in computer science: Math. 111,
3. Additional required course for the major:
Phil. 354, Ethics and Computers, gives
students an ethical context for their pro-

Second Semester
CS 312, Assembly Language and
Systems Programming
CS 410, Programming Paradigms
Stat. 460, Elementary Probability
and Mathematical Statistics
Third Natural Science course
Elective...

Junior Year
(60-89 credit hours earned)
CS 440, Computer Organization
and Hardware
CS 510, Programming Language
Concepts
Humanities Introductory course
(Phil. 125Q)...

Second Semester
CS 540, Operating Systems
Advanced CS elective
*Introductory course in Social and
Behavioral Sciences or elective
Humanities/Fine Arts further study
or Issues and Perspectives course
(Phil. 354)...

Senior Year
(90 credit hours earned)
Advanced CS elective
Advanced CS elective
Humanities Introductory course
(literature)...
Social and Behavioral Sciences Further
Studies or Issues and Perspectives
course...

Second Semester
CS 560, Data Structures and
Algorithms II...
Advanced CS elective
CS 105, An Introduction to Computers and their Applications. (3). 2R; 3L. General education introductory course. A computer literacy course introduces students to the Internet and other networks, multimedia, CD ROM, historical development of the computer; uses of the computer in business, industry, government, education, and the home; hardware components of a computer system; data representation; systems analysis and design; and issues of ethics posed by technology. The laboratory section includes hands-on experience with the Internet, Windows, and microcomputer applications packages such as word processors, spreadsheets, etc. No credit granted toward the BS in Computer Science. Prerequisites: some familiarity with typewriter keyboard and minimal typing skills.

CS 150. Workshop. (1-5). Short-term courses focusing on new computer techniques. Repeatable for credit. Prerequisite: departmental consent.

CS 210. Introduction to Computer Science. (4). 3R; 2L. General education introductory course. Broad introduction to the discipline of computer science. Covers algorithms, computer hardware, operating systems, introduction to high-level language programming, databases, artificial intelligence and other applications, and social issues. Prerequisites: Engl. 101, Math. 111, 112 or equivalent with a grade of C or better in each.

CS 211. Problem Solving and Programming in C. (4). 2R; 2L. First course in programming in a high-level language. Emphasizes analyzing problems, designing solutions and expressing them in the form of a well-structured program in the high-level language C. Prerequisites: Engl. 101, Math. 111, 112 or equivalent with a grade of C or better in each.

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 grade of C or better.
Courses for Graduate/Undergraduate Credit

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 grade of C or better.

CS 320. Discrete Structures in Computer Science. (4). Deals with discrete structures 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, onto functions; matrices; graphs and trees; elementary graph algorithms; finite automata and regular languages; context-free grammars and languages. Prerequisites: CS 210 and 211, each with a grade of C or better.

CS 350. Workshop. (1-5). Short-term courses with special computer science emphases. Repeatable for credit. Prerequisite: departmental consent.

CS 365. Introduction to Computer Graphics. (3) 3R; 2L. Introduces interactive computer graphics, presenting the basic concepts of the field. Includes geometry of computer graphics, graphics primitives, two- and three-dimensional representation, transformation, data structures, windowing and clipping, hidden lines, and surfaces and shading. Extensive use of computers provides practical experience. Prerequisite: CS 300.

CS 410. Programming Paradigms. (3) 3R; 1L. Exposure to computer programming in various styles of languages. Emphasizes programming rather than theory. Prerequisites CS 300 and 320 with a grade of C or better in each.

CS 440. Computer Organization and Architecture. (4) 3R; 2L. A study of basic computer hardware, organization, and architecture. Includes number representation, arithmetic, binary logic, circuit design, communication between major computer components, instruction processing cycle, system design, addressing techniques and the concepts of microprogramming. Hardware laboratory demonstrates the concepts. Prerequisites: CS 300 and 312 with a grade of C or better in each.

CS 481. Cooperative Education in Computer Science. (1-5). Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. Prerequisite: departmental consent. Offered Cr/NC only.

CS 497. Special Topics. (1-3). Special topics of current interest in computer science. Prerequisite: departmental consent.

CS 498. Individual Projects. (2-3). Repeatable for a total of six hours of credit. Graded S/U only. Prerequisite: departmental consent.

CS 501. Numerical Programming Techniques. (3) 2R; 2L. A study of the programming techniques used to solve nonlinear equations, interpolate, 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—impersonative languages, functional languages, logic languages, object-oriented languages, etc. Prerequisite: CS 410 with a grade of C or better.

CS 540. Operating Systems. (3) 3R; 1L. Covers the fundamental principles of operating systems: process synchronization, scheduling, resource allocation, 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 grade of C or better.

CS 560. Data Structures and Algorithms II. (3) 3R; 1L. Design and analysis of algorithms. Techniques for 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 344 or 511, and Stat. 460 with a grade of C or better in each.

CS 612. Systems Programming. (3) 2R; 2L. A study of system software including assemblers, disassemblers, macroprocessors, link editors, loaders, language translators and debuggers. Practical experience in building system software through programming laboratory exercises. Prerequisite: CS 300 and 312 with a grade of 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 the 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 grade of 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 grade of C or better and CS 300 and 320 with a grade of B or better in each; or CS 410 or CS 560 with a grade of C or better; or departmental 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 grade of C or better.

CS 680. Introduction to Software Engineering. (3) 2R; 2L. An introduction to the body of knowledge, presently available tools and current theoretical concepts 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 grade of 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 grade of 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, rules for maintaining, user interface design, performance evaluation issues relative to software design, systems evolution aspects from a software maintenance perspective, project management techniques and information system engineering. Prerequisite: CS 300 with a grade of 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 nondeterministic, and com
cepts of decidability, computability and formal language theory. Prerequisite: CS 420 or equivalent with a grade of C or better or graduate standing.

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 the implementation of practical applications. Prerequisite: CS 300 with a grade of 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 approach 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. Prerequisite: CS 300.

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, metarules and dealing with uncertainty. Introduces basics of a production system language. Prerequisite: CS 410 with a grade of C or better or instructor's consent.

CS 781. 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 3.0 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 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 grade of B or better; 720 is recommended.

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 grade of 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 842. Operating Systems Concepts. (3). A comprehensive treatment of the design of execution software for systems ranging from single multiprogramming to multiprocessor and network environments. Addresses concepts of concurrent and parallel processes, related problems of intra- and inter-system communication, synchronization and integrity. Presents general principles of resource management as related single-processor and multiprocessor environments. Prerequisites: CS 540 or ECE 694.

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. Prerequisite: CS 540.

CS 862. Advanced Database Systems. (3). Covers recent developments and advances in database technology. For students who have had a first database course and have a good background in the related computer science disciplines. 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 560.

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. Covers early visual theories, 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 300 and Stat. 460 with a grade of 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 structured 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. Topics include 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 890. Graduate Seminar. (2). A series of seminars on topics of current research interest in computer science. Participants are required to present one or two seminars on topics to be selected with the approval of their graduate advisor. Repeatable up to four credit hours. Graded S/U only. Prerequisite: departmental consent.

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 and 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 six hours of credit. Graded S/U only. Prerequisite: departmental consent.

CS 893. Individual Reading. (1-5). Repeatable for credit with departmental consent. 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 (Econ.)
The economics major in Fairmount College of Liberal Arts and Sciences 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 a foundation for many career paths.

Major. The economics major in Fairmount College of Liberal Arts and Sciences requires a minimum of 31 hours and a maximum of 41 hours in economics. Math. 144 or Math. 242Q 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 144, Business Calculus or Math. 242Q, Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 201Q and 202Q, Principles of Economics I and II</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 231, Introductory Business Statistics</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 301, Intermediate Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 302, Intermediate Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 340, Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>Upper-division electives</td>
<td>12</td>
</tr>
<tr>
<td>Econ. 201Q and 202Q may be taken as part of the Fairmount College requirements.</td>
<td></td>
</tr>
</tbody>
</table>

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. 101G, 102Q, and 231. Econ. 201Q and 202Q, or the equivalents, must be included.

Teaching of Economics. Because 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.

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 a number of 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, three of which may, with departmental consent, be taken in a cognate subject (such as foreign literature, theatre, etc.) offered in a course by another department. The course work must be distributed as follows:

I. Basic Requirements (12 hours)
   Engt. 272Q; 310; 320Q or 330Q; 360; 361; 362Q; 274 or 315

II. Major Requirements (12 hours with at least 6 upper-division) from Engt. 223, 252Q, 254Q; 275Q, 285Q, 290Q, 336, 340Q, 342, 345, 346, 347, 365, 421Q, 450, 503, 504, 512, 513, 514, 515, 521, 522, 524, 526, 527, 532, 533, 535, 536, 537, 580, 610, 615, and 685Q

Minor. A minor consists of 15 hours and requires Engt. 310 and either 320Q or 330Q. Of the remaining nine hours, at least six must be of upper-division work. Engt. 101 and 102 are not counted toward a minor. A number of minors have been specially designed to support majors in other fields; for further information, contact the chairperson of the English department.

Creative Writing
A student planning to major in creative writing must complete Engt. 101 and 102 and thereafter complete 33 hours of course work in English, including the following courses:

I. Basic Requirements (12 hours)
   Engt. 272Q; 310; 320Q or 330Q; 274 or 315

II. Major Requirements (3 hours)
   Engt. 285Q (to be completed with a grade of B or better or receive departmental consent for further creative writing course work)

III. Skill Requirements (at least 12 hours) from Engt. 301, 303, 401, 403, 517, 518, 585, 586, 604, 605 (except for Engt. 301 and 303, all of these courses may be repeated once for credit) or University Honors English courses (1-3)

IV. Electives (at least 6 hours)
   Upper-division hours from any other area of emphasis within the department

Minor. A minor with a creative writing sequence is available and consists of 12 hours of creative writing course work including Engt. 285Q and 9 hours of skill courses listed above, plus 3 hours of Engt. 310 or 320Q or 330Q.

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)
   Engt. 315 and one of the following: 316, 317, 667 or 274

II. Composition (6 hours)
   English 680 and one of the following: 210, 685Q or any course in the creative writing sequence

III. Literature (27 hours)
   A. Foundations: English 272Q; 310; 320Q or 330Q and 340Q
   B. British and American literature: Engt. 362Q or 503; 252Q or 504; 360 or 361
   C. Cross-cultural language/literature: Engt. 342, 345, 365 or 672
   D. Literature for adolescents: CI 616

IV. Other (6 hours)
   A. Theatre 143G and 221Q
   V. Electives (6 hours)
   Six hours in English or in a certifiable minor
Composition

Noncredit Courses

Engl. 011. Syntax, Logic and Organization. (3). Offered Cr/NCr 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/NCr 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/NCr 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 to short essays. Prerequisite: Engl. 013.

Lower-Division Courses

Engl. 100. English Composition. (3). A required composition course for non-native-speaking students scoring below a certain level as determined by a departmental examination. Emphasizes reading, writing, and thinking skills. Credit applied for graduation. Prerequisite: Engl. 015 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. Integrates the writing process, rhetorical modes, and library skills into writing assignments related primarily to non-fiction readings. Prerequisite: qualifying 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 sequentially with Engl. 101 in the freshman year. Prerequisite: Engl. 101, with a grade of 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 specific theme. Prerequisites: Engl. 101 and 102.

Engl. 150. Workshop. (1-4). Repeatable for credit. Material varies according to the needs of students.


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/NCr only.

Courses for Graduate/Undergraduate Credit

Engl. 581. Composition Practicum. (1). Required for all English majors in English. Does not count for credit toward the MA or MFA degree. Focuses on techniques and strategies for teaching composition. Each participant must teach in a section of the composition course he or she teaches. Graded S/U only. Repeatable for credit. Prerequisite: appointment as a graduate teaching assistant in the Department of English.

Engl. 680. Theory and Practice in Composition. (3). Introduces and explores theories of rhetoric, research in composition and writing programs, and practices in schools and colleges. Students investigate the process of writing, analyze varieties and samples of school writing, and develop their own writing skills by writing, revising, and evaluating their own and others' work. Especially for prospective and practicing teachers; may not be taken for credit by students with credit in Engl. 780.

Engl. 685Q. Advanced Composition. (3). Explores the interrelationships among contemporary issues, problem-solving and communication. The first objective is to engage students in interdisciplinary inquiry into some aspect of this issue, inquiry which asks students to apply the analytical approaches of their major fields to current issues of broad, general interest. The second objective is to develop students' abilities to communicate their knowledge and assumptions about this issue to a variety of audiences and for a variety of purposes. Prerequisites: Engl. 101 and 102 and upper-division standing.

Engl. 780. Advanced Theory and Practice in Composition. (3). For teaching assistants in English. Review of new theories of rhetoric, recent research in composition and new promising developments in composition programs in schools and colleges. Students are given practice in advanced writing problems, situations and techniques and may propose projects for further special study.

Creative Writing

Lower-Division Course

Engl. 285Q. Introduction to Creative Writing. (3). An introductory course; the techniques and practice of imaginative writing in its varied forms. Course may be used to fulfill the general education requirement only as an elective (studio and performance). Prerequisites: Engl. 101 and 102.

Upper-Division Courses

Engl. 301. Fiction Writing. (3). Primary emphasis on student writing. Students study form and technique by reading published works and apply those studies to the fiction they write. Prerequisite: Engl. 285Q with a grade of B or better.

Engl. 303. Poetry Writing. (3). Primary emphasis on student writing. Students study form and technique by reading published works and apply those studies to the poetry they write. Prerequisite: Engl. 285Q with a grade of B or better.

Engl. 401. Fiction Workshop. (3). Advanced course. Manuscripts will be critiqued to develop skill in writing, rewriting, and polishing. Repeatable for credit. Prerequisites: Engl. 301.

Engl. 403. Poetry Workshop. (3). Advanced course. Manuscripts will be critiqued to develop skill in writing, rewriting, and polishing. Repeatable for credit. Prerequisites: Engl. 303.

Courses for Graduate/Undergraduate Credit

Engl. 517-518. Playwriting I and II. (3). Cross-listed as Thea. 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.


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 artistry generally associated with fiction. Prerequisite: consent of creative writing director.

Engl. 808. Creative Writing: Poetry. (3). Advanced work in the writing of poetry. Repeatable for credit. 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. Specifically designed for prospective English teachers, but open to all interested students. Prerequisite: Engl. 315 or departmental consent.

Courses for Graduate/Undergraduate Credit
Engl. 667. English Syntax. (3). Cross-listed as Ling. 667 and Anthr. 667. A study of 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. An introduction to the study of language variety with special attention to regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite: Engl. 315 or departmental consent.

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.

Engl. 740. Graduate Studies in Linguistics. (3). Cross-listed as Ling. 740. Selected topics in theories of language and methods of linguistic study. With departmental consent, the course is repeatable for credit.

Literature

Lower-Division Courses
>Engl. 220G. 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. 307G. Narrative in Literature and Film. (3). 2R; 2L. A comparative aesthetic analysis of the art of narration in literature and especially in film.


>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. 320Q. 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. 330Q. 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. 330. Explores the literary genre of the journal as practiced by both historical and modern women. Works by both well-known diarists and little-known notebook keepers will be examined. Students complete in-class and out-of-class assignments and will be encouraged to do daily work in a journal of their own. Prerequisites: Engl. 101 and 102.

>Engl. 340Q. 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 Anthr. 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. 345. Studies in Comparative Literature. (3). General education further study course. Study of 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, Chicana/o and immigrants from other cultures. Prerequisites: Engl. 101, 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, 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 eighteenth century.

>Engl. 361. Major British Writers II. (3). General education further study course. Covers the primary writers in British literature from the nineteenth century to the present.
Engl. 362Q. American Writers of the 19th Century. (3). General education further study course. The study of 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 Afro-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. 400Q. 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 hypocrisy. Also acquaints students with the nature of literary inquiry by approaching works from a variety of critical perspectives.

Engl. 421Q. Epic and Romance. (3). Cross-listed as Honors 400Q. Readings in the 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 given 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 nonmajors 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 transcendental 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 after World War II. Readings also may include literary criticism and other types of nonfiction prose. Discussions cover themes, topics and literary forms inspired by the social and cultural movements and events of the first half of the 20th century.


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. 340Q. 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 centuries. 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. 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. Works 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. 536Q. 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 the various playwrights into the lives and roles of women. In addition to reading and analyzing plays, students write plays of their own.

Engl. 550. 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 Ling. 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 lyric works, 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.


Courses for Graduate Students Only

Engl. 800. Introduction to Graduate Study in English. (3). Prepares students to perform effectively in graduate classes in English. Concerned with: (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. Throughout the semester a balance between criticism and research is maintained.


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. 826. Theories of Rhetoric: Renaissance to Early Modern. (3). 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, Bulwer, 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. 841. Graduate Studies in Contemporary Literature. (3). Covers selected topics in the literature of the last quarter-century, including material in translation. Deals with a broad range of authors and genres; but with change of content and departmental consent, it will be repeatable for credit.

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 in Special Topics. (3). Intensive study of selected texts, writers or literary problems. Seminar discussions, reports and research projects. Repeatable for credit with departmental consent.


Environmental Science
WSU offers an Interdisciplinary Master of Science degree program in environmental science. This degree 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.

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.

Wichita State University does not at this time offer a film studies major. However, the minor will prove useful to students majoring in literature, journalism, and speech, and will also 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. 106Q, The Way It Was: Western Civilization in Film; Comm. 220Q, Introduction to Film Studies; Art G. 231, Basic Photography (Motion Picture); Engl. 307Q, Narrative in Literature and Film; Comm. 320, Cinematography; Art G. 430, Television for Graphic Design; Comm. 304, Television Production and Direction; and Comm. 604, Advanced Television Production and Direction.

French
See Modern and Classical Languages and Literatures.

Geography (Geog.)
Only courses 201 and 235 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. 125Q or 201 or the equivalent.

Lower-Division Courses

Geog. 125Q. Principles of Human Geography. (3). General education introductory course (social science). An introductory course examining the development of human and cultural landscapes.


Geog. 201. Physical Geography. (3). Lab fee. General education introductory course (natural science). 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.

Upper-Division Course

Geog. 210Q. 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. 325. Meteorology. (3). Lab fee. General education further study course (social science). 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, and applied meteorology. Does not apply toward a major or minor in geography.

Requires field trips at the option of the instructor. Prerequisite: instructor's consent.

Geog. 262Q. Cultural Geography. (3). An introduction to cultural geography emphasizing man's geographical distributions, the spatial aspects of his cultural activities, the sources and techniques of his livelihood and the relationships to his environment.

Geog. 230. Field Studies in Geography. (1-6). Off-campus, systematic field study in a selected area of geographic significance. Course is given upon demand and may be repeated for credit when the locality and content differ. Where appropriate, travel, lodging and board are charged.

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. 210Q.

Geog. 520. Geography of the United States and Canada. (3). Physical, political, economic, historical and human geography of the United States and Canada.

>Geog. 530. 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. 620. Field Studies in Geography. (2-6). Off-campus, systematic field study in a selected area of geographic significance. Course is given upon demand and may be repeated for credit when the locality and content differ. Where appropriate, travel, lodging and board are charged.

Geog. 670. Urban Geography. (3). Lab fee. Geography of cities; the origin, growth, functions, characteristics and environmental problems of urban areas; structure and dynamical elements of intraurban space; land-use anal-
ysis and approaches to urban planning; and problems of urban ecology.

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 and is repeatable for credit when content differs. May require field trips. Prerequisite: junior standing.

Geog. 750. Workshop in Geography. (1-4). Short-term courses with special focus on geographical problems. Prerequisite: instructor's consent.

Course for Graduate Students Only

Geog. 820. Field Studies in Geography. (2-6). Off-campus, systematic field study in a selected area of geographic significance. Course given upon demand and may be repeated for credit when the locality and content differ. Where applicable, travel, lodging and board costs are charged. Prerequisite: instructor's consent.

