Undergraduate Catalog
2002-2003

Wichita State University
1845 Fairmount
Wichita, Kansas 67260
(316) 978-7000
www.wichita.edu
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Undergraduate Catalog 2002-2003
This catalog is a guide for information only and is not a contract. This catalog becomes effective Fall Semester 2002 and extends through the Summer Session 2003. The official University address is Wichita State University, 1845 Fairmount, Wichita, Kansas 67260. The general University telephone number is (316) 978-3456. For admission information, call toll-free (800) 362-2994. The University’s World Wide Web address is www.wichita.edu
What you’ll find inside this Catalog

- For new and continuing students, it’s a guide to academic life at WSU.

- For high school and community college advisors, it’s an information source that will help students make the best possible transition from their current educational setting to WSU.

- For WSU personnel, it’s the standard reference for answers to many University policies and procedure questions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

About WSU’s Metropolitan Advantage

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

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

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

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

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

About Campus Life

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

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

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

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

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

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

About Your Studies

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

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

About Your Life After WSU

As you near the end of your career at WSU, this Catalog will help 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 the WSU Foundation offer opportunities to continue your relationship with Wichita State.

This Catalog was created to assist students. Whether you've just enrolled in your first class or you're about to receive your degree, we hope this Catalog will be a path through our academic world, make your life as a student easier, and help you build strong ties to Wichita State University.
Academic Calendar for 2002-2003

**Fall Semester 2002**
- August 14-19: Fall semester registration
- August 22: Weekday and evening classes begin
- September 2: Labor Day, holiday
- October 16: Midterm point
- October 20-22: Fall recess
- November 4: Final date for withdrawal with nonpenalty grades
- November 11-January 9: Telephone registration period for spring semester (exact dates published in the Schedule of Courses)
- November 27-December 1: Thanksgiving recess
- December 12: Last day of class
- December 13: Study Day
- December 14-20: Final examinations
- December 20: Fall semester ends
- December 22: Commencement

**Spring Semester 2003**
- January 13-18: Spring semester registration
- January 20: Martin Luther King, Jr. Day, holiday
- January 21: Classes begin
- March 14: Midterm point
- March 17-23: Spring recess
- April 5: 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 12: Last day of classes
- May 13: Study Day
- May 14-20: Final examinations
- May 16-17: Commencement
- May 20: Spring semester ends

**Summer Semester 2003**
- May 26: Memorial Day, holiday
- May 27-June 6: Presession and workshops
- June 2-6: Summer Session registration
- June 9: Classes begin, first four-week term and eight-week term
- July 3: Last day of first four-week term
- July 4: Independence Day holiday
- July 7: Classes begin, second four-week term
- August 1: Summer Session ends

These dates are subject to change.

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

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

Produced by University Publications and Advertising 5/02.
General Information

2002-2003 University and Academic Officers

Donald L. Beggs, 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 R. Kopita, Vice President for Student Affairs
Susan Kovar, 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. Sigmon, 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
William Bischoff, Dean of Fairmount College of Liberal Arts and Sciences
Ruth Jackson, Dean of Libraries
Jim Schaus, Director of Intercollegiate Athletic Association, Inc.

Kansas Board of Regents

Clay C. Blair III, Mission, chair
Stephen L. Clark, Wichita
Janice DeBauge, Emporia
William R. Docking, Arkansas City
Lew Ferguson, Topeka
Flora Jean Hampton, Dodge City
Fred A. Kerr, Pratt
Jack Wempe, Lyons
Deryl Wynn, Kansas City
Kim A. Wilcox, President and CEO, 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 120 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 arts 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 20; the average age of all undergraduate students is 25. Approximately half of the students at WSU attend full-time, while the other half attend part-time and take advantage of gaining work experience at such local companies as Boeing; 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 65 undergraduate degree programs in more than 200 areas of study in six undergraduate colleges: W. Frank Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions, and Fairmount College of Liberal Arts and Sciences. The Graduate School offers an extensive program including 44 master's degrees which offer study in more than 100 areas; a specialist in education degree; and doctoral degrees in applied mathematics; chemistry; communicative disorders and sciences; human factors and community/clinical psychology; educational administration; and aerospace, electrical, industrial, and mechanical engineering. A listing of the programs and degrees offered at Wichita State University is located on the inside back cover of the Catalog.