Geology (Geol.)
The Bachelor of Science (BS) degree in geology provides in-depth training for professional work in industry or government as well as for graduate study. The Bachelor of Arts (BA) degree in geology provides training for graduate study or teacher preparation background. A number of assistantships, fellowships, and scholarships is available. Contact the Department of Geology for further information.

The geology program emphasizes field and laboratory skills in sedimentology, geochemistry, paleontology, paleoclimatology, structure and geophysics, mineral and fuel resources, and related fields. Attention is directed to solving problems of local and global perspective related to earth systems and environmental analysis.

Students who expect to achieve either the BS or BA in geology within a minimum period of time should have completed geometry, trigonometry, and two years of algebra in high school. Chemistry and physics also are recommended in high school.

Geology Major. A major with the BA requires a minimum of 33 hours in geology, including the following:
1. Geol. 111Q, General Geology
2. Geol. 312, Historical Geology and Stratigraphy; 320, Mineralogy, and 324, Petrology
3. Geol. 526, Sedimentary Geology; 544, Structural Geology; 581, Numerical Geology; and 640, Field Geology
4. A minimum of 17 hours in elective geology courses at 500 or above.

Required supporting sciences for the BS degree are:
1. Biol. 203Q or Biol. 575 or Anthr. 505
2. Math. 242Q and Math. 243
3. Stat. 370
4. AE 227 (or an approved substitute)
5. Chem. 111Q and 112Q or Chem. 123Q and 124Q
6. Math. 213Q and 214Q or Physics 313Q and 314Q
7. Any additional course from the following list (or an approved substitute): Math. 344 or Math. 511; Anthr. 613 or 711; any physics course that has a prerequisite of Physics 214 or 314; any chemistry course that has a prerequisite of Chem. 112Q or 124Q; Biol. 578 or either of the biology courses listed in Item 1 above that were not completed.

Minor. A minor in geology consists of at least 15 hours of geology including Geol. 111Q, General Geology.

It is suggested that students minoring in geology consult with the department in selecting courses most appropriate to their major field of study.

Nonmajor and Nonminor Students. A nonmajor or nonminor student who wishes to achieve the broadest terminal background knowledge of geology is advised to take Geol. 111 Q, General Geology, and 312, Historical Geology and Stratigraphy. Similar advice is offered to the potential major whose decision to elect geology is pending.

Lower-Division Courses

Geol. 101Q. Science and Environment. (3). Study of the physical environment and environmental education— the educational process concerned with man's relationship with his natural and manmade surroundings; includes the relation of population, pollution, energy, resource depletion and allocation, conservation, transportation, technology, economic impact and urban and rural planning to the total human environment.

Geol. 102. Earth Science and the Environment. (3); 3R, or (4) 3R; 2L General education introductory course. A survey of 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 sciences laboratory experience. Credit not allowed in both Geol. 102 and 111Q.

Geol. 111Q. General Geology. (4). 3R; 2L General education introductory course. An overview of the earth, the concepts of its origin, composition, materials, structure, landforms and history; and natural processes operating to create the earth's physical environment. May require field trips into the earth laboratory. Credit not allowed in both Geol. 102 and 111Q.

Geol. 150. Workshop. (1-4). Short-term courses focusing on geological problems. Prerequisite: instructor's consent.

Upper-Division Courses

Geol. 300G. Energy, Resources and Environment. (3). General education issues and perspectives course. An examination of man's effects on his environment and man's dependence on earth resources in meeting his needs. Examines the significance of availability and location of energy and mineral resources relative to the protection and improvement of man's environment and man's desires for a high standard of living. Some emphasis on urban geology.

Geol. 302Q. Earth and Space Sciences. (3). 2R; 2L 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 seawater; diversity of life in the oceans; economic potential of the sea and man's effect on the marine environment.

Geol. 312. Historical Geology and Stratigraphy. (3). General education further study course. Stratigraphic aspects and systematic field study of geological problems. Prerequisite: instructor's consent.
treatment of plate tectonics including aspects of spherical geometry necessary to understand the movement of plates over the earth's surface. Includes earthquake focal mechanisms and paleomagnetic interpretations of plate movements; driving forces for plate tectonics; the history of the development of plate tectonic theory. Prerequisites: Geol. 111Q and Math. 112 or 123 or equivalent mathematical background.

>Geol. 544. 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 (or taken concurrently), and Geol. 324.

>Geol. 552. Physical Stratigraphy. (3) 2R; 3L. Description, classification, correlation and relative ages of stratigraphic rock units and the origin of primary structures of clastic sedimentary rocks. Laboratory emphasis on binocular microscopic examination and physical properties of unconsolidated sediments and clastic sedimentary rocks. Requires field instruction in stratigraphic mapping methods. Prerequisites: Geol. 312, 320 and 540 or equivalent.

>Geol. 560. Geomorphology and Land Use. (3) General education further study course. Identification of landforms and their genesis; processes producing landforms; the influence of geomorphology in aspects of natural hazards such as landslides, floods, earthquakes, and volcanic activity; soil erosion, drainage basin modification, coastal and desert environments, mineral resource exploitation, and their effects on humans; importance of these influences in environmental management and land-use planning. Prerequisite: Geol. 111Q or Geol. 101Q or Geol. 300G with a grade of B or better.

Geol. 562. Regional Geology of the United States. (3). A detailed regional survey of the general geology, geomorphology, stratigraphy and structural geology and their interrelationship in the United States. Requires field trips (instructor's option). Prerequisite: Geol. 560 or instructor's consent.

>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. 111Q, Geol. 201 or equivalent.

>Geol. 570. Biogeology. (3) 2R; 3L. General education further study course. Systematic survey of major fossil biogeological materials. Analysis of the origin and evolution of life and paleoecological interpretation of ancient environments and climates. Includes handles and binocular microscopic examination of major fossil biogeological materials. Includes application of analyzed fossil data to the solution of problems in biogeochronology, paleoecology, paleoclimatology and paleogeography. Citations from fields of invertebrate, vertebrate and micropaleontology, and palynology. May require museum and field trips. Prerequisite: Geol. 312 or 552.

>Geol. 574. Special Studies in Biogeology. (3) 2R; 3L. General education further study course. A systematic study in selected areas of biogeology and paleontology. Content differs, upon demand, to provide in-depth analysis in the fields of: (a) invertebrate paleontology, (b) vertebrate paleontology, (c) micropaleontology, (d) palynology and (e) paleoecology. Gives appropriate laboratory instruction in the systems, taxonomy and biogeological relationships within the selected fields listed. May require field trips. Repeatable for credit to cover all five areas listed.

>Geol. 581. Computer Applications in Geology. (3). Applications of computers in the solution and presentation of geologic and affiliated studies, using available software. Lectures and practice on: (a) analysis of numerical data using spreadsheet and statistical programs; (b) simulation and quantitative analysis of physical processes of deposition, including time-series analyses; (c) modeling of surface and subsurface fluid flow, including groundwater hydrology; (d) mapping and analysis of geologic data; (e) programming in available spreadsheet programs; (f) methods of presentation of geologic data utilizing computer graphics programs. Prerequisites: Geol. 526 and 552 or instructor's consent.

>Geol. 602. Laboratory Methods in Geology. (3). Methods of data collection and analysis of geologic samples; special instruction in the use of the scanning electron microscope, atomic absorption spectrophotometer, cathodoluminescence, X-ray diffraction equipment, computer-assisted image analysis system, particle size description by sieving methods, and staining techniques for qualitative and semi-quantitative internal identification. Prerequisite: Geol. 312, 320; or instructor's consent.

>Geol. 621. Geochemical Cycling. (3). The chemistry of earth materials and the important geochemical processes; cycles operating on and within the atmosphere, hydrosphere and lithosphere through time; anthropogenic effects on these cycles today. Prerequisites: Geol. 111Q and Chem. 111Q or instructor's consent.

Geol. 630. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geologic significance. Course given upon demand and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging and board costs are charged.

Geol. 640. Field Geology. (6). 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 professionally written report are due on campus during the sixth week. Prerequisite: 12 credits of advanced geology or instructor's consent.
geoL. 645. Geoscientific Presentation. (2). Essential elements of effective communication of geoscientific information in both written and oral formats. Students prepare original manuscripts on results of geologic research and make numerous in-class presentations utilizing professionally acceptable visual displays. Prerequisites: Geol. 312, but course restricted to juniors, seniors, and graduate students; or instructor’s consent.

geoL. 650. Geohydrology. (3). 2R; 3L. The hydrologic cycle, physical and chemical properties of water, fluid flow through permeable media; exploration and evaluation of groundwater; water quality and pollution; and water law. Prerequisites: Geol. 552 and Math. 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). Modern climate and climatic changes, and analysis of climatic deterioration: systematic study of geologic evidence of climate change through time. Emphasis on theoretical causes, feedback mechanisms, and recognition of effects on climatic perturbations in the rock record. Prerequisite: Geol. 312.


geoL. 682. Petroleum Geology. (6). 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; characteristics of subsurface strata, including laboratory analysis of recovered subsurface samples; application to petroleum geology, mineral resource evaluation, and environmental geology. Prerequisites: Geol. 312; Phys. 214Q or equivalent.

geoL. 690. Special Studies in Geology. (1–5). Systematic study in selected areas of geology. Content differs and is repeatable for credit.

geoL. 698. Independent Study in Geology. (1–3). Independent study on special problems in the field of geology: (a) general, (b) mineralogy, (c) paleontology, (d) economic geology, (e) sedimentation, (f) stratigraphy, (g) geophysics, and (h) petroleum. May require field trips. Prerequisite: instructor’s consent.

geoL. 702. Environmental Science I. (4). (2R; 3L). Cross-listed as Biol. 702 and Chem. 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science, including chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. Prerequisite: acceptance in the master’s of environmental science program or instructor’s consent.

geoL. 703. Environmental Science II. (4). (2R; 3L). Cross-listed as Biol. 703 and Chem. 703. Advanced theoretical and applied principles of the interdisciplinary study of environmental science, including environmental chemical analysis, environmental toxicology, aquatic microbiology, environmental biochemistry, water treatment, photochemical smog, and hazardous waste chemistry. Prerequisite: acceptance in the master’s of environmental science program or instructor’s consent.

geoL. 704. Environmental Science Colloquium. (1). Cross-listed as Biol. 704. Students in the master's of environmental science program 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.

geoL. 706. Environmental Science Internship. (1–6). Cross-listed as Biol. 706 and Chem. 706. Students in the master’s of environmental science program may gain interdisciplinary skills in environmental science by participating in an approved internship project with local business, industry, or government agencies. Internship is an alternative to thesis research for degree requirements. Enrollment in internship requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: completion of 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; emphasizes application to sedimentary environments and environmental problems. Includes some laboratory work. Prerequisites: Geol. 324 and Chem. 112Q 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 soil classification, soil 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 systems. May require field trips. Prerequisites: Geol. 526, 552 or equivalents.

geoL. 727. Carbonate Diagenesis. (3). 2R; 3L. An in-depth analysis of diagenesis of carbonate sediments and rocks. Includes mineralogic stability in natural waters, meteoric, marine and diagenetic diagenesis, dolomitization processes, and dolomitizing processes and products; trace-element isotope studies and diagenetic tools, cathodoluminescence and x-ray diffraction studies of carbonates; origin and porosity. Prerequisites: Geol. 520 (unless waived by instructor) and 726.

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 resources 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 analysis and economic 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 scale in terms of stratigraphic principles, 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; eustatic 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. Topics include cover 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 processes and framework chemistry. Computer simulation models used whenever practical along with detailed analysis of case histories, including those related to environmental geoscience. Prerequisite: Geol 650, 681, Math 344 or instructor’s consent.

Geol. 760. Exploration Geophysics. (3). An introduction to the theory and application of geophysical techniques for hydrocarbon, mineral, and groundwater prospecting. Topics include use of seismic techniques; instrumentation for acquisition on land and sea; seismic processing; structural and stratigraphic modeling; 3-D seismic exploration; and seismic refraction techniques. Prerequisite: completion of geology undergraduate math and physics requirements; Math 344 or 555; Geol 524 and 544; and instructor’s consent.

Geol. 781. Advanced Numerical Geology. (3). Involves practical implementation of algorithms and computer code. Included is the analysis of multivariate techniques and the development of the computer/algorithm skills needed to handle very large databases. Topics include standard statistical approaches to data analysis; treatment of applied linear algebra and matrix theory; and the application of linear and non-linear discriminant analysis, various factor analytic techniques, hard and fuzzy clustering, linear and non-linear unmixing, analysis, and other forms of data modeling. Prerequisites: Geol 581 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) palaeontology, (f) economic geology, (g) sedimentation, (i) stratigraphy, (j) geophysics and (k) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

Geol. 808. History of Geology. (1-3). 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 and may be repeated for credit when content differs. May require field trips. Prerequisites: graduate standing, instructor’s consent, and 2 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 geochro­my, (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. (3-1R; 5L. 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: Geol 520.

Geol. 826. Sedimentary Petrology. (3). 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 and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisites: summer field geology (or equivalent) and instructor’s consent.

Geol. 840. Geotectonics. (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 problem and field trips. Prerequisite: 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. Emphasis on 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 estimations, shallow aquifer geophysical modeling, geophysical basin modeling, and regional and global environmental modeling. Prerequisites: Geol 581, 760; Math 344 or 555; or instructor’s consent.

Geol. 870. Advanced Biogeology. (3). 2R; 3L. Paleocological reconstruction of ancient plant/animal communities and environments emphasizing community structure, bioturbation, 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. Emphasis on 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 unmixing, extrapolation and interpolation techniques, quantitative and environmental geothermometry and geophysical techniques, modeling global phenomena, and simulations of multi-phase flow in aquifers and reservoirs. Prerequisites: Geol 581, 781; and Math 344 or 355; 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 assures them a foundation for an integrated liberal education. Combined with courses in other disciplines, the history major prepares students for entrance into a wide variety of career opportunities, including business, government, law, journalism, teaching, 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 698; 3 credit hours of either Hist. 100G, 101G, or 102G; 3 credit hours of either Hist. 131Q or 132Q; 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 those hours may be lower-division (100- and 200-level) courses. Students who complete the minor are limited to 3 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. 100G. 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 given to the major social, cultural, economic, and political traditions of Asia, Africa, and the Americas as well as Europe.

> Hist. 101G & > Hist. 102G. History of Western Civilization. (3 & 3). General education introductory courses. 101G: prehistory to 1648. 102G: 1648 to the present.

Hist. 106Q. The Way it Was: Western Civilization in Film. (3). Selected topics in the history of Western civilization on topic(s) dealt with in films from the 17th century to the present. Not open to history majors or those with credit in Hist. 101G and 102G.

Hist. 110. Russian Studies. (3). Cross-listed as Russ. 110 and Pol. S. 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.

Hist. 131Q & > Hist. 132Q. History of the United States. (3 & 3). General education introductory courses. 131Q: survey from the colonial period to 1865. 132Q: survey from 1865 to the present.

Hist. 150. Workshop in History. (2-3).

Hist. 200. Introduction to Historical Research and Writing. (3). Basic instruction in research methodology, composition and criticism. Required of history majors.

Hist. 213. American Popular Culture. (3). Cross-listed as Anthr. 213. An examination of popular culture from colonial times to the present emphasizing the media explosion since the Civil War. Looks at the American past through the eyes of mass-man, suggesting that mass-man experienced the past differently from what traditional surveys indicate. Such topics as popular music, cinema, pulp magazine literature, comics, television, cult heroes, stereotyping of public issues, family life, fashion and familiar items of household technology are treated seriously rather than as sidelines to the more serious business of politics and finance.

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. 222. East Asia. (3). Cross-listed as Pol. S. 222, LAS-I 222Q and Rel. 222Q. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. Taught by a team of instructors from several departments.

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. 310. Special Topics in History. (2-3). Repeatable twice for credit. Prerequisite: departmental consent.

Hist. 311 & > Hist. 312. History of Latin America. (3 & 3). General education further study courses. 311: a study of Spanish and Portuguese colonization of America. 312: an examination of the national period from the wars of independence to the present.

Hist. 313 & > Hist. 314. English History. (3 & 3). General education further study courses. 313: from the earliest times to the beginning of the Stuart period, emphasizing the origin and development of institutions, customs and nationalism. 314: 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 1890.

Hist. 316. The Jewish Experience in Christian Europe. (3). Introductory survey course. Examines the history, social structure, and economy of Europe and the Jewish communities in the aftermath of the destruction of the Talmudic era in 1890.

Hist. 317. The Holocaust. (3). General education further study course. Examines the history, social structure, and economy of Europe and the Jewish communities in the aftermath of the destruction of the Talmudic era in 1890.

Hist. 320. Russian History Survey. (3). General education further study course. A survey of Russian history from 862 A.D. to the present.

Hist. 321. The Viet Nam Conflict. (3). General education further study course. Examines the Viet Nam conflict, beginning with the French experience and ending with the final battles in 1975.

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. 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 diplomatic, economic, psychological and scientific dimensions of the war. Considers the legacy of the war in light of the postwar world.

Hist. 357. Women in the Ancient World. (3). General education further study course. Examines the myths and realities of women's lives in the traditional societies of ancient Greece and Rome. Examines the role of women's social and economic roles varied from culture to culture and how they changed over time from the age of primitive matriarchy to the Christian era. Investigates the influence of these cultures on our own.

Hist. 359. The Greek World. (3). Surveys Greek history and culture from the Minoans to the Roman Conquest.

Hist. 362. The Roman World. (3). General education further study course. Surveys Roman history and culture from the Etruscans to Constantine the Great, the first Christian emperor. Examines the history, social structure, and economy of Rome and the Roman world to answer the questions: what made Rome great and what led to her eventual decline. Includes warfare, slavery, and family life.

Hist. 481. Cooperative Education. (1-3). The cooperative program would cover work done at museums or archival divisions of libraries. Cannot be included for a history major or minor. Offered CR/NC only. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

Hist. 501. The American Colonies. (3). General education further study course. Colonization of the New World emphasizing the British colonists and their development.

Hist. 502. The American Revolution and the Early Republic. (3). General education further study course. Examination of selected phases of the revolutionary, confederation and federal periods.

Hist. 503. The Age of Jefferson and Jackson. (3). General education further study course. Political, economic and cultural development of the United States from the election of Thomas Jefferson to the end of the Mexican War emphasizing the growth of American nationalism.

Hist. 504. Civil War and Reconstruction. (3). General education further study course. A study of the origins and military events of the American Civil War and the political and social ramifications of the conflict.
Hist. 505. America’s Gilded Age, 1877 to 1900. (3). Emphasizes roots of urban problems, foundations of dissent policy toward minority groups and evaluation of imperial expansion.

Hist. 507. The United States: the 20th Century, 1900-1945. (3). General education further study course. Examines political, social, and economic issues from the Progressive Era through World War II.

Hist. 508. The United States: the 20th Century, Since 1945. (3). General education further study course. The history of the United States from the Truman through the Nixon administrations.

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, with special emphasis on 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 & Hist. 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. 525. American Military History. (3). General education further study course. A history of the military in America from the colonial period to the present, emphasizing warfare and military institutions and their impact on American social, economic and political traditions.

Hist. 528. History of Wichita. (3). A history of Wichita, Kansas, from 1865 to the present with emphasis on the lessons of local history for future planning and its importance to an individual citizen’s sense of place.


Hist. 531. American Environmental History. (3). General education further study course. Examination of the historical, physical, economic, scientific, technological, and industrial interactions of the peoples of America with their environment. Particular emphasis is placed on the period from 1800 to the present.


Hist. 533. The American City: from Village to Metropolis. (3). A study of urbanization and urban life from colonial times to the present—changing life-styles and thought patterns, urban architecture, ethnic assimilation, emergence of the suburb, political and ecological adjustments—are the ingredients of new technology and forms of business organization.

Hist. 534. History of the Old South. (3). General education further study course. An examination of Southern civilization prior to the American Civil War.

Hist. 535Q. 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 pre-historic 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, with particular attention to political developments, 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 DeGaulle emphasizing French attempts to adjust politically, socially, economically and culturally to the changing conditions of modern industrial society.

Hist. 545Q. Neither War Nor Peace: The World Since 1945. (3).

Hist. 553. 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. 559Q & Hist. 560. Greek History. (3 & 3). General education further study courses. 559Q: the Hellenic world from prehistoric times to the end of the Peloponnesian War, 560: the 4th century and the Hellenistic period.


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, 567: history of Europe, 1200 to 1500.

Hist. 568. Social, Economic and Intellectual History of the Middle Ages. (3). Examines the 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. 574. History of Christianity. (3).

Hist. 575Q. 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. 581. Europe, 1815-1870. (3). General education further study course.

Hist. 582. Europe, 1870-1945. (3). General education further study course. Survey of European history from 1870 to 1945.

Hist. 583. Europe, 1945-Present. (3). General education further study course. A survey of European history from 1945-present.

Hist. 588. History of Early Russia. (3). General education further study course. Covers the social, political, and cultural history of Kiev 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/Lenist 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. 595. History of Eastern Europe. (3).

Hist. 599. Experimental Course in History. (3). Designed by the faculty to respond to particular student or faculty interest. Same academic
standards and expectations as other 500-level history courses.

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. Versailles 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. 614. Economic History of Europe. (3). Cross-listed as Econ. 625. 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. 201Q and junior standing.

Hist. 615. Hitler and the Third Reich. (3). The establishment and collapse of the Weimar Republic, the rise and fall of Hitler's Third Reich, the divided Germany of the present and the role of each in world affairs, 1914 to the present.

Hist. 616. Germans and Jews. (3). The history of antisemitism in central Europe, 19th and 20th centuries.

Hist. 620. Media Courses in History. (2-3). Courses created or coordinated by the Department of History, offered through various media: radio, television and newspaper. Areas of historical emphasis vary. Repeatable with instructor's approval; however, three hours maximum credit will apply towards MA degree in history.

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 way they reach audiences. Student 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). Introduce the basic knowledge, theory and related skills of archival administration, including the nature of information, records and historical documentation; the role of records in modern society; and issues and relationships that affect archival functions. Learn 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. (0-2). Graduate history students participate in internship experiences funded through the Cooperative Education programs. Augments Hist. 803. Prerequisite: instructor's consent.

Courses for Graduate Students Only


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). Open only to graduate students. Repeatable for credit to a maximum of six hours.

Hist. 865. State and Local Government Finance. (3). Cross-listed as Econ. 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. Prerequisites: Econ. 765 or instructor's consent.

Interdisciplinary Liberal Arts and Sciences Program (LAS-I)

Lower-Division Courses

LAS-I 100. Freshman Seminar. (1). A study of the University as a resource for personal development and the development of an individual master plan for study and self-development in the University. Offered Cr/NCr only.

LAS-I 100A. 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 Wichita State University. Covers career information, interest testing and interpretation, educational planning, and other activities. Offered Cr/NCr only.

LAS-I 100P. Parents' Course. (1). Studies issues and experiences which confront new students at Wichita State University, how these issues may impact on parents and how parents can be constructively supportive during this major, new life experience. Offered Cr/NCr 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). Involves students in the career/life, educational planning and decision-making process based on career development theories. Uses various assessments and exercises to explore values, interests, and skills as they relate to career choice. Students research occupations and gain knowledge of labor market trends. Course content assists in exploration of college major and career path choice or change. Addresses current workplace issues. Offered Cr/NCr only.

LAS-I 150. Workshop: Special Topics. (1-3). Meets identified needs of specific audiences. Offered Cr/NCr 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 191. Regents Honors Academy 1. (3). Course material, the content of which is derived from Liberal Arts and Sciences and provides an interdisciplinary focus, is specifically designed for Kansas Regents Honors
Academy. Prerequisite: restricted to members of the Kansas Regents Honors Academy.

LAS-I 192. Regents Honors Academy 2. (3). Course material, the content of which is derived from Liberal Arts and Sciences and provides an interdisciplinary focus, is specifically designed for Kansas Regents Honors Academy. Prerequisite: restricted to members of the Kansas Regents Honors Academy.

>LAS-I 222Q. East Asia. (3). General education issues and perspectives course. Cross-listed as Hist. 222, Pol. S. 222 and Rel. 222Q. A survey of basic topics on China, Korea and Japan, covering the period from 5000 B.C. to the present, including geography, prehistory, history, culture, anthropology, society, philosophy, religion, politics and the economics of each country. Taught by a team of instructors from several departments.

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/NCR only.

Upper-Division Courses

>LAS-I 300G. Global Issues. (3). General education issues and perspectives course. Taught by faculty from many colleges and disciplines. Emphasizes issues and perspectives in interdisciplinary research. Emphasizes the integration of methods native to the humanities, social sciences, and natural sciences. Prerequisite: restricted to members of the Kansas Regents Honors Academy.

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 research. Emphasizes research and problem-solving 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 Liberal 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; arts; 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 of Liberal Arts and Sciences.

LAS-I 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 Students Only

LAS-I 500. 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. Prerequisite: consent of student's departmental consent chairperson and instructor.

LAS-I 585. Terminal Project. (2-6). 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, internship research report, or any other individualized activity, but the scope of it must be approved by the student's advisory committee. 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 liberal studies 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.

Linguistics (Ling.)

There is no major in linguistics, however, an emphasis in linguistics is available through the general studies program or a Bachelor of Arts degree field major plan.
logical comparisons of languages and the problem of language universals. Prerequisite: Ling. 315.

Ling. 682. Linguistics. Structure of a Selected Non-Indo-European Language. (3). Language offered depends on student demand and availability of staff. Course may be conducted as a field methods course and is 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. 505. Russian. Russian Phonology. (2). Cross-listed as Russ. 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. 301. Philosophy. Language and Philosophy. (3). Cross-listed as Phil. 301.
Ling. 304. CDS. Developmental Psycholinguistics. (3). Cross-listed as CDS 304.
Ling. 325. Philosophy. Formal Logic. (3). Cross-listed as Phil. 325.
Ling. 727. Teaching English as a Second Language (2-3). Cross-listed as Engl. 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.
Ling. 740. Graduate Studies in Linguistics. (3). Cross-listed as Engl. 740. Selected topics in theories of language and methods of linguistic study. With departmental consent, the course is repeatable for credit.

Others

Lower-Division Course

Ling. 292. Linguistics. Special Studies. (2-3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. Repeatable for credit when content varies.

Courses for Graduate/Undergraduate Credit

Ling. 590. Linguistics. Special Studies. (2-3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. Repeatable for credit when content varies.

Mathematics and Statistics

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 bachelors (BA and BS), masters' (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: Math. 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

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, 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. 571-572 or Stat. 771-772, plus 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 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 (242Q, 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 degrees in mathematics require a high-level algorithmic computer language such as FORTRAN or Pascal.

Noncredit Courses

Math. 007. Arithmetic. (3). Offered Cr/NcR 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/NcR 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/NcR only. Content consists of 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. 021. Plane Geometry. (3). Offered Cr/NcR only. For students without high school credit in plane geometry. Course may be used to meet departmental prerequisites in place of one unit of high school geometry. Prerequisite:...
one unit of high school algebra, Math. 011 or concurrent enrollment in Math. 011. Not applicable to degree.

Lower-Division Courses

Math. 101Q. Mathematics Appreciation. (3). Elementary topics in mathematics of interest to persons in other fields. Especially for persons majoring in non-technical fields. No credit toward a major or minor in mathematics.

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 or Math. 021 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 Math. 112.

Math. 122. College Trigonometry. (3). Studies the trigonometric functions and their applications. Credit in both Math. 123 and 112 is not allowed. Prerequisite: Math. 111 with C or better or equivalent high school preparation, and one unit of high school geometry or Math. 021.

Math. 131. Contemporary Mathematics. (3). General education basic skills course for students majoring in non-technical areas. A collection of applications of mathematics illustrating how contemporary mathematical thinking is used in the decision-making process. Covers topics selected from such areas as the mathematics of social choice; management science; statistics; coding information; and the geometry of growth, shape, and symmetry. Prerequisite: Math. 012 or two years of high school algebra and a qualifying score on a recent departmental placement examination.

Math. 144. Business Calculus. (3). General education introductory course. A brief but careful introduction to calculus for students of business and economics. Credit in both Math. 123 and 242Q is not allowed. Prerequisite: Math. 111 or 112 with a grade of 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 not more than six 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. 011.

Math. 242Q. Calculus I. (5). General education introductory course. Analytic geometry and the calculus in an integrated form. Credit in both Math. 242Q and 144 is not allowed. Prerequisites: Math. 112 with a grade of 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 grade of C or better in each.

Math. 243. Calculus II (5). General education further study course. A continuation of Math. 242Q. Includes a study of integration and applications and an introduction to infinite series. Prerequisite: Math. 242Q with a grade of C or better.

Upper-Division Courses

Math. 300G. The Evolution of Mathematics. (3). A study of mathematics and mathematicians from antiquity to the present; to see how mathematics has developed from man's efforts to understand the world and the extent to which mathematics has molded our civilization and culture. Since mathematics is what mathematicians do, the lives of mathematicians from various ages and countries are studied. Not a mathematical skills course.

Math. 311. Introduction to Linear Algebra. (1). A study of systems of linear equations, matrices, vectors, eigenvalues and eigenvectors. Credit not allowed in both Math. 211 and 311. Prerequisite: Math. 344 or concurrent enrollment.

Math. 311Q. 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. 111 or 211 or equivalent college-level mathematics course.


Math. 350. Modeling with Differential Equations. (3). Covers first order equations (linear and separable), linear equations with constant coefficients, the Laplace transform, numerical methods of solution, and several physical and biological applications. Not intended for students in engineering or the sciences. Prerequisite: Math. 243 with a grade of C or better.

Math. 415. An Introduction to Advanced Mathematics. (3). Develops the concept of proof in a setting of mathematical tools needed in subsequent courses. Covers topics in number theory, algebra and analysis. Particular attention to equivalence relations, functions, induction and mathematical systems. Prerequisite: Math. 344 with a grade C or better.

Math. 480. Individual Projects. (1-3). Repeatable up to ten hours. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable to toward the MS in mathematics.

Math. 501. Elementary Mathematics. (5). A study of topics necessary to an understanding of the elementary school curriculum, such as set theory, real numbers and geometry. Not for major or minor credit. Prerequisites: elementary education major and Math. 111 or equivalent with a grade of 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 grade of C or better.

Math. 513. Fundamental Concepts of Algebra. (3). Defines group, ring and field and studies their properties. Prerequisites: Math. 415 and 511 with C or better or departmental consent.

Math. 530. Applied Combinatorics. (3). Basic counting principles, occupancy problems, generating functions, recurrence relations, principles of inclusion and exclusion, the pigeonhole principle, Fibonacci sequences and elements of graph theory. Prerequisite: Math. 344 with a grade of C or better.

Math. 531. Introduction to the History of Mathematics. (3). General education issues and perspectives course. Studies the development of mathematics from antiquity to modern times Solves problems using the methods of the historical period in which they arose. Requires mathematical skills. Prerequisites: Math. 511 and two additional courses at the 500-level or above, with C or better in each.

Math. 545. Integration Techniques and Applications. (3). A study of the basic integration techniques used in applied mathematics. Includes standard results calculus treatments 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. 344 with grade of C or better.

Math. 547. Advanced Calculus I. (3). Covers the calculus of Euclidean space including the standard results concerning functions, sequences and limits. Prerequisites: Math. 344 and 415 with C or better in each.

Math. 551. Numerical Methods. (3). Approximation methods of solutions, interpolation and approximation, numerical differentiation and integration and the numerical solution of first order ordinary differential equations. Some computer use. Prerequisites: Math. 344 with a grade of C or better and a knowledge of FORTRAN, or departmental consent.

Math. 553. Mathematical Models. (3). Covers case studies from the fields of engineering technology and the natural and social sciences. Emphasizes the mathematics involved. Each student completes a term project which is the solution of a particular problem approved by the instructor. Prerequisite: 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 initial value problems, constant coefficients, undetermined coefficients, variation of parameters, and special methods of solution using power series and the Laplace transform methods. A standard course in differential equation for students in the sciences and engineering. Credit not allowed in both Math. 550 and 555. Prerequisite: Math. 243 with grade of C or better or departmental consent.

Math. 580. Selected Topics in Mathematics. (3). Topic chosen from topics not otherwise represented in the curriculum. May be repeated up to a maximum of six hours credit with departmental consent. Prerequisite: departmental consent.

Math. 615. Elementary Number Theory. (3). Studies properties of the integers by elementary means. Prerequisite: Math. 344 with C or better or departmental consent.

Math. 621. Elementary Geometry. (3). Studies Euclidean geometry from an advanced point of view. Prerequisite: Math. 344 with C or better or departmental consent.

Math. 640. Advanced Calculus II. (3). A continuation of Math. 547. Prerequisites: Math. 511 and 547 with a grade of C or better or departmental consent.

Math. 655. Differential Equations II. (3). A continuation of Math. 555 (but with more emphasis on theoretical issues) that covers higher order differential equations, systems of first order equations (including the basics of linear algebra), some numerical methods, and stability and behavior of solutions for large times. Prerequisite: Math. 553 with grade of 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. 511 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, WKBJ method, contour integration and residue methods, integral transforms, Hilbert spaces, special functions, and integral equations. Prerequisite: Math. 550 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. 743. Real Analysis I. (3). A continuation of Math. 742. Prerequisite: Math. 547 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 six hours credit with departmental consent. Prerequisite: 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. 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. 545 or 555 with C or better.

Math. 758. Complex and Vector Analysis for Engineers. (3). A survey of some of the mathematical techniques needed in engineering including an introduction to vector analysis, line and surface integrals and complex analysis, contour integrals and the method of residues. No credit for this course toward a graduate degree in mathematics. Prerequisite: Math. 550 or 555 with grade of C or better.


Math. 818. Selected Topics in Number Theory. (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. 848. Calculus of Variations. (3). Includes Euler-Lagrange equations, variational methods and applications to extremal problems in continuum mechanics. Prerequisite: Math. 547 or 577.

Math. 849. Selected Topics in Analysis. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.


Math. 854. Tensor Analysis with Applications. (3). After introducing tensor analysis, considers applications to continuum mechanics, structural analysis and numerical grid generation. Prerequisite: Math. 545 or 757.


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. 880. Proseminar. (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing.

Math. 881. Individual Reading. (1-5). Prerequisite: departmental consent. Repeatable up to a maximum of six hours with departmental consent.

Math. 885. Thesis. (1-4). May be repeated up to a maximum of six hours credit. Prerequisite: departmental consent.


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). Topics 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 six hours. Prerequisite: 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 50 semester hours of course work allowed in mathematics.

Lower-Division Course

Stat. 170Q. 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. 360Q. Elementary Probability. (3). Includes probability functions, random variables and expectation of finite sample spaces. Prerequisite: Math. 111 with 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 grade of 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, characteristics functions, central limit theorem and other topics with applications to engineering. Prerequisite: Math. 344 with a grade of 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 nonparametric 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. Elementary Survey Sampling. (3). General education further study course. Reviews basic statistical concepts. Covers simple, random, stratified, cluster and systematic sampling, along with selection of sample size, ratio, estimation and cost. Applications studied include problems from the social and natural sciences, business and other disciplines. Prerequisite: any elementary course in statistics, such as Stat. 370, Soc. 501 or Psy. 401 with a C or better.

>Stat. 576. Applied Nonparametric Statistical Methods. (3). General education further study course. Studies assumptions and needs for nonparametric tests, rank tests and other nonparametric inferential techniques. Applications involve problems from the social and natural sciences, business and other disciplines. Prerequisite: any elementary statistics course such as Stat. 370, Soc. 501 or Psy. 401 with C or better.

Stat. 761. Probability. (3). A study of axioms of probability, discrete and continuous random variables, expectation, examples of distribution functions, moment generating functions and sequences of random variables. Prerequisite: Math. 344 with a grade of C or better.

Stat. 762. Applied Stochastic Processes. (3). Studies random variables, expectation, limit theorems, Markov chains and stochastic processes. Prerequisite: Stat. 761 or 771 with C or better or departmental consent.

Stat. 763. Applied Regression Analysis. (3). Studies linear, polynomial and multiple regression. Includes applications to business and economics, behavioral and biological sciences, and engineering. Uses computer packages for doing problems. Prerequisites: Stat. 571 and Math. 344 and 511 with C or better in each or departmental consent.

Stat. 764. Analysis of Variance. (3). An introduction to experimental design and analysis of data under linear statistical models. Studies single-factor designs, factorial experiments with more than one factor, analysis of covariance, randomized block designs, nested designs and Latin square designs. Uses computer packages for doing problems. Prerequisites: Stat. 571 and Math. 344 and 511 with C or better in each or departmental consent.

Stat. 771-772. Theory of Statistics I and II. (3-3). An examination of stochastic dependence distributions of functions of random variables limiting distributions, order statistics, theory of statistical inference, nonparametric tests, and analysis of variance and covariance. Prerequisites: Math. 545 or 547 with grade of C or better or departmental consent.


Stat. 775. Applied Statistical Methods I. (9). 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 a grade of C or better or departmental consent.

Stat. 776. Applied Statistical Methods II. (9). Covers selected topics from multivariate analysis including statistical theory associated with the multivariate normal, Wishart and other related distributions and the related 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 a grade of 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. Prerequisites: Math. 743 and Stat. 761 or 771.


Stat. 875. Design of Experiments. (3). A study of basic concepts of experimental design which include completely randomized design, randomized block design, randomization theory, estimation and tests, latin square design, factorial experiments, confounding, split-plot designs, incomplete block designs and intra- and inter-block information. Prerequisite: Stat. 752 or 772.

Stat. 876. Nonparametric Methods. (3). An introduction to the theory of nonparametric statistics. Includes order statistics; tests based on runs; tests of goodness of fit; rank-order statistics; one-, two- and k-sample problems; linear rank statistics; measure of association for bivariate samples; and asymptotic efficiency. Prerequisite: 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). Teacher's 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 graphic techniques. Prerequisites: Math. 751 and Stat. 772 with C or better or departmental 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.

Minority Studies
See Urban and Public Affairs, Hugo Wall School of.

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 French and Spanish, as well as minors in German, Latin, and Russian; the Bachelor of Arts in Secondary Education with a major in French and Spanish; the Master of Arts in French and the Master of Arts in Liberal Studies with area concentrations 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, and Strasbourg, France.

Graduate students in Spanish interested in applying for teaching assistantships and graduate research assistantships should consult with the graduate coordinator.

Study Abroad. Wichita State University has a special exchange program with Wichita's French sister city, Orléans, and with the University of Strasbourg. Through these programs, students pay their tuition and fees at WSU and do academic work in their chosen field at the French institutions. Students receive direct credit at WSU for all credit earned in Orléans, Puebla, and Strasbourg.

Scholarships. Various scholarships are available for study in French, German, Latin, and Spanish, including Puebla, Mexico.

Retroactive Credit Policy
Qualified students may earn 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.

French (Fren.)
Major. A major in French consists of a minimum of 33 semester hours beyond Fren. 112 or its equivalent, and must include the following courses: Fren. 220, 223, 227, 300, 526, 551, or 552 or equivalents. In addition, 15 hours must be selected from courses numbered above 500. No fewer than nine hours must be literature.

Related Fields. In addition to the above courses, it is strongly recommended that French majors 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 major requirements, 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 3.00 or higher in French
2. Special departmental approval based on demonstrated proficiency in the use of both oral and written French (not based on course grades)
3. Basic courses in 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. 112 and must include Fren. 220, 223, 300, and one upper-division French course numbered 500 or above.

Native Speakers: Native and near native speakers of French are not permitted to take courses at the 100 or 200 level but must take a minimum of 12 upper-divi-
sion semester hours in order to complete a major in French. 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). An introductory course emphasizing speaking, reading, writing and grammar essentials. Requires daily classroom and laboratory work.
Fren. 150. Workshop in French. (2-4). Repeatable for credit.