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

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

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

The 330-acre campus is modern and accessible and at the same time retains the flavor of the University's 107-year heritage. More than 60 pieces of sculpture by internationally known artists adorn the campus. Personajes Oiseaux, a colorful mural created by the great Spanish artist Joan Miró, is displayed on the walls 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 479 full-time faculty and 41 part-time faculty. Of the total, 73 percent have earned the highest degree in their field. Of all undergraduate credit hours, 62 percent are taught by full-time faculty. The average age of our faculty is 61 percent are males and 39 percent are females.

**History**

Wichita State began as Fairmount College, a Congregational institution, in 1895. The college also continued the college preparatory program of Fairmount Institute which began in 1892. In 1926, by a vote of the citizens of Wichita, the college became the Municipal University of Wichita, the first municipal university west of the Mississippi.

After 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 with and serve one another. The primary intent of the partnership between the association and the University is to ensure the continued excellence of Wichita State. But this serious mission certainly doesn't mean the association isn't serious about fun, too. Scores of exciting Shocker opportunities to participate in programs and events geared for fun prove this point every season.

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

For more information about the groups, events, projects and publications of the WSU Alumni Association, call 978-3290 or drop by the Woodman
Alumni Center, 4205 East 21st Street, just east of Eck Stadium/Tyler Field.

WSU Foundation
The WSU Foundation, the private fund-raising organization of the University, works to assure a University of excellence by identifying donors, cultivating and maintaining relationships, securing gifts, and managing resources to enable students and faculty to excel. Private contributions are necessary to support the programs and vision of the University beyond current funding from fees, tuition, and government monies.

Gifts of cash, securities, stock, real estate, and in-kind gifts are coordinated through the Foundation. Planned gifts, most commonly established through a donor’s estate or insurance policy set up to benefit the University, also are coordinated through the Foundation.

For more information, contact 978-3040 or www.foundation wichita.edu, where contributions can be made online.

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 follows.

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 2,550 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.

The process for open admission is simple. Submit an application for admission and the $25 application fee.

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

Admission requirements
• Completed their junior year of high school.
• Younger students will be considered on an exceptional basis.

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

International Student Admission
Wichita State University demonstrates its commitment to international education through its Office of International Education, which comprises three smaller units: the Office of International Admissions, the Intensive English Language Center, and the Office of International Programs. These units work together to assist international students with cultural acclimation, immigration counseling, English language instruction, and admission to the University.

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

English requirements. All international undergraduate students at Wichita State University are required to demonstrate proficiency in English before beginning full-time academic study. Students, however, are not required to submit proof of English proficiency, such as TOEFL results, with their application for admission. The University will consider all under-
graduate applicants for admission without proof of English proficiency. English proficiency may be demonstrated in the following ways:
1. Obtain a TOEFL score* of 530 or higher on the paper-based TOEFL.
2. Obtain a TOEFL score* of 197 or higher on the computer-based TOEFL.
3. Obtain an IELTS overall band score of 6.0 or higher.
4. Obtain a satisfactory score on the WSU English Proficiency Examination.
5. Successfully complete the highest level of WSU’s Intensive English Language Center.
6. Complete at least 30 transferable semester credit hours at a U.S. college or university.

Nondegree-bound Students: The Shocker Connection process, including orientation activities, is available and recommended, for nondegree-bound students.