> Fren. 210Q. Intermediate French. (5). General education introductory course. French review emphasizing conversation, folklore and modern culture. Prerequisite: two units of high school French or Fren. 112 or departmental consent.

Fren. 215. Study Abroad. (3-6). Transfer of credit from a French-speaking university in (a) grammar, (b) conversation, (c) reading.

Fren. 220. Intermediate French Grammar and Composition. (3). A review of elementary French grammar designed to improve proficiency in written expression through use of various tenses and turns of phrase in compositions assigned on a regular basis. Prerequisite: Fren. 112 or departmental consent.


Upper-Division Courses

> Fren. 300. Intermediate French Readings II. (3). General education further study course. Intensive reading of French literary works of the modern period. Course may be used to meet the LAS literature requirement. Prerequisite: Fren. 112 or equivalent.


Fren. 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.

Courses for Graduate/Undergraduate Credit

Upper-division courses are given on a rotating basis. Fren. 300 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 general education literature requirement.


Fren. 515. Major Topics. (1-4). Special studies in (a) language, (b) literature, (c) commercial French, (d) the language laboratory, (e) music, (f) composition, (i) problems in teaching French, (j) civilization, (l) translation, (k) conversation and (m) phonetics. Repeatable for credit. Prerequisite: departmental consent.

Fren. 525. Advanced Conversation. (3). Designed to increase proficiency in spoken French. Assignments include oral reports, dialogues, and work in the language laboratory. Prerequisite: Fren. 227 and either 220 or 223, or departmental consent.

Fren. 526. Advanced Composition and Grammar. (3). Emphasizes theme writing, original compositions and detailed study of modern French grammar. Prerequisite: Fren. 220 or departmental consent.

Fren. 540Q. French Literature in English Translation. (3). Topic varies. May be used to satisfy the general education literature requirement and may count toward a French major or minor if readings and papers are done in French.

Fren. 541Q. French Literature of Africa and the Caribbean in English Translation. (3). A study of the concept of Negritude through the works of major contemporary African and Caribbean writers. No knowledge of a foreign language is necessary. May be used to satisfy the general education 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 and social structure and history, social evolution and intellectual traditions. Course is interdisciplinary in nature and is designed to complement studies in French language and literature. Includes slide demonstrations, guest speakers on special topics and films. Most classes and required readings are in French. Prerequisite/corequisite: Fren. 300.

Fren. 552. Contemporary French Civilization. (3). Emphasizes the major events, themes, ideas, trends and movements in French civilization since the Revolution. Course is interdisciplinary in nature and is designed to complement French language and literature courses. Class work and readings are in French. Prerequisite/corequisite: Fren. 300.

Fren. 623. Seminar in French. (3). Seminar in French literature, language or civilization. Prerequisite: Fren. 300. Repeatable for credit.


Fren. 632. 18th Century French Literature. (3). Prerequisite: Fren. 300.


Fren. 635. Introduction to Romance Language Linguistics. (3). Cross-listed as Span. 635 and Ling. 635. An introduction to the historical phonology and morphology of the romance languages emphasizing French and Spanish. Prerequisite: departmental consent.

Fren. 636. 20th Century French Literature. Reading and discussion of major works of French fiction, poetry and drama from 1900 to 1960. Prerequisite: Fren. 300.

Fren. 726. 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.

German (Germ.)

Major. The major in German has been suspended. If you wish to major in German, contact the Department of Modern and Classical Languages and Literatures, 305 Jardine Hall, (316) 978-3180.

Minor. A minor in German consists of 11 hours beyond the 112 level. Students are permitted to count no more than one of the following for minor credit: Germ. 341 or 441Q.

Lower-Division Courses

Germ. 111-112. Elementary German. (5-5). An introductory course emphasizing speaking, reading, writing and grammar essentials. Requires daily classroom and laboratory work.

> Germ. 220Q. Continuing German. (5). General education introductory course. Grammar review and cultural readings primarily for students meeting the foreign language graduation requirement of Fairmount College of Liberal Arts and Sciences. Recommended for all students with high school German and for transfer students with the college German equivalent to 112.

> Germ. 223. Intermediate German I. (3). General education further study course. Intensive reading and discussion of short works. Prerequisite: Germ. 112 with grade of C or better or departmental recommendation to transfer from Germ. 220Q.

Germ. 225. German Conversation. (2). The development of oral fluency. Prerequisite:
Germ. 220Q, 223, or concurrent enrollment in 223.

Upper-Division Courses

Germ. 324. Intermediate Conversation and Composition. (2). Emphasizes development of written skills as conversational practice continues. Prerequisite: Germ. 225 or instructor’s consent.

Germ. 341. German in the European Context. (3). General education issues and perspective course. Selected topics on significant aspects of life and thought in Germany. Emphasizes the modern period with special attention to the interrelation of cultural trends in the European context. A knowledge of German is not required.

Germ. 344Q. Intermediate German II. (3). General education further study course. Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: Germ. 223 or equivalent.

Germ. 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.

Germ. 441Q. 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 Conversation and Composition. (3). Prerequisites: Germ. 524 or instructor’s consent.

Germ. 650. Directed Study. (1-3). Enrollment in any of the areas listed takes place only upon consultation with the department and agreement with the instructor concerned: (a) introduction to the study of German literature; (b) survey I: from the medieval period through the Age of Goethe; (c) survey II: 19th century to 1945; (d) contemporary literature, including the literatures of East and West Germany, 1949-1989; (e) special topics in literature, repeatable once for credit; (f) special topics in language, repeatable once for credit. Prerequisite: Germ. 344Q or instructor’s consent.

Germ. 750. Workshop in German. (2-4). Repeatable once for credit.

Greek (Ancient Classical) (Greek)

There is no major in Greek. A minor consists of 11 hours beyond the 111-112 level.

Lower-Division Course

Greek 111. Elementary Greek. (5). Presents the basic grammar of Ancient Classical Greek, and emphasizes early reading.

Greek 112. Elementary Greek. (5). Continues the presentation of the basic grammar of Ancient Classical Greek, and emphasizes early reading.

Greek 223. Intermediate Greek. (3). General education introductory course. Completes the presentation of basic grammar of Ancient Classical Greek, and proceeds to the study of selections from the writings of Plato and Herodotus. Prerequisite: Greek 112 or equivalent.

Greek 224. Intermediate Greek. (3). General education further study course. Homer’s Iliad. Prerequisite: Greek 223.

Greek 250. Classical Mythology. (3). A study of the most important myths of the Greeks and Romans. Includes the stories of creation, the gods and goddesses, the major heroes and important sagas such as Achilles, Odysses, and the Trojan War. Sources are mainly literary, e.g., Homer, Hesiod, Vergil, and Ovid, but also includes Greek art. All readings in English; requires no previous knowledge of Latin or Greek.

Upper-Division Course

Greek 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.

Greek 515. Special Studies. (1-4). Topic announced by instructor. Repeatable for credit. Prerequisite: Greek 224 or instructor’s consent.

Greek 531. Advanced Greek. (3). Sophocles and Euripides. Prerequisite: Greek 224.

Greek 532. Advanced Greek. (3). Thucydides. Prerequisite: Greek 531.

Italian (Ital.)

There is no major or minor in Italian but the following courses are offered.

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.

Upper-Division Course

Ital. 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.

Japanese (Japan)

There is no major or minor in Japanese but the following courses are offered.

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.

Upper-Division Course

Japan. 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.

Latin (Latin)

Major. The major in Latin has been suspended. If you wish to major in Latin, contact the Department of Modern and Classical Languages and Literatures, 305 Jardine Hall, (316) 978-3180.

Minor. A minor in Latin consists of a minimum of 11 hours beyond the 112 level and must include at least one 500 level course.

Lower-Division Courses


Latin 150. Workshop in Latin. (2-4). Repeatable for credit.

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. (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 224 or departmental consent is the prerequisite for all upper-division courses.

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. Gives consideration to 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 545. The Roman Novel. (3). Reading of the Satyricon of Petronius and the Golden Ass of Apuleius. The portions that are not read in Latin are read in English. Gives consideration to the development of the novel from its Greek beginnings up to the time of Apuleius and beyond.

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 Democritean materialism. Gives consideration to the place of Lucretius in Latin poetry.

Latin 750. Workshop in Latin. (2-4). Repeatable for credit.

Russian (Russ.)

There is no major in Russian. A minor in Russian consists of a minimum of 12 hours beyond the Russ. 111-112 level and must include at least one 300-level and one 500-level course.

Lower-Division Courses

Russ. 110. Russian Studies. (3). Cross-listed as Hist. 110 and Pol. S. 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.

Russ. 111. Elementary Russian. (5). A presentation of the sounds and structure of Russian to develop the four basic skills of understanding, speaking, reading and writing.

Russ. 112. Elementary Russian. (5). A continuation of Russian 111 to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: Russ. 111 or equivalent.

Russ. 210Q. 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: Russ. 112 or equivalent.

Russ. 224. Intermediate Russian. (3). General education further study course. A continuation of Russian 210Q; further enhancement of listening comprehension and speaking, reading and writing skills. Prerequisite: Russ. 210Q or instructor's consent.

Russ. 225. Russian Conversation and Composition. (2). Development of oral and written skills. May be taken concurrently with Russian 224. Prerequisite: Russ. 112 or instructor's consent.

Upper-Division Courses

Russ. 300. Intermediate Russian Readings (3). General education further study course. Intensive reading and analysis of Russian literary works of all periods. Prerequisite: Russian 224 or instructor's consent.

Russ. 325. Intermediate Russian Conversation and Composition. (2). Continued development of speaking and listening skills, focusing on the vocabulary of everyday Russian life and idiomatic usage. Prerequisite: Russian 224 or 225 or instructor's consent.

Courses for Graduate/Undergraduate Credit

Russ. 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 (intonation and konstruktsia). Prerequisite: any 200-level course or instructor's consent.

Russ. 515. Special Studies. (1-3). Advanced reading and translation in Russian social sciences, literature, and civilization. Repeatable for credit. Prerequisite: departmental consent.

Russ. 540Q. Russian Literature in English. (3). Consideration of the works of one or two major authors, a literary movement, trend, or specific genre. No knowledge of Russian is necessary, although some is desirable. Repeatable once for credit. Prerequisite: departmental consent.

Spanish (Span.)

Major. A major in Spanish consists of a minimum of 30 semester hours beyond Span. 111-112. There are three available options for majors. Basic to all three are the following courses: Span. 220, 222, 225, 300, 325, 525, and 526, or equivalents.

Literature. In addition to the above courses, a major emphasizing Hispanic literature requires 12 hours of upper-division literature and/or linguistics.

Language and Civilization. In addition to the basic courses listed above, a major with an emphasis in language and civilization requires 12 hours selected from the following courses: Span. 505, 515 or 622, 552, 557, 626, 627, 635, 640, 650, and 750.

Teaching. The major with teaching emphasis in Spanish in either Fairmount College of Liberal Arts and Sciences or the College of Education consists of at least 30 hours beyond Span. 112 or its equivalent. These hours must include the basic hours listed above plus a minimum of 12 upper-division hours, six of these chosen from the language major and six from the literature major.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English, or philosophy.

Students who wish to enter the student teaching program must have a 3.00 grade point average in Spanish and departmental approval based on demonstrated proficiency in the use of both oral and written Spanish in order to be admitted to the professional semester. It is strongly recommended that teaching majors take Span. 505 and/or 623. Spanish majors seeking teacher certification must also complete the basic courses required by the Teacher Education Program (see College of Education).

Majors interested in teaching Spanish at the elementary school level should consult the department's professor in charge of teacher education.

Minor. A minor in Spanish consists of a minimum of 11 hours beyond the Span. 111-112 level and must include Span. 220, 222, 225, and three hours at the 500-level or above.

Related Fields. Courses in Spanish or Latin American history, political science, economics, or art are strongly recommended for all majors. With departmental approval, courses in related fields taken in the Wichita State University Summer Program in Mexico may count toward the Spanish major.

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 admitted to 100- and 200-level courses. To complete a major, Span. 300 plus 12 hours of upper-division work are required.

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. (5-5). Emphasizes the four fundamental skills in language learning: understanding, speaking, reading, and writing.

Span. 150. Workshop in Spanish. (2-4). Repeatable for credit.

Span. 210Q. Intermediate Spanish. (5). General education introductory course. Continues the four fundamental skills in language learning: understanding, speaking, reading, and writing. Emphasizes conversation and culture readings. Prerequisite: Span. 112, two units of high school Spanish or departmental consent.

Span. 215. Intermediate Spanish II. (5). 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. 210Q or three units of high school Spanish or departmental consent.

Span. 223. Selected Spanish Readings. (3). General education further study course. Intensive reading of Latin-American and Spanish literary works. Also includes outside readings and reports. Course may be used to meet the LAS literature requirement. Prerequisite: Span. 210Q or three units of high school Spanish or departmental consent.

Span. 225. Spanish Conversation I. (2). Prerequisite: Span. 210Q or three units of high school Spanish or departmental consent. Should be taken with Span. 220.

Span. 281. Cooperative Education. (1-4). 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. May be repeated. Prerequisite: Span. 223. Offered Credit/No Credit only.

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 may be used to meet 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. (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
Upper-division courses are given on a rotating basis. Span. 300 is a prerequisite for all upper-division literature and civilization courses, unless otherwise indicated. All literature courses, including Span. 223 and 300, may fulfill the general education literature requirement.

Span. 505. Spanish Phonetics. (2). Cross-listed as Ling. 505. Prerequisite: any 200-level course or departmental consent.

Span. 515. Major Topics. (1-4). Special studies in (a) language, (b) literary reports, (c) commercial Spanish, (d) the 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). Offered fall semester only. Prerequisite: Span. 325 or departmental consent.

Span. 526. Advanced 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 Theatre. (3). Prerequisite: Span. 300 or departmental consent.

Span. 536. Contemporary Spanish Novel. (3). Prerequisite: Span. 300 or departmental consent.

Span. 540Q. 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 major, Spanish and/or Latin-American literature. Prerequisite: Span. 300 or departmental consent.

Span. 540Q. 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 major, Spanish and/or Latin-American literature. Prerequisite: Span. 300 or departmental consent.

Span. 560. 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. 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.
Courses for Graduate Students Only


Span. 826. 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. Emphasis is on 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, (f) romanticism, (g) 20th century poetry. (k) criticism, (l) 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, (g) theater, (h) 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 300 or above. Each philosophy major must meet with a departmental advisor at least once a semester to plan or review a program of study. These programs are designed in terms of the individual student's interests and future plans. Up to 12 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 philosophical aspects of their major fields.

Lower-Division Courses

>Phil. 100G. The Meaning of Philosophy. (3). General education introductory course. An exploration of the meaning of philosophical 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. 125Q. 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 guide in understanding the university and in choosing one's own future.

>Phil. 144Q. Moral Issues. (3). General education introductory course. An introduction to philosophical thought about ethics. Discusses a number of contemporary moral issues and considers various philosophical approaches to their solutions.

Phil. 150. Workshop in Philosophy (1-2). Short-term courses with special philosophical emphases.

Upper-Division Courses

>Phil. 300G. Science and the Modern World. (3). General education issues and perspectives course. Develops an understanding of the 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. An examination of the philosophical pressures on values brought 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. 303Q. 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, Schleiermacher, idealism, materialism, positivism, empiricism and pragmatism.

>Phil. 308. Philosophy of Economics. (3). General education further study course. Investigates various philosophical issues inherent in economic theory and decision making. Philosophical problems discussed include concepts of rationality, decision theory, economic freedom, economic justice, morality and markets and the methodology and presuppositions of economic inquiry.

>Phil. 311Q. 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. 313Q. Political Philosophy. (3). General education further study course. An examination of various philosophical issues concerning political systems. Discusses issues such as the nature of political authority, the rights of individuals, constitutionalism 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, Hutchinson, 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. 322Q. Early Modern Philosophy. (3). General education further study course. A study of philosophical thought in the period from the Renaissance through the 17th century with selections from philosophers such as Pico, Galileo, Cusanus, Telesio, Erasmus, More, Hobbes, Bacon, Machiavelli, Descartes, Spinoza, Leibniz, Malebranche and Locke.

Phil. 325. Formal Logic. (3). Cross-listed as Ling. 325. A study of systems of formal logic
including sentential and predicate logic. Emphasizes the uses of these systems in the analysis of arguments.

>Phil. 327. Philosophy of Health Care. (3). General education further study course. An examination of the philosophical and ethical issues generated by the development and expansion of the health care professions. Examines topics such as the concept of health, rights of patients, the medical team, professional rights and responsibilities, behavior control, euthanasia and institutional care. For the layperson as well as the medical professional.

>Phil. 331Q. Ancient Greek Philosophy. (3). General education further study course. An examination of 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. S. 338. An exploration of philosophical issues raised by the feminist movement emphasizing conceptual and ethical questions.

>Phil. 346Q. Philosophy of Religion. (3). General education further study course. Cross-listed as Rel. 346. An examination of 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. Attention to such specific topics as 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. 356. 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. An intensive examination of one or more fundamental problems or themes in the philosophy of art or in the special aesthetics of painting, music, sculpture, literature, drama, movies etc. 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. 400. Honors Seminar. (3). Cross-listed as Hrs. 400. An honors course on a special topic, to be announced. Repeatable for credit up to six hours. Prerequisite: honors student or departmental consent.

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, Pierce, 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, universal objects 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 paid 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 of the 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 such philosophers 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. 674. Artificial Intelligence and Philosophy. (3). Cross-listed as CS 674. Transfer of ideas between artificial intelligence and philosophy: concept and techniques of artificial intelligence and their application in philosophy (search, heuristic, problem solving, knowledge representation, learning, discovering); sources of insight for artificial intelligence; branches of philosophy. The analogy between minds and computers "cognition is a computation and the mind is a computer," is contrasted with "there are mental features not accessible to computation." Discusses the relevance of Godel's theorem and of other results in the domain of computability in this context. Prerequisites: at least one 300-level course in computer science or philosophy, Math 243 and five hours toward the major in any one of the physical or biological sciences with grades of C or better or departmental consent.

Phil. 699. Directed Reading. (2-9). 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. 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. 213Q or 214Q or 313Q-314Q, 315Q-316Q, 551, 621, 631, 641, and 651; Math. 555 and 545, 547, or 757; and five hours in chemistry.

For the Bachelor of Arts (BA) degree, two additional hours of Phys. 516, 517, or 616 plus six hours of upper-division physics electives are required.

For the Bachelor of Science (BS) degree, Phys. 616, three semesters chosen from Phys. 516 and 517, six additional upper-division hours in physics, and five 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. 213Q-214Q or 313Q-314Q or 315Q-316Q and at least six additional hours of physics courses numbered above 500.

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**Lower-Division Courses**

>Phys. 111Q. 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 have completed prerequisites for Phys. 313Q. 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. 151. Preparatory Physics. (2). A general physics course for those who have not had adequate preparation for Phys. 313Q. Emphasizes problem solving using selected areas of physics, including vectors, one-dimensional motion, rotational motion, equilibrium, elasticity, hydrostatics, thermal effects, lenses, and mirrors. Prerequisites: Math. 112.

>Phys. 195G. 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). A series of courses covering similar topics.

>Phys. 198. Discovery in Astronomy. (3). Discusses a selected topic in astronomy to develop an understanding of the discoveries and problems of modern astronomy. Particularly for general students with little or no background in science. See course schedule for topic each semester.

>Phys. 213Q. General College Physics I. (5). 4R; 3L. General education introductory course. Mechanics, heat and wave motion. For students with a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite: high school trigonometry or Math. 112.

>Phys. 214Q. General College Physics II. (5). 4R; 3L. General education further study course. A continuation of Phys. 213Q. Electricity, light, and modern physics. Prerequisite: Phys. 213Q or 313Q.

Phys. 223. The Mechanical Universe. (4). A study of the development of mechanics with calculus. The mechanics is applied to planetary motion, harmonic motion and waves as embodied in the specially prepared TV course, "The Mechanical Universe." Not a lab course but lab credit can be obtained by departmental arrangement. Prerequisite: high school trigonometry or Math. 112.

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**Upper-Division Courses**

>Phys. 313Q. 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. 315Q that accompanies this course. Credit is not given for both Phys. 213Q and 313Q. Corequisite: Math. 243.

>Phys. 314Q. 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. 316Q that accompanies this course. Credit is not given for both Phys. 214Q and 314Q. Prerequisites: Math 243 with a grade of C or better and Phys. 213Q with a grade of B or better or Phys. 313Q.


>Phys. 320. Scientific Thinking. (3). General education issues and perspectives 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.

>Phys. 395Q. 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. (1-8). 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 four hours earned in Phys. 481 may be applied toward satisfying the requirements for a major in physics. Offered Cr/NC only. Prerequisite: departmental consent.

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Courses for Graduate/Undergraduate Credit

*Phys. 501. Special Studies in Physics for Educators. (1-3). SL. A series of courses cover-
ing 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. Corequisite: 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. 314Q.

Phys. 518. Advanced Quantum. (1). Provides a working knowledge of quantum mechanics and its applications to solid state physics that require modification of classical physics for their explanation. Prerequisite: Phys. 214Q or 314Q or departmental consent. Corequisite: Math. 344.

Phys. 541. 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. 542. Theoretical Physics. (3). A study of mathematical techniques applicable to physics and other sciences. Instructor selects topics, such as power series, infinite products, asymptotic expansions, WKB method, contour integration and residue methods, integral transforms, Hilbert spaces, special functions, and integral equations. Prerequisite: Math. 555 or instructor's consent.

*Course may not be counted for credit toward a graduate physics major.

Courses for Graduate Students Only

Phys. 500. Individual Readings. (1-3). Repeatable for credit up to 3 hours. Prerequisites: 30 hours of physics and departmental consent.

Phys. 501. Selected Topics in Physics. (2-3). Repeatable for credit up to 6 hours. Prerequisite: departmental consent.

Phys. 502. Seminar. (1). Review of current periodicals; reports on student and faculty research. Repeatable for credit up to 2 hours. Prerequisite: 20 hours of physics.

Phys. 503. Research. (1-3). Repeatable for credit up to 6 hours.

Phys. 511. Quantum Mechanics. (3). The Schrödinger 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. 531. 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. 551. 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 semi-conductor devices. Prerequisites: Math. 555, Phys. 651 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. 121Q and 30 additional hours, including at least one course in four of the five groups below.

Minor. A minor consists of Pol. S. 121Q and 12 additional hours, at least six of which must be in upper-division courses.

Group 1. Political Theory and Philosophy—Pol. S. 232Q, 345, 444, or 547


Group 3. Comparative Politics—Pol. S. 226Q, 320, 330, 523Q, 524, or 525

Group 4. International Politics—Pol. S. 335Q, 336, 338, or 534

Group 5. Public Policy and Administration—Pol. S. 321, 505, 506, 533, 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. 201Q-202Q, 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. 121Q, 232Q, 319, 321, and 580; students must also elect two of the following courses—Pol. S. 315, 316, 317, and 551; elect one course from Pol. S. 226Q, 320, 330, 523Q, and 524; elect one course from Pol. S. 335Q, 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 202Q; one course from among Anthr. 102Q and Min. S. 100Q or 210Q; either Psy. 111Q or Soc. 111Q.

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 P. Adm. 625.

Electives (12 hours)—Engl. 210; Hist. 131Q and 132Q; Phil. 144Q; Soc. 334; Acct. 260; Fin. 340 and 612; HRM 466, 664, and 666; Mgmt. 360, 362, 430, and 462; Pol. S. 560; SUPA 501.

Lower-Division Courses

>Pol. S. 101G. Politics: Who Gets What. (3). General education introductory course. Focuses on some of the great political ideas and applies them to modern issues. Even if there are no eternal truths, there are eternal problems. Major ideas include: the rules and the ruled, liberty versus order, the right of dissent, political obligation and issues of conscience. Also, current policies developed over sex in politics, First Amendment freedoms, ethnic politics and the politics of oil.

>Pol. S. 103G. Games Nations Play: Problems in International Relations. (3). Course's immediate and most apparent aim is to familiarize students with a number of international problems. The intention, however, is to achieve more general and long-lasting aims rather than to transmit facts. The dual aims thus become the development of a sensitivity on the part of students to international problems that will be a part of their lives and to create a framework in which the students can analyze the international problems they encounter in the future.

>Pol. S. 110. Russian Studies. (3). Cross-listed as Hist. 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. 150. Political Science Workshop. (1-3). Prerequisite: instructor's consent.


>Pol. S. 222. East Asia. (3). Cross-listed as Hist. 222, Rel. 222Q and LAS-I 222Q. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. Taught by a team of instructors from several departments.

>Pol. S. 226Q. Comparative Politics. (3). General education introductory course. An analysis of the basic patterns and structures of Western democratic and political systems, transitional systems and dictatorial or totalitarian systems.

>Pol. S. 232Q. 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 in order 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. 313. The Presidency. (3). General education further study course. Focuses upon the evaluation of the presidential office, the recruitment of presidents and the nature of presidential power.

>Pol. S. 316Q. The Congress. (3). General education further study course. Focuses on the Congress with particular attention to interest articulation at both state and national levels.

>Pol. S. 317. Urban Politics. (3). General education further study course. An analysis of 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. A survey of 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; budgeting and fiscal management; public personnel administration; political, judicial and other controls over the administration.

>Pol. S. 325. Women in the Political System. (3). Cross-listed as Womn. 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). A systematic study of contemporary political developments in the former Soviet Union and East Europe. Examines major policy-making institutions and processes and considers the fundamental premises on which the political system is based. Includes selection of leaders and roles in policy-making; legislative bodies; political parties and elections; political aspects of the educational system, the media, religious institutions, and ethnicity.

>Pol. S. 335Q & >Pol. S. 336. International Politics and Institutions. (3 & 3). General education further study courses. 335Q: Focuses on interaction between actors in the international system. Covers nature of conflict and conflict resolution. Either 335Q or 336, but not both, may be accepted toward a major in history.

>Pol. S. 336: Focuses on the role of international organizations in the international system. Emphasizes the United Nations. Also covers some regional organizations.

>Pol. S. 337. International Force and Intervention. (3). General education further study course. Examines the use of force and intervention in the international system. Covers the use of diplomatic and military surprise and crisis and the nature of war. Also discusses problems involved in comparing arms levels between Soviet and Western coalitions and in transferring arms to Third World countries.
Pol. S. 338. Soviet Foreign Policy. (3). The concept, content and control of Soviet foreign relations; instruments and tools of Soviet diplomacy; strategy and tactics; change and continuity from Russia to Soviet foreign relations and policy aims; and execution of foreign policy in selected areas.

>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. 358Q. 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. 399. Travel Seminar. (1-4). An interdisciplinary travel seminar that allows students 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. Students observe the political systems of the places they visit, analyze their dynamics, and demonstrate their understanding of those systems through a project which has the approval of the department's advisor.

>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 a social 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 Cr/NCr only.

Pol. S. 490. Internship in Government/Politics. (3-6). (Washington, 6; Topeka, 3). Credit for approved work experience in a public, quasi-public or governmental agency, including an academic component. Washington interns participate in the program co-sponsored with the University of Kansas for which an on-site coordinator is provided. Kansas legislative interns spend two days per week in Topeka while the legislature is in session. Both internships offered each spring semester. Prerequisites: sophomore or upper-class standing; Pol.S. 121Q or equivalent and instructor's consent.

Courses for Graduate/Undergraduate Credit

Pol. S. 505. The Politics of Health. (3). Shows how governments in the United States make decisions in the health field, describes the political forces shaping governmental policy in health and analyzes the arguments for and against an increased governmental role in health.

>Pol. S. 523Q. Government and Politics of Latin America. (3). General education further study course. An examination of the political institutions and processes that currently exist in the Latin American Republics. Emphasizes the social, economic and psychocultural factors affecting these institutions and processes.

>Pol. S. 524. Politics of Modern China. (3). General education further study course. Emphasizes study of 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. Encompasses 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 Chinese communism and the ideological heritage; political culture; political leadership; leadership 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. 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 historicism 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. Gives attention to 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 the 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. 552Q. 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. 560. The Planning Process. (3). Crosslisted as P. Adm. 560. For students desiring to work in an urban planning agency or who will be involved in planning issues as an administrator at the city, county, state or federal level. Also for students seeking an understanding of the complex process of urban-related life. Examines the role of planning in solving human and environmental problems. Emphasizes the relationship between specialists, citizens and elective officials as participants in the planning process.

Pol. S. 564. Comparative Public Administration. (3). Cross-listed as P. Adm. 564. Studies the administrative system of selected developed countries. Develops an understanding of the various methods and approaches of comparative analysis and the relationships between administrative institutions and their environmental settings.


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 import 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 the first or second semester of graduate study.

Pol. S. 710. Public Sector Organizational Theory and Behavior. (3). Cross-listed as P. Adm. 710. Review of 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. Special emphasis on 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.

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. 841. Seminar in Urban Politics. (3). An intensive analysis of urban politics emphasizing individual research projects. Prerequisite: departmental consent.

Pol. S. 842. Administration in Local Government. (3). Cross-listed as P. Adm. 842. Examination of 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.

Pol. S. 845. Seminar in Political Theory. (3). Detailed study of the relevant works of a major political philosopher and his/her contribution to contemporary thought. Prerequisite: departmental consent.

Pol. S. 851. Seminar in Public Law and Judicial Behavior. (3). Analysis of special problems in and approaches to the study of legal systems. Emphasizes developing awareness of research in the field. 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. 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 write 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, a 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 thesis must be submitted to a departmental committee for evaluation and approval. Prerequisite: departmental consent.


Psychology (Psy.)
The course of study is designed to provide a breadth of knowledge in the field 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, etc.) 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. 111Q is prerequisite for all higher number psychology courses. All BA majors are required to take Psy. 111Q, 401, 411, and 601. In addition, six hours must be taken from each of the groups listed below.

Group 1: Psy. 302, 322, 332, 342Q, 402, 502Q, 512, 522, 532, or 622
Group 2: Psy. 304Q, 324Q, 334Q, 404, 414, 514, 524, 534, or 544
Group 3: Psy. 306, 316, 326, 336, 386, 406, 416Q, 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.

Kansas Alcoholism and Drug Addiction Counselors' Association (KADACA) Certification. KADACA certification requires Psy. 118, 128, 138, 158, 168, 306, 326, 336, and 148 (to be taken last). Psy. 111Q is a prerequisite to Psy. 306, 326, and 336. Psy. 148 should be taken after all other courses in the sequence have been completed. No special application to the Department of Psychology is required by WSU students to enroll in these courses. The certifying agency is KADACA, not WSU.

Lower-Division Courses

Psy. 106. Stress and Stress Management. (3). 2R; 2L. Introduction to the theories of stress and a survey of major stress management techniques. Class discussion emphasizes the conceptualization of stress and its social impact, complemented by stress reduction techniques. Course does not satisfy the University's social science requirement nor does it count for a psychology major.

Psy. 111Q. General Psychology. (3). General education introductory course. An introduction to the general principles and areas of psychology. Includes learning, perception, thinking, behavioral development, intelligence, personality and abnormalities of behavior. Course is a prerequisite for advanced and specialized courses in psychology.


Psy. 128. Pharmacology for Substance Abuse Counselors. (1). Covers states of intoxication, withdrawal, and side effects associated with alcohol and substance abuse. Includes cross addiction and adverse effects of combining psychoactive drugs with prescribed and over-the-counter medication. Does not satisfy WSU's social science requirement nor does it count for 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 for a psychology major.

Psy. 148. Field Experience in Substance Abuse Counseling. (2). Work experience in an agency that provides substance abuse counseling services. Students gain experience in assessment, case and record management, individual and group counseling, and other skills relevant to the work of a substance abuse
counselor. Does not satisfy WSU's social science requirement nor does it count for a psychology major. Offered Cr/NCr only.

Ps. 150. Workshop in Psychology. (1-4).

Ps. 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 for a psychology major.

Ps. 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 adjusting counseling techniques to make them more culturally sensitive. Does not satisfy WSU's social science requirement nor does it count for a psychology major.

Upper-Division Courses

>Ps. 302. Psychology of Learning. (3). General education further study course. Explores basic principles of how organisms learn. Highlights key concepts such as reinforcement and punishment, generalization and discrimination, extinction and extinction of specific behaviors. Discusses important research, theoretical issues and current trends. Prerequisite: Ps. 111 Q.

>Ps. 304Q. Social Psychology. (3). General education further study course. A study of how social behavior is influenced by the behavior and characteristics of others. Includes attitude formation and change, attribution, interpersonal attraction, impression formation and compliance, as well as the application of social psychological principles to an understanding of prosocial, aggressive and sexual behavior. Prerequisite: Ps. 111 Q.

Ps. 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 principles and issues involved in individual counseling. Emphasizes the therapeutic relationship, effective listening, issues surrounding defense mechanisms, and crisis intervention. Prerequisite: Ps. 111 Q.

>Ps. 316. Industrial Psychology. (3). General education further study course. An introduction to the many roles of scientific psychology in the selection, training, evaluation and general welfare of people in the workplace. Includes employee morale, job satisfaction, leader behavior, fair employment practices and sources of worker stress. Prerequisite: Ps. 111 Q.

>Ps. 322. Cognitive Psychology. (3). General education further study course. Presents a coherent picture of human memory and cognition within the framework of the information-processing approach. This approach views the individual as an active, constructive planner in remembering and organizing new and prior learned knowledge. Includes the study of attention, memory, thought, decision making and problem solving processes. Prerequisite: Ps. 111 Q.

>Ps. 324Q. Psychology of Personality. (3). General education further study course. An examination of psychoanalytic, behavioral, trait and other contemporary theories of human personality. Gives consideration to many factors influencing personality, as well as the methods of research in the area, ways of assessing personality and some of the methods of treating personality disorders. Presents and discusses case studies. Prerequisite: Ps. 111 Q.

Ps. 326. Introduction to Group Counseling. (3). Survey of 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: Ps. 111 Q.

>Ps. 332. Psychology of Perception. (3). General education further study 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. Also gives consideration to motivation and personality factors in perception. Prerequisite: Ps. 111 Q.

>Ps. 334Q. Developmental Psychology. (3). General education further study 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: Ps. 111 Q.

>Ps. 336. Alcohol Use and Abuse. (3). General education further study course. A study of the individual, social and cultural aspects of alcohol use. Investigates both nonproblem and abusive drinking, research on why people drink, prevention of problems linked to alcohol use, treatment of alcoholism and the needs of special populations. Includes investigation of combined alcohol and drug abuse as well as study of specific psychological aspects of use of drugs other than alcohol. Prerequisite: Ps. 111 Q.

>Ps. 342Q. Psychology of Motivation. (3). General education further study 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: Ps. 111 Q.

Ps. 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: Ps. 111 Q.

Ps. 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: Ps. 111 Q and Math. 111 or 112.

>Ps. 402. Psychology of Consciousness. (3). General education further study 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: Ps. 111 Q.

>Ps. 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: Ps. 111 Q.

>Ps. 406. Introduction to Community Psychology. (3). General education further study course. A review of the historical, theoretical and empirical bases of community psychology and community mental health. Presents contemporary models of community psychology including the ecological and social action perspectives. Includes social support, self-help, social policy and the prevention of psychosocial problems. Prerequisite: Ps. 111 Q.

Ps. 411. Research Methods in Psychology. (4), (3), (3L). Covers the philosophy of research methods, experimental designs, appropriate data analysis techniques, and historical trends and developments in experimental psychology. The laboratory exposes students to representative experimental lab techniques in the major subdivisions of psychology. Active involves all students in research project(s). Prerequisite: Ps. 401.

>Ps. 414. Child Psychology. (3). General education further study course. Covers psychological development from conception through infancy and childhood. Includes the development of language, perceptual and cognitive functioning, social-emotional attachment and socialization. Attention to practical issues of discipline and child rearing. Prerequisite: Ps. 111 Q.

>Ps. 416Q. Psychology and Problems of Society. (3). General education issues and perspectives course. A study of the special role of psychological theory, research and principles applied to contemporary social issues and problems including environmental concerns, problems in the schools, substance abuse, nuclear proliferation, racism/sexism, child abuse, juvenile delinquency, aggression, behavioral control, aging, technology, etc. Prerequisite: Ps. 111 Q.

Ps. 426. Psychology of Work. (3). Selects from standard topics of industrial psychology; examines in greater depth the seriousness of job satisfaction problems; stresses the technological change, membership in unions, concerns of productive workers, facts and myths about the working woman and other similar topics. Prerequisite: Ps. 111 Q.
Ps. 428. Field Work in Psychology. (3). Special projects and practicums under supervision. In public and/or private agency settings. Psychological study, observation, service and/or research may be undertaken with prior approval by the department. Repeatable for a maximum of six credit hours, but only three hours may be earned per semester. Offered CR/NC only. Prerequisite: Ps. 111Q and departmental consent.

Ps. 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.

Courses for Graduate/Undergraduate Credit

Ps. 502Q. Comparative Psychology. (3). Develops a unified theoretical perspective about the origins of behavior of all animals. Focuses on the evolution and development of behavior. Field trips supplement lectures. Prerequisite: one course from Group One.

Ps. 508. Psychology Tutorial. (3). Selected topics in psychology. Repeatable for a maximum of 6 hours' credit. Instructor's consent may be required. Check Schedule of Courses. Prerequisite: Ps. 111Q.

Ps. 512. Primatology. (3). A survey of the primates (including humans) and their behavior. Includes principles of evolution and taxonomy, the evolution of the primates to Homo sapiens, the emergence of language, cognitive functioning, and culture. Prerequisite: Ps. 111Q.

Ps. 514. Psychology of Health and Illness. (3). A survey of the relationships between psychology/behavior and physical health and illness. Includes stress and coping, health habits, symptom perception, health care provider-client relationships, hospitalization and prevention. May include a self-study of life style and behavior in relation to health and illness. Prerequisite: Ps. 111Q.

Ps. 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: Ps. 111Q.

Ps. 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, the role of hormones in behavior, and neurochemical correlates of behavior. Prerequisite: Ps. 111Q.

Ps. 524. Advanced Psychology of Personality. (3). More intensive treatment of the topics of psychology of personality emphasizing contemporary theories, research and application of the psychological study of personality. Prerequisite: Ps. 324Q.

Ps. 526. Psychological Testing and Measurement. (3). A critical analysis of the psychological foundations of tests and the interpretation of test findings. Surveys several tests representing the areas of intelligence, personality, normal and abnormal psychology, interests, special abilities and aptitudes to illustrate general principles of testing. Prerequisite: Ps. 401.

Ps. 532. 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: Ps. 111Q.

Ps. 534. Psychology of Women. (3). General education issues and perspectives course. Cross-listed as Wom. 554. Psychological assumptions, research and theories of the roles, behavior, and potential of women in contemporary society. Prerequisite: Ps. 111Q.

Ps. 536. Behavior Modification. (3). A study of the basic assumptions, principles and issues of behavioral approach to helping persons with psychological problems. Includes demonstration and individualized practice in general helping skills as well as individual projects in applying these skills. Prerequisites: Ps. 111Q and instructor's consent.

Ps. 544. Abnormal Psychology. (3). An introductory survey of abnormalities of behavior. Examines definitions, causes, types and classifications of abnormal behavior. Gives attention to various theories of abnormality, research evidence, and various methods of diagnosis and treatment. Presents hypotheses regarding prevention of abnormality. Prerequisite: Ps. 524Q.

Ps. 546. Practicum in Applied Behavior Analysis and Social Learning. (3). 1R; 4L. Placement in local human service agencies for about eight hours a week for 14 weeks. Under supervision, students assist in the development and delivery of services at the agency site. Repeatable once. Prerequisites: Ps. 536 and instructor's consent.

Ps. 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: Ps. 324Q.