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

Degree-bound Students: Because orientation and educational planning are not preludes to education, but rather 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 complete Shocker Connection: Advising and Enrollment. After new students have met with their academic advisor who helps them build their class schedule, consider career or life goals, register for classes and obtain their Shocker Card, they are expected to attend orientation. Information about advising, enrollment, and orientation is sent by the Office of Admissions-Orientation to all students who have been admitted to the University.

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) 978-3245
business.wsu.edu/

Education
College of Education
107 Corbin Education Center
(316) 978-3500
education.wsu.edu/

Engineering
College of Engineering
100 Wallace Hall
(316) 978-3400
www.engr.wsu.edu/

Degree-Bound—Exploratory or Nondegree-Bound
LAS Advising Center
115 Grace Wilkie Hall
(316) 978-3700
advising.wsu.edu

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

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

Health
College of Health Professions
402 Ahlberg Hall
(316) WSU-3600
chip.wichita.edu/

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

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

*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.

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

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

Graduate Students. For more information, graduate students should consult the Graduate Bulletin; the Web site (see below); or e-mail grad.sch@wichita.edu.

For more information, write:
Office of International Education
Wichita State University
Wichita, Kansas 67260-0122 USA
Telephone: (316) 978-3232
Fax: (316) 978-3777
E-mail: international@wichita.edu
Internet: www.wichita.edu/iec/

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

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

**Student Academic Success**

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

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

**Housing and Residence Life**

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

Because research nationwide has repeatedly shown that freshmen who live on campus are more successful academically than freshmen who do not live on campus, and because Wichita State University is committed to students and student success, WSU requires all incoming freshmen to live on campus in designated University housing. Freshmen live their first two semesters in our traditional residence hall, Fairmount Towers, unless they qualify to live in the Honors Hall in Brennan or are exempted from living on campus. All other students may choose their own accommodations; however, University housing is highly recommended.

Exceptions to the freshmen residency requirement are made for freshmen who are:
1. 21 years old or older
2. Married
3. Living with a parent, legal guardian, grandparent, uncle, or aunt in Sedgwick County
4. Living in official Greek housing

All freshmen who would like to be exempted from the residency requirement—including those who fall into one of the above categories—are required to complete and submit a *Freshman Exemption Form*. Exemptions will be reviewed by 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
webs.wichita.edu/housing

For housing and residence life fees, see page 13 of the Catalog.

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

**Registration**

Specific information regarding registration is given in the WSU Schedule of Courses published each semester and summer. Students may register in person, through Touch 'n Roll (phone) registration, or through web registration on the Internet at the designated times.

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

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

**Financial Information**

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

Kansas Residency requirements are described on page 35 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 financial need, but some scholarships are awarded without consideration of financial need.

**Scholarships**

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

**Federal Grants and Loans.** Students may receive assistance through several federal programs: Supplemental Educational Opportunity Grants, Pell Grants, Perkins Loans, Stafford Loans, Unsubsidized Stafford Loans, and Parental Loans for Undergraduate Students.

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

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

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

These rules assume that a student "earns" his/her aid based on the time the student remains enrolled. "Unearned" aid, other than Federal Work-Study, must be returned. Unearned aid is the amount of financial aid received that exceeds the amount the student has earned.

During the first 60% of the enrollment period, a student "earns" aid in direct proportion to the length of time he/she remains enrolled. A student who remains enrolled beyond the 60% point earns all aid for the period.

Financial Aid Repayments
A reduction in hours may require repayment of financial aid received. Students should discuss possible reductions in class hours with the WSU Office of Scholarship. Students will be advised about how the drop may impact their financial aid.