Ps. 566. Perspectives on Self-Help Groups. (3). Cross-listed as Nurs. 566 and Sc. Wk. 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 experience with self-help groups on such topics as addiction, cancer and other illnesses, eating disorders, bereavement, mental illness, and parenting.

Ps. 568. Computer Applications to the Behavioral Sciences. (3). 2R; 2L. Introduces computer applications to the behavioral sciences including 1) techniques of analyzing experimental data, 2) statistical applications, 3) interactive computing, 4) "canned" statistical programs, 5) word processing, and 6) other current computer applications. Prerequisites: 9 hours in the social sciences.

Ps. 601. Systems and Theories in Psychology. (3). Includes behaviorism, Gestalt psychology, structuralism, and others. 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 Ps. 411 or instructor's consent.

Ps. 608. Special Investigation. (1-3). Upon consultation with instructor, advanced students with adequate preparation may undertake original research or directed readings in psychological problems. Repeatable for a maximum of 6 credit hours. Requires consultation with and approval by appropriate advisor prior to registration. Prerequisites: 9 hours in psychology and instructor's consent.

Ps. 622. History of Psychology. (3). Traces the development of philosophical and empirical concepts of psychology from the ancient Greeks through the 19th century. Examines the origins and various views of the body-mind relationship. Emphasizes the influences of naturalistic assumptions and research methods on 20th century psychology. Prerequisites: 9 hours of psychology or instructor's consent.

Ps. 720. Aerospace Psychology. (3). Explores 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 selection requirements, and training, pilot workload, cockpit control and display systems and aviation safety. Prerequisites: 15 hours of psychology or instructor's consent.

Ps. 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

Ps. 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 vs. experimental designs, prediction vs. explanation, and modeling. The associated lab provides basic computer skills for access to the mainframe and some basic training in SPSS-X, SAS, and BIOMED statistical routines. Prerequisite: instructor's consent.

Ps. 811. Advanced Research Methods II. (4). 3R; 3L. Continuation of Ps. 810. Statistical techniques emphasized are a continuation of multiple regression, structural analyses including Path Analysis and LISREL, factor analysis.
Behavior. (3). Focuses on how human beings acquire and use cognitive knowledge in understanding of classical and instrumental substantive issues such as perception, cognition, and social relationships for development and the conditioning, and the cognitive processes of evaluation, motivation, and psychological assessment. Serviced as an applied computer system. Prerequisite: instructor's consent.

Psy. 840. Seminar in Environmental Psychology (3). Explores historical, theoretical, and empirical bases of environmental psychology. Provides 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. Includes the study of principles of individual behavior and some of the variables of which it is a function as illustrated by respondent and operant conditioning along with some areas of application. Prerequisites: Psy. 502 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 contemporary issues in psychotherapy, such as process and outcome, and clinician and therapist variables in the therapeutic process. Prerequisites: Psy. 111Q 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. Prerequisites: 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 human factors psychology student an opportunity to further develop and apply skills in community-clinical psychology. Repeatable for a maximum of 9 credit hours. Prerequisite: advisor's consent.

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 Community-Mental Health Programs. (1-3). Graded S/U only. A planned placement experience in an off-campus setting, giving the doctoral community-clinical psychology student an opportunity to further develop and apply skills in community-clinical psychology. Repeatable for a maximum of 9 credit hours. Prerequisite: advisor's consent.

Psy. 933. 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, human development, education, or prevention-oriented. Repeatable for credit. Graded S/U 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, human development, education, or prevention-oriented. Repeatable for credit. Graded S/U 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 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 aversive 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; 5L. 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, clinical psychology, public health, health psychology, and organizational psychology. Prepares 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 implementors, 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-biological contexts and causes of such behavior. Discusses implications for preventative and clinical interventions. Prerequisite: instructor's consent.

Psy. 941. Measurement of Human Performance. (3). The logic of fundamental measurement is developed and applied to human performance from detection to decision. Signal Detection Theory (SDT) is developed and compared with threshold theory. Demonstrates procedures for assessing both detection and discrimination under both SDT and threshold theory. Information measurement and utility theory is developed and applied 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. Begins with a review of the concept of integrative levels and proceeds to a discussion of modern evolutionary thought. Examines the concept of development from psychological, biological, and anthropological perspectives. Prerequisite: instructor's consent.

Psy. 943. Seminar in Comparative Psychology. (3). Intensive study of general principles of behavior origins and development. Oriented around the evolution and development of behavior. Includes a review of the concept of integrative levels in psychology. Prerequisites: Psy. 502Q and 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 interface between human sensory and motor systems. Covers the sensory, motor, cognitive, and affective processes as related to human factors psychology. After a review of the anatomy and physiology of sensory-motor systems, emphasizes contemporary research and literature regarding the interface of sensory-motor processes. Prerequisite: instructor's consent.

Psy. 947. Seminar in Perception. (3). Intensive study in 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 inquire themselves about the major religious traditions of the world and to think critically and constructively about religion as a dimension of human experience and a mode of human expression. The curriculum includes courses on major religious traditions, significant issues in religion, and methods of studying religion.

There is no major in religion but an emphasis in religion is available through the general studies program and a minor in religion is also possible.

Students contemplating an emphasis or minor in religion should discuss their academic program with a member of the department. A Bachelor of Arts degree field major provides an additional option.

Minor. A minor in religion requires a minimum of 15 hours. A maximum of six may be taken at the 100 level.

Lower-Division Courses


Rel. 120Q. The Biblical Heritage. (3). The collection of books known as the Bible has been central to a number of religious traditions for more than 2,000 years. Course examines the central religious ideas and motifs of Biblical literature and then proceeds to study how the Jewish and Christian traditions have interpreted these ideas and molded them in various forms and combinations. Course is historical and analytic not connotational; culminates with a survey of the roles played by the Bible in contemporary American culture.

Rel. 125. World of the Bible. (3). Seeks to understand the Bible within its geographical, historical and religious context—the polytheistic world of the ancient Near Eastern and Mediterranean civilizations of Babylon, Assyria, Egypt, Persia, Greece and Rome from the time of the patriarchs to the rise of Christianity. Special attention to similarities and differences between Biblical ideology and views current in neighboring religious traditions.

Rel. 130Q. Introduction to Religion. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on the methods used in the study of religion.

Rel. 131Q. Traditional Religion and the Modern World. (3). A study of some of the traditional religious systems (Buddhist, Hindu, Confucian, Taoist, Judaic and Christian) and of several of the important modern criticisms of religion with a view to confronting the problem of whether traditional religion can be significant in the modern world.

Rel. 150. Workshop in Religion. (2-4).

Rel. 210. Current Religious Issues. (3). A critical study of contemporary issues in the West with some attention to non-Western religions. Considers the relationship of religion to such topics as race, war, secularism, population explosion and politics.

Rel. 215. The Meaning of Death. (3). An exploration of the images, interpretations and practices that constitute the response to death in major religious traditions.

Rel. 221. Judaism. (3). The history and central teachings of traditional Judaism and its modern varieties (Reform, Orthodox, Conservative, etc.). Focuses on Jewish customs and practices as well as Jewish religious thought.

Rel. 222Q. East Asia. (3). Cross-listed as LAS-I 222Q, Hist. 222, Pol. S. 222Q. General education introductory course. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. Taught by a team of instructors from several departments.

Rel. 223. Hinduism and Buddhism. (3). Hinduism and Buddhism are closely related, both growing out of a unique period in the history of India's ancient Vedic tradition. The world view from which they arise is sharply different from that which has been characteristic in the West; one of its consequences has been the direct investigation of consciousness by sophisticated meditative techniques, a type of religious activity for which the West has become famous. Course investigates the formation of that world view and explores the diverse ways in which it has been elaborated and interpreted as a way of life and path of spiritual cultivation in the Hindu and Buddhist tradition.
Rel. 224Q. Christianity. (3). An overview of Christianity from New Testament times to the present stressing historical developments in religious life and theology. Includes Catholic, Protestant and Orthodox Christianity; explores contemporary trends and problems.

Rel. 225. Jesus. (3). There have been varied responses to and multiple interpretations of the life and teaching of Jesus. Course examines the development and function of traditions about Jesus in Biblical, extrabiblical and more recent, popular sources.

Rel. 240. Religion in America. (3). A survey of the beliefs, practices and issues current in major American religious bodies with some attention to minor religious denominations such as the Black Church, Christian Science and the Latter Day Saints.

Rel. 245. Islam. (3). The religion in its geographical, social, political and cultural context, both Arab and non-Arab.

Rel. 250Q. Eastern Religions. (3). An introduction to the religions of India and China. Studies and contrasts Hinduism, Buddhism, Jainism, Taoism and Confucianism. Tries to understand the religious life and texts of these ancient and dynamic cultures from the vantage point of the believers themselves.

Rel. 255. Zen and Taoism. (3). Zen is a form of Buddhism that emphasizes spontaneity and the ultimate of the here and now, employing startling nonintellectualistic methods to free minds of the routine world of distinctions, plurality and linear time. It represents a vision that is at once Buddhist and deeply Chinese; its most distinctive features may in fact be best understood as a Buddhist development of ideas, values and orientations found in China’s ancient Taoist tradition. The Taoist view of the universe as a harmonious organic unity in which humans fittingly participate by selfless spontaneity rather than calculated intervention is radicalized in Zen; at the same time, it is the Taoist sensibility that leads to the Zen departure from more traditional Buddhist approaches to enlightenment. Course traces these developments, beginning with a consideration of Taoism and then tracing the transformation of Buddhism in China to its culmination in the unique methods and teachings of Zen.

Rel. 260Q. Psychic Phenomena. (3). Spiritual traditions have everywhere and at most times appeared in a triple world: natural, divine and intermediate. The intermediate world of the psychic, the occult, the astral, is the subject of philosophical/psychological investigation. Includes psychic out-of-body states, ESP, clairvoyance, telepathy, incarnate bodies in Hinduism and the Tibetan Bardos. Lecture, discussion and student reports. Visits by persons with expertise in psychic reading, out-of-body states, Kirlian photography and ESP.

Rel. 280. Special Studies. (3). A concentrated examination of a significant figure, event or issue in religion or the study thereof. Repeatable for credit. Prerequisite: departmental option.

Rel. 281. Cooperative Education. (1-4). Offered Cr/NCR only.

Upper-Division Courses

Rel. 311. Old Testament Topics. (3). An in-depth study of a major facet of the religion of the Hebrew Bible, such as prophecy, law, covenant, historiography and wisdom, or a genre of biblical literature, such as poetry or narrative.


Rel. 322. Protestantism. (3). Traces the development of the Protestant Christian tradition and analyzes its distinctive themes. After a historical survey of this family of Christianity, course explores distinctively Protestant themes, such as justification by faith, the primacy of individual conscience and the primacy of scripture, integrating them with current phenomena.

Rel. 327. Magic, Witchcraft and Religion. (3). Cross-listed as Anthr. 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. 333Q. Women and Religion. (3). Cross-listed as Wom. S. 333. An examination of past and present images and roles of women in religious traditions. Looks at women in the Bible and religious history as well as contemporary criticisms of patriarchal religion and resources for change.

Rel. 346. Philosophy of Religion. (3). Cross-listed as Phil. 346Q.

Rel. 364. Zionism and Israel. (3). An examination of the national element in Judaism and the movement that has arisen in relationship to this nationalism in the 19th and 20th centuries. Concludes with an investigation into the relationship between Zionist ideals and the modern state of Israel.


Rel. 410Q. Comparative Religion. (3). An observation and analysis of the patterns found in the characteristic religious phenomena (e.g., myths, symbols, rites, institutions), with a view to a systematic understanding of human religious life as it has expressed itself throughout history.

Rel. 419. Modern Atheists. (3). An examination and critical evaluation of some of the seminal critiques of religion in general and Christianity in particular that have been produced in the modern world. Includes selections from such figures as Spinoza, Voltaire, Feuerbach, Marx, Nietzsche, Freud and Camus.

Rel. 421. Sociology of Religion. (3).
satisfactory completion of a noncredit orientation session. Provisional admissions may be granted before final grades are received but enrollment in required upper-division social work courses is dependent upon meeting these admission standards.

The second stage is application for admission into supervised field practice. Information and application materials for admission into the major and to the field practicum are available from the social work office.

Lower-Division Courses


Sc. Wk. 201. Introduction to Social Work Practice. (3). Introduction to the practice of social work. Includes development of social work as a profession: the holistic approach and multilevel intervention strategies used in practice; aspects of the problem-solving process; and attention to the current trends in direct social services. Community service activities are required. Prerequisites: Soc. Wk. 111Q and Psy. Wk. 111Q.

Upper-Division Courses

Sc. Wk. 300Q. Understanding Social Welfare. (3). Surveys a broad spectrum of social welfare programs and policies, emphasizing the relations of governmental and voluntary sector service systems to larger social institutions and to historical developments in determining who should be helped and how. Explores the relations of area services to unmet individual, group, and societal needs, to trends in policy, and to current issues.


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/NCr.

Courses for Undergraduate/Graduate 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. Voluntary and proprietary systems are examined in the development of knowledge and skills for the engagement of complex community resources, the promotion of service innovations, and in the shaping of decisions in the arenas of public policy. Emphasis is placed on diverse populations in metropolitan environments. Prerequisites: Pol. S. 121Q or Hist. 132Q, Sc. Wk. 300Q.

Sc. Wk. 502. Social Work Practice: 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 which focuses on experiential learning. Required for social work majors. Prerequisite: program admission.

Sc. Wk. 541. Women, Children, and Poverty. (3). Cross-listed as Wom. S. 541. Addresses the problems of poverty among women in the U.S. today and examines 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 to poverty among women in Kansas. Prerequisites: 6 hours of social science preferably in women's studies, including Wom. S. 388Q, or instructor's consent.

Sc. Wk. 551. Independent Studies. (1-3). Individual projects for social work students who are capable of doing independent work in areas of special interest. Repeatable for credit not to exceed six 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 these entities to beginning professional social work practice. Prerequisites: Six hours from a list of social and behavioral science courses approved by the social work faculty and selected in consultation with a social work advisor.

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 structures and practices 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. S. 566 and Psy. S. 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. Funded by support group members share their experience with self-help groups on such topics as addiction, cancer and other illnesses, eating disorders, bereavement, mental illness, and parenting.

Sc. Wk. 601. Advanced Social Work Practice. (3). Advanced practice theory emphasizing becoming both knowledgeable and skillful in applying theory to practice. Focuses on developing a clear understanding of concepts, principles, techniques and processes of social work methods as they relate to individuals, families and groups and to the larger community. To be taken concurrently with Sc. Wk. 602 except by program consent. Prerequisites: Sc. Wk. 502 and program consent.

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. 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. This course covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area social work institutions. Repeatable. Prerequisite: instructor or program consent.


Sc. Wk. 702. Foundations of Generalist Practice II. (3). Provides continued social work practice foundation content with an emphasis on developing generalist knowledge and skill at the group, organizational, community and societal levels. It 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. 701 or instructor's consent.
Sc. Wk. 710. Micro Human Behavior and the Social Environment. (3). Provides theories and knowledge of human bio-psycho-social development and functioning of individuals and families, and of the transaction between individuals and families and their environment. Presents theoretical perspectives on development over the life span and family functioning. Explores areas of universality and differences across gender, race, ethnicity, class, physical and mental ability, and sexual orientation.

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 textualization of social work practice within diverse environments and macro systems. Particular emphasis is placed on understanding the needs of minority communities and on understanding change and empowerment strategies which further social justice in communities and organizations. Prerequisite: Sc. Wk. 710 or instructor's consent.

Sc. Wk. 715. 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 comparison of these structures and provisions enables the development and use of frameworks for analyzing social policies and evaluating programs in light of the mission of the social work profession; the principles of social and economic justice; and the historical, economic, and political factors which impinge on policy. Content on the effects of policies and work practice includes the use of professional roles in shaping the processes of policy formulation in agency and governmental areas.

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 students with 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 will 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. 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. Corequisite: 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. Corequisite: Sc. Wk. 702.

Sc. Wk. 750. Social Work Workshops. (1-5). 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. 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. The course introduces the basic concepts of the social work research process as well as the methods for collecting and analyzing data. Students will also 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. 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 competency 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 Empowerment 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 multi-level systems. Requires 300 hours of agency service. Prerequisite: program consent.

Sc. Wk. 823. Field Practicum IV. (4). Continuation of Sc. Wk. 822. Requires 300 hours of agency service. Prerequisite: program consent.

Sc. Wk. 851. Applied Social Work Research. (3). Prepares students to be ethical practitioners who assess the benefits of social work interventions on an ongoing basis. Because of the importance of evaluation in social work, students develop the research skills needed to evaluate their own practice, conduct program evaluations, use the computer as a research tool, and interpret descriptive and Inferential statistics. Prerequisite: Sc. Wk. 751 or 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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</thead>
<tbody>
<tr>
<td>Soc. 111Q, 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 specialities. Depend-
ing 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 six hours of such courses may be included.

**Minor.** A minor in sociology consists of at least 15 hours, including:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
<th>Soc. 111Q, Introduction to Sociology **...**3 At least 6 hours of courses, 500+...<strong>6</strong></th>
</tr>
</thead>
</table>

**Lower-Division Courses**

| Soc. 100G. Sociology and Everyday Life. (3). Re-lates current sociological thought to everyday life experiences. The underlying assumption is that the discipline of sociology can effectively broaden the perspective of individuals and assist them in understanding the organization of social events facing them every day. Covers a wide range of topics: family relations, religion, work relations, recreational and leisure activities, education experiences, child and adult socialization, interpersonal relationships in public and private settings, urban/rural living and fads and fashions. Course is flexible to allow students to explore, in depth, their own unique life experiences within a sociological framework. |
| Soc. 111Q. 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. Two major objectives: (1) to examine the interactions between humans and microcomputers and (2) to study the effect of microcomputers upon social interaction and stratification within society. In particular, course focuses upon the work setting and the family. Includes new social roles (programmer, hacker, the cyberphobic the cyberphobic); 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. 111Q. |
| Soc. 315G. 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 with Wom. S. 316. Examines the male role in America from a variety of sociological perspectives and with particular settings, for example, work, family and leisure. Other relevant topics: socialization, intimacy and adult developmental stages and crises. Discusses changing male roles produced by strains and conflicts in contemporary America. |
| Soc. 320Q. 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 and methods to issues of concern within contemporary society. Includes deviance, social inequality, and discrimination. Prerequisite: Soc. 111Q. |
| Soc. 322. Deviant Behavior. (3). General education further study course. The structure, dynamics and etiology of 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. 111Q. |
| 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 relations, parent child relationships, 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. 330Q. 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. 111Q. |
| Soc. 334. Sociology of the Community. (3). General education further study course. An exploration of a basic unit of social organization, the community: Emphasizes organizational and interpersonal relationships within the community and changes in those relationships, as well as the community's place within society. Prerequisite: Soc. 111Q. |
| 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. 338Q. 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 symbolic interactionist perspective in sociology. The goal is for students to understand how social interaction influences their daily activities. Includes the meaning and importance of the symbol; the nature and development of self; social roles and their influence on individuals; and the social construction of society. Prerequisite: Soc. 111Q. |
| 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. |

**Courses for Graduate/Undergraduate Credit**

| Soc. 512. Measurement and Analysis. (3). Generally offered in the spring only. An applied study of the conceptual tools and methodological skills needed to conduct quantitative sociological research. Prerequisites: Soc. 111Q, Soc. 312, 501. |
| Soc. 513. Sociology of Aging. (3). General education further study course. Cross-listed as Geront. 513. Analyzes the social dimensions of
old age, including changing demographic structure and role changes and their impact on society. Prerequisite: Soc. 111Q.

>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. 111Q.

>Soc. 516. Sociology of Sex Roles. (3). General education further study course. Cross-listed as Wom. S. 516. Analyzes the changing role of man's and woman's roles, the source of changes in these roles, the consequent ambiguities and conflicts. Prerequisite: Soc. 111Q.

>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. 111Q.

>Soc. 520. Family and Aging. (3). Cross-listed as Gerond. 520. Analyzes the families and family systems of older people. Emphasizes demographic and historical changes, care giving, and intergenerational exchanges and relationships. Prerequisites: Soc. 111Q or Gerond. 100 or jr. standing.

>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. 111Q.

>Soc. 527. Violence and Social Change. (3). Analyzes the causal processes and functions of extreme and violent political behavior, i.e., revolutionary, insurrectionary, and protest movements. Includes an analysis of consequences for social change. Prerequisite: Soc. 111Q.

>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. 111Q.

>Soc. 537. The Social Consequences of Disability. (3). Cross-listed as Gerond. 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. 111Q.

>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 their families in hospitals and nursing homes and social research and theory relevant to the health professions. Prerequisite: Soc. 111Q.

>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. 111Q.*

>Soc. 540. Criminology. (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Soc. 111Q.*

>Soc. 541. Contemporary Corrections. (3). Historical and contemporary programs for the treatment of offenders viewed as societal reactions to criminal behavior. Prerequisites: 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. Prerequisites: 9 hours of sociology.

>Soc. 598. Internship. (1-6). Supervises persons involved in internships or placements in the community where credit can be given. 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, the family and others. Repeatable for a maximum of 6 hours credit. Prerequisites: Soc. 111Q, 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. Prerequisites: 15 hours of sociology and instructor's consent.

>Soc. 750. Sociology Workshop. (1-3). Provides specialized instruction using a variable format, in a sociologically relevant subject.

>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 in the fall only. Seminar demonstrates the application of statistical packages via mainframe and personal computers to analyze data and interpret the output. Examines statistical tests from univariate to multivariate. 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 practices, and measurement strategies. Prerequisite: Soc. 512 or departmental consent.

>Soc. 813. Seminar on the Family. (3). Review of recent research on the family and the theoretical implications. 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. 822. Seminar in Deviant Behavior. (3). In-depth examination of recent theory, methods, and research in the area of deviance. Includes implications of future theory development. 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. 830. 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. 835. Seminar in Sociological Theory. (3). Usually offered in the spring only. Examines classical and contemporary sociological theories and focuses on including the application of such theories in students' thesis and nonthesis 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 Research. (1-3). For the advanced student who wants to achieve research competence in a specific area. Each student is directed by a member of the graduate faculty in the development of a project in research not leading to thesis research. Prerequisites: Soc. 812 and instructor's consent.

>Soc. 860. Proseminar—Teaching Sociology. (1). Usually offered in the fall 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 supervision of a member of the graduate faculty. Repeatable for credit but not to exceed 6 hours. Prerequisite: departmental consent.
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 affairs through high-quality graduate instruction, excellence in applied research, and responsive community service. This focus results not only in an excellent graduate education for students, but allows a special connection with local and regional communities 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. This unique mission serves as a foundation for the many opportunities offered through the school which houses the Master of Public Administration (MPA) degree program, 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 Center for Urban Studies responds to requests of public officials and community organizations to conduct research, offer training and professional development, and provide technical assistance and consultation. The Kansas Public Finance Center targets research and service in the field of public finance, focusing on developing and implementing public strategies that promote economic vitality in Kansas and advancing the study and practice of public finance.

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.

Master of Public Administration

The interdisciplinary nature of the Hugo Wall School of Urban and Public Affairs extends to the Master of Public Administration (MPA) degree and is structured to respond to the uniqueness of the student body at an urban university. Emphasizing public management, public finance, and public policy, the degree prepares students for positions of responsibility in public and nonprofit organizations.

In the MPA degree program, students have the opportunity for exposure to the methods and perspectives of the social and behavioral sciences, economics, and the humanities. The link between these disciplines and the problems of public management are emphasized through methods which include use of practitioners in the classroom, policy-relevant research assignments, public affairs seminars, and internships. The teaching faculty have significant professional experience in state and local government and are involved in research relevant to state and local governments and nonprofit organizations in Kansas. These experiences allow them to bring relevant perspectives on public management into the classroom.

Graduates of the program have gone on to hold positions ranging from city managers to budget analysts in state government to management analysts in major hospitals. Although the majority are employed in public service, some graduates of the program hold positions in the private sector, while still others have pursued additional study in law, doctoral education, or other specializations.

The Master of Public Administration degree consists of 39 graduate hours, 24 of which are required core courses (PAdm 702, 710, 725, 745, 765, 775, 802, 895). The remaining 15 hours are courses within an area of specialization to fit the student’s career interest and are developed between the student and their advisor. Common areas of specialization include public management, financial management, and policy analysis.

Students with limited work experience in the public sector are encouraged to consider an internship as part of their MPA program. Intern positions are remunerative and awarded on a competitive basis.

Upper-Division Courses


P. Adm. 407. Introduction to Research Methods. (3). Cross-listed as CJ 407, Geron. 407, and Min. S. 407. Introduces research methods emphasizing the methods most commonly used. Includes library and reference materials, government documents, and legal materials. Prerequisite: CJ 191Q, Geron. 100Q, or Min. S. 100Q.

Courses for Graduate/Undergraduate Credit

P. Adm. 501. Integrity in Public Service. (3). Cross-listed as CJ 501, Geron. 501, and Min. S. 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. Explores 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.

P. Adm. 550. Workshop. (3). Specialized instruction using variable format in relevant urban and public affairs subjects. Repeatable for credit up to 6 hours.

P. Adm. 560. The Planning Process. (3). Cross-listed as Pol. S. 560. For students desiring to work in an urban planning agency or who will be involved in planning issues as an administrator at the city, county, state, or federal level. Also for students seeking an understanding of the complex process of urban-related life. Examines the role of planning in solving human and environmental problems. Emphasizes the relationship between specialists, citizens and elective officials as participants in the planning process.

P. Adm. 564. Comparative Public Administration. (3). Cross-listed as Pol. S. 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 their environmental settings.


P. Adm. 621. Environmental Law. (3). Cross-listed as CJ 621 and Min. S. 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 pro-
cesses of environmental protection. Includes issues in the development and implementation of environmental policy. Prerequisite: an approved methods class.


P. Adm. 651. Dispute Resolution. (3). Cross-listed as CJ 651, Geron. 651, and Min. S. 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, and analysis of case studies.

P. Adm. 688. Urban Economics. (3). Cross-listed as Econ. 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. 201Q and 202Q, 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, Geron. 702, Min. S. 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. Special emphasis on the laws governing public personnel management and on the unique merit, equal employment opportunity, productivity, and ethical aspects of the public. Emphasizes labor-management relationships 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. 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. 201Q and 202Q or instructor's consent.

P. Adm. 775. State and Local Government Law. (3). Exposes students to the legal principles which undergird the foundation of governmental operation and administration.

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 Econ. 804. 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 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. 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. Prerequisite: an approved statistics class and an approved methods class.

P. Adm. 865. State and Local Government Finance. (3). Cross-listed as Pol. S. 865 and Econ. 865. An analysis of state and local government expenditure and revenue systems, with an introduction to state and local financial administration. Prerequisites: P. Adm. 765 or instructor's consent.

P. Adm. 866. State and Local Financial Systems. (3). Deals with selected aspects of state and local government financial management. Introduces fund accounting, costing of government services, capital budgeting, and asset management. Prerequisite: P. Adm. 865 or instructor's consent.


P. Adm. 890. Internship. (3). Integrates academic and professional experience. Only graduate 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 results, 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, Min. 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 a 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 three hours in courses numbered 140 to 149. Other 100-level courses and workshops may not be counted for the major, except for 190G, 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, minority studies, psychology, communication, political science, and administration of 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. 287Q, 387Q, 587, 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. S. 190G, 287Q, 380K, 387Q, 391, 481, 482, 570, 580, 587, 635


Minor. The minor in women's studies consists of a minimum of 15 hours of women's studies courses, including Wom. S. 287Q and 387Q. 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. 287Q or 387Q. At least 6 credit hours must be at the 300-level or above, and may include 387Q.

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 etc.) and students are required to keep a daily journal. Course provides an intense journal writing experience for those enrolled and encourages students to continue the practice on their own. Graded S/U.

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 abuse. 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.

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.

Wom S. 190G. The American Woman in Popular Culture. (3). General education introductory course. Examines how women of various races, classes, and ethnicities are represented in a wide variety of popular media. Encourages the critical analysis of why and how these popular representations are politically and socially significant in shaping society's perceptions of "the American woman." Also explores women's popular genres.

Wom S. 240. Minority Women In America. (3). Cross-listed as Min. S. 240Q.

Wom S. 287Q. Women in Society: Social Issues. (3). General education introductory course. Examines women's efforts to claim their identity from historical, legal and social perspectives. Includes recent laws relating to women; contemporary issues (such as rape, day care, working women, the future of marriage); agencies for change; theories of social change; and the relationship of women's rights to human rights.

Upper-Division Courses

Wom S. 316. The American Male. (3). Cross-listed as Soc. 316.

Wom S. 325. 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. 330. 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. 361. Women and Work. (3). General education further study course. Examines the image and reality of women's employment from minimum wage work to corporate board rooms, as well as women's unpaid work. It explores the impact of cultural values, societal arrangements, and public policy on occupations, wages, and family life.

>Wom S. 380K. Women and Peace. (3). Explores many facets of women's strategies for interpersonal and political peacemaking. Also explores women's pacifist and patriotic strategies, including service, resistance and direct actions.

>Wom S. 387Q. Women in Society: Cultural Images. (3). General education further study course. Examines the roots of ideas about women in our society and women's responses to those ideas as they have attempted to define themselves. Emphasizes cultural images of women in literature, art, myth, philosophy, religion, psychology, education and politics. Also considers women in other cultures and other times and contemporary women's visions of an alternative future.

>Wom S. 391. Women's Global Issues. (3). General education further study course. Explores women's issues from a global perspective and examines dependencies on sub-national relationships in their social and personal context. Examines theories of treatment and recovery in relation to feminist theory and women's roles in co-dependency.

>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., from 1600 to the 1830s. 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. from 1830 to the 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 Sex Roles. (3). Cross-listed as Soc. 516. Prerequisite: Soc. 111Q.

Wom S. 521. Women's Traditional Arts. (3). Surveys various art forms which are usually identified as the creative work of women. Using such examples as quilts or other textile arts, students focus not only on the aesthetics of these traditional forms, but also on their historical and social value to the culture.

Wom S. 522. Contemporary Women's Art. (3). Examines art by women in the contemporary world. Special attention to the impact of the women's movement on contemporary artists and the role of creative energies and 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. 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. 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. Prerequisite: Engl. 101, 102, and one course in literature.

Wom S. 536Q. 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. 537. Contemporary Women's Drama. (3). Cross-listed as Engl. 537. Examines contemporary plays by and about women to discover and explore the insights of the various playwrights into the lives and roles of women. Writers considered vary. In addition to reading and analyzing plays, students write plays of their own. Prerequisites: Engl. 101 and 102 and 3 hours of English literature.

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 to poverty among Kansas families. Prerequisites: 6 hours of social science preferably in women's studies, including Wom. S. 267Q.

Wom S. 542. Gender in Other Cultures. (3). Cross-listed as Anthr. 542.

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 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.

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. Considers: What is the relationship between the making of masculinity and femininity and science? How are gender and race woven into science and social science and with what results? Does the entrance of white women and people of color into the sciences and humanities change how they are practiced? Do they produce significantly different understanding 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. 387Q and 388G, 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 woman 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 four hours of lecture and two hours of lab.
University Faculty—January 2000

Note: This listing reflects the faculty at Wichita State University as of January 3, 2000.


Abidine-Helm, Sue, Assistant Professor, Finance, Real Estate, and Decision Sciences (1998). BS, Birzeit University, 1983; MS, Southampton University, 1988; PhD, Indiana University, 1994.


Ackerman, Paul D., Assistant Professor and Assistant Chairperson, Psychology (1968). BA, University of Kansas, 1964; MA, 1966; PhD, 1968.


Alexander, David R., Professor, Physics, and Executive Director, Fairmount Center for Science and Mathematics Education (1971). BS, Kansas State University, 1967; AM, Indiana University 1968; PhD, 1971.

Ali, Shahid I., Visiting Assistant Professor, Finance, Real Estate, and Decision Sciences (1997). BS, University of Engineering and Technology, Pakistan, 1982; MBA, Emporia State University, 1987; PhD, Texas Tech University, 1998.

Alley, Robert D., Professor, Curriculum and Instruction (1957). BS, Iowa State University, 1957; ME, University of Montana, 1960; EdD, Arizona State University, 1967.


Anderson, Peggy A., Assistant Professor, Curriculum and Instruction (1993). BS, Emporia State University, 1967; MA, University of Kansas, 1979; PhD, Wichita State University, 1983.

Armstrong, Richard N., Assistant Professor and Associate Director, Elliott School of Communication (1987). BA, Southern Utah State College, 1972; MA, Brigham Young University, 1974; PhD, Bowling Green State University, 1978.


Babich, Judith, Associate Professor, School of Performing Arts (1984). BA, Edgecliff College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.


Bagai, Rajiv, Associate Professor and Graduate Coordinator, Computer Science (1990). MS, Birla Institute of Technology and Science, 1983; MS, University of Victoria, 1987; PhD, 1991.

Bair, Sue F., Assistant Professor, Kinesiology and Sport Studies (1966). BA, Wichita State University, 1961; ME, 1967.

Baijai, Prem N., Associate Professor, Mathematics and Statistics (1968). BA, Punjab University, 1951; MA, 1954; MS, Case Western Reserve University, 1970.

Bakken, Linda, Professor, Administration, Counseling, Educational, and School Psychology (1985). BA, Northern Michigan University, 1960; MS, Utah State University, 1979; EdD, Boston University, 1983.


Ballenger, Marcus T., Professor, Curriculum and Instruction, and Associate Dean, Education (1970). BSE, North Texas State University, 1959; MED, Texas Tech University, 1963; EdD, 1970.

Bannister, Andrea, Assistant Professor, School of Community Affairs, Criminal Justice Program, and Director, Regional Community Policing Training Institute (1995). BS, University of Illinois, Champaign-Urbana, 1989; MA, Indiana University, Bloomington, 1990; PhD, Michigan State University, 1995.


Baughman, Margaret, Associate Professor, English (1993). BA, University of Virginia, 1979; MS, Northwestern University, Evanston, 1980; MFA, City University of New York, Brooklyn College, 1989.


Bean, Matt, Associate Professor and Associate Director, Opera/Musical Theatre (1998). BA, Brigham Young University, 1983; MM, Manhattan School of Music, 1985; DM, Indiana University, 1991.

Beggs, Donald L., President and Professor of Education (1999). BSE, Southern Illinois University, 1963; MED, 1964; PhD, University of Iowa, 1966.


Bell, John A., Associate Professor and Chairperson, Management (1971). BA, University of Southern California, 1966; PhD, Texas Tech University, 1976.


Berman, Nancy, Associate Professor, Management, and Associate Dean, W. Frank Barton School of Business (1980). BA, Wichita State University, 1981; MBA, 1974; PhD, University of Minnesota, 1983.

Bergen, Wesley, Visiting Assistant Professor, Religion (1997). BA, University of Manitoba, 1973; MDiv, Lutheran Theological Seminary, 1975; STM, St. Andrew's College, 1989; PhD, Emmanuel College, University of Toronto, 1996.


Billings, Dorothy K., Associate Professor, Anthropology (1968). BA, University of Wisconsin, 1955; PhD, University of Sydney, 1972.

Bischoff, William, Professor, Geology, and Associate 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, 1980.

Blakeslee, Donald J., Professor, Anthropology (1976). BA, University of Nebraska, 1969; MA, 1971; PhD, University of Wisconsin-Milwaukee, 1975.

Blocher, Larry R., Associate Professor, School of Music (1995). BME, Morehead State University, 1975; MME, 1977; PhD, Florida State University, 1986.


Bogner, Donna J., Visiting Assistant Professor, Chemistry (1991). BS, McPherson College, 1965; MSc, Wichita State University, 1972; PhD, Kansas State University, 1981.


Bolick, Margaret E., Associate Professor, Curriculum and Instruction (1998). BA, University of Texas-Austin, 1971; MED, 1978; PhD, Kansas State University, 1996.

Bolin, Brian L., Assistant Professor, School of Business (1999). BS, Oklahoma State University, 1985; MS, 1988; MSc, Walla Walla College, 1998; PhD, Oklahoma State University, 1994.

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.

Benn, John D., Jr., Associate Professor, History (1965). BA, University of Texas, 1952; MA, University of Houston, 1958; PhD, University of New Mexico, 1963.

Boughton, Harrison C., Professor, School of Music (1961). BA, University of Northern Iowa, 1956; MA, University of Denver, 1959; DMA, University of Missouri-Kansas City, 1975.

Bousfield, George R., Associate Professor, Biological Sciences (1991). BS, Saginaw Valley State University, 1974; MA, Indiana University, 1976, PhD, 1981.

Bowman, Barbara E., Assistant Professor, Biological Sciences (1966). BS, University of Utah, 1954; MSE, Wichita State University, 1966; PhD, University of Kansas, 1979; MLS, Emporia State University, 1995.


Brady, Stephen W., Associate Professor, Mathematics and Statistics, and College Algebra Program Director (1967). AB, Indiana University 1963; AM, 1965; PhD, 1968.

Brafo-Elizondo, Pedro, Professor, Modern and Classical Languages and Literatures (1973). Universidad Technica del Estado, Chile, 1957; MA, Education, Catholic University, Chile, 1961; MA, University of Iowa, 1971; PhD, 1974.

Britton, Clark V., Jr., Professor, School of Art and Design (1957). BAA, Auburn University, 1952; MAA, 1955.

Brock, Thomas H., Assistant Professor and Director, Television Services (1980). BS, University of Illinois, 1969; MEd, 1970.

Brooks, Christopher, Professor, Mathematics (1961). BA, University of Northern Iowa, 1969; MEd, Indiana State University, 1970; PhD, Indiana University, 1972; MFA, Indiana University, 1974.

Brown, Allison McKenney, Assistant Professor, Mathematics and Statistics (1973). BS, Indiana University, 1969; MEd, 1970; PhD, Purdue University, 1975.

Brown, Janet B., Associate Professor, Library, and Education Librarian (1980). BA, Wichita State University, 1974; MLS, Emporia State University, 1975.

Brown, Karen L., Associate Professor, Biological Sciences (1988). BSc, University of Michigan, 1993; JD, University of Kansas, 1993.

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Brooks, Christopher, Professor, Mathematics (1961). BA, University of Northern Iowa, 1969; MEd, Indiana State University, 1970; PhD, Indiana University, 1972; MFA, Indiana University, 1974.

Davidson, Harry, Professor, School of Music, and Director of Orchestras (1998). BA, Case Western Reserve University, 1978; MM, Pacific Lutheran University, 1983.


Davis, Gayle R., Associate Professor, Women's Studies, and Associate Vice President, Academic Affairs (1982). BA, Muskingum College, 1968; MA, Michigan State University, 1975; PhD, 1981.


deSilva, Dharma, Professor, International Business and Management, and Director, Center for Intercontinental Business (1976). BA, University of Evansville, 1957; MS, Southern Illinois University 1959; PhD, Indiana University, 1966.

Descans, James W., Professor, School of Accountancy (1985). BBA, University of Oklahoma, 1960; MBA, 1961; PhD, University of Texas-Austin, 1966.


Deyoe, Nancy, Associate Professor, Library, and Principal Cataloger, Catalog Department (1987). BA, Kansas State University, 1983; MLS, University of Denver, 1984.

Distler, Donald A., Associate Professor, Biological Sciences (1963). BA, University of Louisville, 1952; MS, 1958; PhD, University of Kansas, 1966.

Doggett, M. Steven, Associate Professor, Biological Sciences (1998). BS, Southwest Missouri State University; MFA, 1989; PhD, University of Georgia, 1995.

Dooley, Patricia, Assistant Professor, Elliott School of Communication (1997). BA, University of Minnesota, 1975; MA, 1993; PhD, 1994.


Dowles, Kathy A., Assistant Professor and Associate Dean for Access Services, Library (1979). BS, University of Minnesota for Women, 1978; MALS, University of Kentucky, 1979; MPA, Wichita State University, 1985.