Comprehensive Fee Schedule
Fees given in this Catalog were proposed for 2002-2003 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>Fees</th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate tuition*</td>
<td>$78.22</td>
<td>$304.12</td>
</tr>
<tr>
<td>Per credit hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designated tuition for technology</td>
<td>1.09</td>
<td>1.09</td>
</tr>
<tr>
<td>Designated tuition for library</td>
<td>1.09</td>
<td>1.09</td>
</tr>
<tr>
<td>Total tuition per credit hour</td>
<td>$80.40</td>
<td>$306.30</td>
</tr>
<tr>
<td>Student fee—all students</td>
<td>$20.30</td>
<td>$20.30</td>
</tr>
<tr>
<td>Per credit hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University 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>$155.57</td>
<td>$355.57</td>
</tr>
<tr>
<td>Per credit hour</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Designated tuition
For technology                              1.09     | 1.09
For library                                  1.09     | 1.09
Total tuition per credit hour                 $117.75  | $357.75
*Tuition and fees are for the Fall and Spring semesters and Summer Session.

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 on the Wichita State University campus (City of Wichita and its contiguous industrial sites), supports the Educational Opportunity Fund ($0.40 per credit hour), student union, athletics, Heskett Center, bowling programs, Student Health Services, forensics, Student Government Association, student publications, and other student activities.

Workshop and Off-Campus Fees
On-campus credit workshops cost $80.40 tuition and $20.30 student fees, both per credit hour, and $10.50 overhead. In addition, there is a $17 registration fee per semester and a parking fee of $5.50 per credit hour. A specific course fee of $94 (undergraduate) includes no Area fee or $136 (graduate) includes $28 Area fee per credit hour is assessed for off-campus regular enrollment and continuing education credit courses or workshops. Noncredit workshop fees are based on costs.

Departmental or College Fees
Special departmental fees are charged as summarized below:

1. Students are required to reimburse the University for the cost of (a) excess breakage and wastage of materials and (b) materials used in excess of those required for completion of course work.
2. Dance program fee (DANCE 201, 210, 310, 410, 420, and 510) is $12 per semester and $50 per 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)—$50 per semester.
6. Kinesiology and Sport Studies (bowling), KSS 201B—$10 per course.
7. Kinesiology and Sport Studies (horseback riding)—$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)—$159 per student.
11. Kinesiology and Sport Studies (pool, billiards)—$25 per semester.
12. Kinesiology and Sport Studies (ice skating)—$80 per semester.

Special Fees, Deposits, and Waivers
Certain other fees are assessed as indicated below:

Math placement test fee—$4 per student.
Mathematics search fee—$4 per student.
Scholarship search fee—$4 per student.
Non-Wichita State student—$10 per person.
Undergraduate admission application fee—$25 per person.
Graduate admission application fee—$35 per person.
Media course fee—$12 per credit hour.
English composition placement fee—$4 per person.

Free Music Courses
During the academic school year, students enrolled in the following ensembles will not be charged tuition and fees:

Wind Ensemble
MUS P 210B, 410B, and 710B
Orchestra
MUS P 211A, 411A, and 711A
Band (Symphony)
MUS P 211B, 411B, 711B, and 711C
Band (Concert)
MUS P 212B, 412B, and 712B
University Singers
MUS P 211F, 411F, and 711F
Jazz Arts Ensemble
MUS P 211T, 411T, 412T, 412T, 711T, and 712T
A Cappella Choir
*MUS P 212F, 412F, and 712F
Concert Chorale
MUS P 213F, 413F, and 713F