Driedfort, John E., Professor, History (1970). BA, Bowling Green State University, 1963; MA, 1966; PhD, Kent State University, 1970.

Duell, Orpha K., Professor and Chairperson, Administration, Counseling, Educational, and School Psychology (1967). BS, Kansas State University, 1963; MS, University of Illinois, 1965; PhD, 1967.


Eckert, Ruth, Assistant Professor, School of Nursing (1999). BSN, Catholic University of America, 1986; MS, University of California-San Francisco, 1991.


Egbert, Robert L., Professor, Electrical and Computer Engineering, and Director, WCU Center for Energy Studies (1983). BSE, University of Missouri-Rolla, 1972; MSEE, 1973; PhD, 1976 Licensed Professional Engineer-Missouri, Kansas.

Eggers, Jill A., Assistant Professor, School of Art and Design (1993). BFA, Western Michigan University, 1983; MFA, Yale University School of Art, 1989.

Eichhorn, David, Assistant Professor, Chemistry (1996). MA, Harvard University, 1986; PhD, University of California, Berkeley, 1992.


Emery, Sandra L., Assistant Professor, Curriculum and Instruction (1999). BEd, State University of New York at Canton, 1990; MS, University of Kansas, 1997; PhD, 1997.


Ericson, David F., Associate Professor, Political Science (1992). BA, Wayne State University, 1972; MA, University of Michigan, 1976; PhD, University of Chicago, 1978.

Farmer, Steven M., Assistant Professor, Management (1999). BS, Tulane University, 1978; MA, Southern Methodist University, 1986; MS, Georgia Institute of Technology, 1991; PhD, 1993.


Ferretti, Robert, Professor, Curriculum and Instruction (1999). BA, University of Michigan, 1960; M.S. C.W. Post College of Long Island University, 1965; PhD, Florida State University, 1969.


Fletcher, Phyllis, Assistant Professor, School of Nursing (1988). BSN, Wichita State University, 1976; MN, 1980.

Flores, Michael B., Assistant Professor, School of Accountancy (1998). BBA, University of Texas-EI Paso, 1981; MAA, New Mexico State University, 1982. CPA-Texas.

Foley, Mark, Assistant Professor, School of Music (1989). BM, University of Minnesota, 1984; MM, Eastman School of Music, University of Rochester, 1989.

Foran, Michael F., Professor, School of Accountancy (1999). BS, University of Arizona, 1967; MAS, University of Illinois, 1968; PhD, University of Washington, 1972; CMA; CPA-Texas, Oklahoma.

Foran, Nancy J., Associate Professor, School of Accountancy (1979). BS, University of California-Los Angeles, 1965; MS, Wichita State University,


Kelley, James W., Associate Professor and Dean, University Academic Programs (1982). BS, Oregon State University, 1964; MA, University of Denver, 1966; PhD, 1970.


Konek, Carol W., Professor, Women's Studies (1995). BA, University of North Dakota, 1989; MS, University of Nebraska, 1991; PhD, University of South Carolina, 1992.

Koretski, Cathleen A, Assistant Professor and Director, School of Social Work (1995). BA, Blackburn College, 1975; MSW, St. Louis University, 1981; PhD, University of Kansas, 1997.


Kuehn, Laszlo, Assistant Professor, Mechanical Engineering (1983). BSME, Villanova University, 1980; MSME, Drexel University, 1984; PhD, 1990.

Koehn, Mary, Instructor and Clinical Educator, School of Nursing (1999). BSN, Fort Hays State University, 1984; MSN, Wichita State University, 1989.


Lacy, Thomas E., Jr., Assistant Professor, Aerospace Engineering (1998). BS, University of New Mexico, 1983; MS Georgia Institute of Technology, 1992; PhD, 1998. Licensed Professional Engineer.

Lancaster, Kirk E., Professor, Mathematics and Statistics (1980). AB, Humboldt State University, 1975; PhD, Oregon State University, 1981.


Larson, Gary, Assistant Professor, Elliott School of Communication (1997). BA, University of Minnesota, 1976; MA, North Dakota State University, 1991; PhD, University of Minnesota, 1997.

Lary, Marvis, Assistant Professor and Chairperson, Physician Assistant (1987). BA, Wichita State University, 1975; BHS, 1979; MHS, 1986; PhD, Kansas State University, 1991.


Luce, Timothy W., Assistant Professor, School of Social Work (1978). BS, Central Missouri State University, 1973; MA, 1974; PhD, St. Louis University, 1981.


LeCompte, Richard L.B., Associate Professor and Chairperson, Finance, Real Estate, and Decision Sciences, and H. Dene Heskett Chair in Finance (1989). BA, University of Arkansas, 1976; MA, 1978; PhD, University of Texas-Austin, 1981.

Lengnick-Hall, Cynthia A., Professor and Barton Fellow, Management (1990). BA, University of California-Los Angeles, 1970; MBA, 1976; PhD, University of Texas-Austin, 1981.

Lengnick-Hall, Mark L, Associate Professor and Barton Fellow, Management (1990). BA, University of Texas-Austin, 1975; MBA, 1980; PhD, Purdue University, 1988.

Lescoe-Long, Mary A., Assistant Professor, Public Health Sciences (1994). BS, Western Michigan University, 1975; MA, University of Michigan, 1980; PhD, University of South Carolina, 1982.

Leventhal, Tim, Assistant Professor, Director, School of Social Work (1995). BA, Blackburn College, 1975; MSW, St. Louis University, 1981; PhD, University of Kansas, 1997.

Lewis, D. Kathleen, Associate Professor, Physical Therapy (1999). BS, University of Minnesota; BS, Kansas State University; MA, University of Southern California-Los Angeles; JD, Washington Law School, 1999.

Lewis, Rhonda, Assistant Professor, Psychology (1996). BA, Wichita State University, 1991; MA, University of Kansas, 1993; MPH, 1996; PhD, 1996.

Li, Qiong, Assistant Professor, Economics (1995). BA, East China Normal University, PR China, 1991; MA, University of Houston, 1992; PhD, 1995.

Lida, Bonnie L, Instructor, Marketing and Entrepreneurship, and Associate Director, EMBA Program (1997). BBA, Wichita State University, 1995; MBA, 1997.


Lofthus, Ariel, Assistant Professor, History (1997). BA, University of Michigan, 1979; PhD, Stanford University, 1981; MA, University of Michigan, 1982; PhD, 1992.


Longhofer, Stanley D., Associate Professor, Finance, Real Estate, and Decision Sciences, and Stephen L. Clark Chair in Real Estate and Finance (1999). BBA, Wichita State University, 1989; MS, Oklahoma State University, 1991; PhD, 1995.

Loper, Gerald D., Jr., Associate Professor, Physics, Associate Vice President for Research and Director, Office of Research Administration (1964). BA, Wichita State University, 1959; MS, Oklahoma State University, 1962; PhD, 1964.


Lowe, Roger D., Assistant Professor, School of Accountancy, and Vice President, Administration and Finance (1964). BSBA, Pittsburgh

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 (1970). BA, University of New York, Cortland, 1966; MEd, Ohio University, 1967.


Saalmann, Dieter, Professor and Chairperson, Modern and Classical Languages and Literatures (1971). BA, Northwestern State University, 1963; MA, Johns Hopkins University, 1965; PhD, Washington University, 1970.


Sawar, M. Edwin, Professor and Graduate Coordinator, Electrical and Computer Engineering (1979). BSEE, University of Alexandria, 1975; MS, 1976; PhD, University of Illinois, 1979; Licensed Professional Engineer, 1982.


Saxton, Judith, Assistant Professor, School of Music (1999). BME, Mansfield University, 1986; SM, Northwestern University, 1987.


Schmida, John W., Assistant Professor, Biological Sciences (1993). BS, University of Massachusetts, 1981; PhD, University of Washington, 1987.

Schneider, Philip H., Professor, English (1967). BA, State University of New York College-Oneonta, 1965; MFA, University of Iowa, 1967.


Scudder, Rosalind K., Professor, Communicative Disorders and Sciences, and Director, Center for Teaching and Research Excellence (1972). BA, Wichita State University, 1964; MA, 1972; PhD, 1978.

Seery, Patricia, Assistant Professor and Clinic Coordinator, Dental Hygiene (1996). AS, Wichita State University; BHS, 1977; MHS, 1986.


Sethi, Awanti P., Associate Professor, Finance, Real Estate, and Decision Sciences (1988). BS, Gauhati University, 1974; MS, Kanpur University, 1978; MISA, Carnegie-Mellon University, 1982; PhD, 1983.

Shirreffs, Douglas, Associate Professor and Director, School of Accountancy (1969). BBA, University of Oklahoma, 1961; MBA, 1963; PhD, University of Missouri, 1969; CPA-Oklahoma.


Sheffield, James F., Associate Professor and Chair, Political Science (1974). BA, Mississippi State University, 1969; MS, Florida State University, 1970; PhD, University of Kansas, 1985.


Shermois, Instructor and Clinical Coordinator, School of Nursing (1986). BSN, University of Nebraska-Lincoln, 1970; PhD, Rehabilitation Sciences, University of Kansas, 1987.


Retired Faculty

Ahlgren, Clark D.
Allen, Anneke S.
Allen, June S.
Anderson, Robert E.
Armstrong, Warren B.
Artega, Lucio
Bateman, Morita C.
Bartel, Peter
Benningfield, Lloyd M.
Berg, J. Robert
Bernard, David E.
Bernhart, Walter J.
Bezzi, D.R.
Bish, John T.
Borresen, C. Robert
Bowyer, James M.
Brandhorst, Armin L.
Breazeale, John B.
Brewer, Jeneva J.
Brimkman, Sidney
Brooks, Nancy A.
Burk, Kenneth W.
Bush, Martin H.
Carson, Doris M.
Cearas, James J.
Chaffee, Leonard M.
Chambers, Randall M.
Chang, Dae H.
Chrisman, Paul G.
Collins, George
Comstock, George A.
Corbett, Donald L.
Crane, Hubert D.
Craig, Andrew J.
Cress, Allan
Crown, Gary D.
Cuthbertson, K. Jean
Decker, Jay C.
Dey, Glen R.
Doig, J. Robert, Jr.
Douglas, Donald M.
Douglas, J. Rex
Draile, Lewis A.
Duell, Dennis C.
Dunning, Wayne W.

Wright, David W., Associate Professor, Sociology (1993). BA, Indiana University-Purdue University at Indianapolis, 1987; MA, Purdue University, 1989; PhD, 1992.
Wyatt, Frank B., Assistant Professor, Kinesiology and Sport Studies (1998). BS, North Texas State University, 1977; MA, San Francisco State University, 1985; PhD, University of North Carolina, 1996.
Wynn, Tor, Assistant Professor, Sociology (2000). BA, Oakland University, 1993; MA, University of Iowa, 1996; ABD, 2000.
Yang, C. Charles, Assistant Professor, Mechanical Engineering (1997). BS, National Taiwan University, 1985; MS, 1987; PhD, Louisiana State University, 1993. Licensed Professional Engineer—Louisiana.
Yang, Wan, Assistant Professor, Geology (1999). BS, Northwestern University, China 1984; MS, California State University at Fresno, 1990; PhD, University of Texas at Austin, 1995.
Yeager, Samuel J., Professor, Hugo Wall School of Urban and Public Affairs, and Coordinator, Public Administration Program (1976). BA, University of Massachusetts, 1967; MLS, George Peabody College, 1968; MS, Troy State University, 1971; MPA, Auburn University, 1972; DFA, University of Georgia, 1976.
Yeotis, Catherine G., Associate Professor, Curriculum and Instruction (1979). BS, Michigan State University, 1963; MS, Purdue University, 1973; PhD, 1978.
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.
Zoller, Peter T., Associate Professor, English, and Associate Vice President, Academic Affairs (1973). BA, University of San Francisco, 1965; MA, Claremont Graduate School, 1966; PhD, 1970.
Platt, George M.
Poland, Leo A.
Reif, Martin A.
Ritchie, Gisela F.
Rogers, Ethel Elizabeth
Rohn, Arthur H.
Sarachek, Alvin
Savaiano, Eugene
Schad, Jasper G.
Schlesier, Karl
Schr, Robert L.
Scriven, Nancy L.
Simoni, John P.
Slingerland, F. Yvonne
Small, Blanche L.
Smith, R.V.
Snyder, Melvin H., Jr.
Spangler, Eugene C.
Stephens, Frances C.
Strecker, Joseph L.
Stubbs, Nancy B.
Sullivan, Betty A.
Sutterlin, Peter G.
Sweeney, Arthur B.
Taggart, Gladys Martha
Taggart Jr., Theoburn
Tasch, Paul
Tejeda, Antoinette
Terlffinger, Curtis D.
Terrell, William T.
Terwilliger, Gordon B.
Throckmorton, Helen J.
Todd, Richard A.
Unrau, Mildred C.
Unrau, William E.
Unruh, Henry
Vahdat, Pari
Wahlbeck, Phillip G.
Wall, Lillian A.
Walbers, Dorothy J.
Webb, Edgar L.
Webb, Samuel C.
Weber, Carolyn
Wellbrock, Mildred
Welsbacher, Betty T.
Welsbacher, Richard C.
Wentworth, C. Russell
Wentz, William H., Jr.
Wherritt, Robert C.
Wiebe, Paul
Wiebe, Raymond F.
Wilson, John H.
Yoon, I.N.
Zumwalt, Glen W.
## 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 one hour of credit. In courses involving meetings other than lectures, the following symbols are used: R, lecture; L, laboratory; T, theory; C, conference; D, demonstration; and P, practicum, with the number of practicum per week given in front of the letter (6-8P means six to eight hours of practicum per week).

### Abbreviations

The following abbreviations of academic departments and areas are used in reference to courses offered by those departments.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Department/Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acct.</td>
<td>Accounting</td>
</tr>
<tr>
<td>AE</td>
<td>Aerospace engineering</td>
</tr>
<tr>
<td>Anthr.</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Art E.</td>
<td>Art education</td>
</tr>
<tr>
<td>Art F.</td>
<td>Art and design foundation</td>
</tr>
<tr>
<td>Art G.</td>
<td>Graphic design</td>
</tr>
<tr>
<td>Art H.</td>
<td>Art history</td>
</tr>
<tr>
<td>Art S.</td>
<td>Studio arts</td>
</tr>
<tr>
<td>BA</td>
<td>Business administration</td>
</tr>
<tr>
<td>B. Law</td>
<td>Business law</td>
</tr>
<tr>
<td>Biol.</td>
<td>Biological sciences</td>
</tr>
<tr>
<td>CD5</td>
<td>Communicative disorders and sciences</td>
</tr>
<tr>
<td>CESP</td>
<td>Counseling, educational, and school psychology</td>
</tr>
<tr>
<td>Chem.</td>
<td>Chemistry</td>
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<tr>
<td>CI</td>
<td>Curriculum and instruction</td>
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<tr>
<td>CJ</td>
<td>Criminal justice</td>
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<tr>
<td>Comm.</td>
<td>Communication</td>
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<tr>
<td>CS</td>
<td>Computer science</td>
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<tr>
<td>Dance</td>
<td>Dance</td>
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<tr>
<td>DH</td>
<td>Dental hygiene</td>
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<tr>
<td>DS</td>
<td>Decision sciences</td>
</tr>
<tr>
<td>EAS</td>
<td>Educational administration and supervision</td>
</tr>
<tr>
<td>Econ.</td>
<td>Economics</td>
</tr>
<tr>
<td>ECE</td>
<td>Electrical and computer engineering</td>
</tr>
<tr>
<td>EMT</td>
<td>Basic emergency medical care</td>
</tr>
<tr>
<td>Engl.</td>
<td>English language and literature</td>
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<tr>
<td>Engr.</td>
<td>General engineering</td>
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<td>Entre.</td>
<td>Entrepreneurship</td>
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<tr>
<td>Fin.</td>
<td>Finance</td>
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<tr>
<td>Fine Arts</td>
<td>Fine arts-general</td>
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<tr>
<td>Fren.</td>
<td>French</td>
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<tr>
<td>Geog.</td>
<td>Geography</td>
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<tr>
<td>Geol.</td>
<td>Geology</td>
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<td>Germ.</td>
<td>German</td>
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<tr>
<td>Geron.</td>
<td>Gerontology</td>
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<tr>
<td>HSOUP</td>
<td>Health services organization and policy</td>
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<tr>
<td>Hist.</td>
<td>History</td>
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<tr>
<td>Hnrs.</td>
<td>Honors Program</td>
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<tr>
<td>HP</td>
<td>Health professions—general</td>
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<tr>
<td>HRM</td>
<td>Human resource management</td>
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<td>IB</td>
<td>International business</td>
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<td>IEN</td>
<td>Industrial engineering</td>
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<td>Ital.</td>
<td>Italian</td>
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<td>Japan.</td>
<td>Japanese</td>
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<tr>
<td>KSS</td>
<td>Kinesiology and sport studies</td>
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<td>LAS-I</td>
<td>Liberal arts interdisciplinary</td>
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<td>Latin</td>
<td>Latin</td>
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<td>Legal</td>
<td>Legal assistant</td>
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<td>Ling.</td>
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<td>ME</td>
<td>Mechanical engineering</td>
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<td>Med. T.</td>
<td>Medical technology</td>
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<td>Mfg. E.</td>
<td>Manufacturing engineering</td>
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<td>Mgmt.</td>
<td>Management</td>
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<td>MICT</td>
<td>Mobile intensive care technician</td>
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<td>Min. S.</td>
<td>Minority studies</td>
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<td>MIS</td>
<td>Management information systems</td>
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<td>Mkt.</td>
<td>Marketing</td>
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<td>Mus. A.</td>
<td>Applied music</td>
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<td>Mus. C.</td>
<td>Musicology-composition</td>
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<td>Mus. E.</td>
<td>Music education</td>
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<td>Mus. P.</td>
<td>Music performance</td>
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<td>Nurs.</td>
<td>Nursing</td>
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<td>PA</td>
<td>Physician assistant</td>
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<td>P. Adm.</td>
<td>Public administration</td>
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<td>Phil.</td>
<td>Philosophy</td>
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<td>Political science</td>
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<td>Psychology</td>
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<td>Physical therapy</td>
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<td>Physical therapist assistant</td>
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<td>Real estate and land use economics</td>
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<td>Rel.</td>
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<td>Russian</td>
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<td>Social work</td>
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<td>Sociology</td>
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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)
Duerksen Fine Arts Center (B)
Eck Stadium (E)
Edwin A. Ulrich Museum of Art (B)
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)
Geology Building (C)
Golf Course Maintenance Building (E)
Golf Pro Shop (F)
Grace Memorial Chapel (C)
Grace Wilkie Hall (D)
Greenhouse (D)
Henriqu 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)
Levitt Arena (B)
Lindquist Hall (C)
Lutheran Student Center (D)
Marcus Center for Continuing Education (F)
McKinley Hall (B)
McKnight Art Center (B)
Media Resources Center (D)
Memorial '70 (B)
Metropolitan Complex (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)
Publications/Printing (D)
Rhatigan Student Center (C)
Sheldon Coleman Tennis Complex (C)
Tyler Field (E)
Visual Communications (D)

Campus Map

Wallace Hall (D)
Warehouse (E)
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)
Sigma Phi Epsilon (C)

Sororities
Alpha Phi (D)
Delta Delta Delta (D)
Delta Gamma (D)
Gamma Phi Beta (D)

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.
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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—the International Association for Management Education
Accreditation Board of Engineering and Technology
American Bar Association
American Speech-Language and Hearing Association,
  North Central Association of Colleges and Schools
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
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 Council for Accreditation of Teacher Education
National League for Nursing

*North Central Association of Colleges and Schools Commission on Institutions of Higher Education;
30 North LaSalle Street, Suite 2400; Chicago, Illinois 60602-2504; (800) 621-7440.

A complete listing of the programs and degrees offered at Wichita State University is located on the inside back cover of this Catalog.