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
Nursing entrance test fee—$14 per person.
Application fees:
Dental hygiene—$15 per person.
Physical therapist assistant—$20 per person.
Physical therapy—$20 per person.
Physician assistant—$20 per person.
Acceptance fees:
Dental hygiene—$100 per person.
Medical technology—$100 per person.
Physical therapist assistant—$100 per person.
Physical therapy—$100 per person.
Physician assistant—$100 per person.
18. W. Frank Barton School of Business
Executive MBA (includes tuition, textbooks, materials, and administrative fees) $21,000 per person.
Installation payment administration fee $30/person
Diploma replacement fee $20/copy
International undergraduate application fee $50/person
International undergraduate reapplication fee $25/person
International graduate student application fee $50/person
Transcript/certification fee (non-enrolled persons) $5/copy
Copies of public documents
1. Public records in print:
   a. Access: staff time necessary to obtain records; no charge for requesting less than 30 minutes of staff time to obtain $20/hour
   b. Copying: $0.10/page
2. Public records kept in computer files:
   a. Access to public record(s) stored on computer files that can be accomplished using retrieval software already available and without software modification(s): $8/credit hour
   b. Access to public record(s) stored on computer files that requires custom programming time to retrieve and process: $25 semester
   c. Copying: $0.10/page
   d. Return of check: $30/check
   e. Testing and credit by examination fee:
      - Experiential learning assessment fee $25/person
      - Departmental examination fee $8/credit hour
      - Late registration fee (after end of regular registration) $5/credit hour
   f. Library fines and lost materials: $0.05 per credit hour

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

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

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

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

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

Housing and Residence Life Fees
Housing rates at Wichita State University vary with the choice of facility and meal plan. Housing costs for Fairmount Towers, Brennan Hall, and Wheatshocker Apartments are listed below. The listed rates do not include a $35 nonrefundable application fee for noncontinuous contractors. Payments must be made 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 payment is not received by the fifth day after the due date. Rates include all utilities (water, gas, electricity), local telephone service, basic cable TV service, ethernet connection, and an activity fee. All facilities are air conditioned.

Students who cancel their contracts before July 1 (December 1 for spring semester only contracts) receive a 100% refund of their prepayment. Students who cancel their contracts between July 1 and July 31 (December 1 and December 31 for spring semester only contracts) receive a 75% refund of their prepayment. Students who cancel their contracts on or after August 1 (January 1 for spring semester only contracts) forfeit their prepayment/deposit. Students who cancel their contracts after occupancy are assessed a cancellation fee of $150 plus 50% of the remaining balance of the contract. The cancellation fee is subject to appeal.

Rates are for fiscal year 2003. 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 the 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>$4,420</td>
<td>$4,420</td>
</tr>
<tr>
<td>15-max meal plan</td>
<td>$4,340</td>
<td>$4,340</td>
</tr>
<tr>
<td>10-max meal plan</td>
<td>$4,230</td>
<td>$4,230</td>
</tr>
<tr>
<td>19-basis meal plan</td>
<td>$4,320</td>
<td>$4,320</td>
</tr>
<tr>
<td>15-basis meal plan</td>
<td>$4,240</td>
<td>$4,240</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 in Fairmount Towers. An Honors specialty housing floor is offered in Fairmount Towers. A quiet floor is offered in Fairmount Towers. Fairmount Towers South is a substance free (no alcohol, smoking, tobacco products, or other substances). Fairmount Towers is used for Summer School. Housing and camp/conference. Max meal plans include $100 in Shocker Dollars for the year. $50 per semester. Shocker Dollars continue after the semester/session for which they were purchased.
**Brennan Hall**

<table>
<thead>
<tr>
<th>Meal Plan</th>
<th>Double (S)</th>
<th>Single (S)</th>
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</thead>
<tbody>
<tr>
<td>15-max meal plan, S</td>
<td>$4,820</td>
<td>$5,820</td>
</tr>
<tr>
<td>15-max meal plan, L</td>
<td>$4,200</td>
<td>$5,200</td>
</tr>
<tr>
<td>15-max meal plan, S</td>
<td>$4,120</td>
<td>$5,120</td>
</tr>
<tr>
<td>15-max meal plan, L</td>
<td>$3,920</td>
<td>$4,920</td>
</tr>
<tr>
<td>10-max meal plan, S</td>
<td>$3,810</td>
<td>$4,810</td>
</tr>
<tr>
<td>10-max meal plan, L</td>
<td>$3,730</td>
<td>$4,730</td>
</tr>
<tr>
<td>10-max meal plan, S</td>
<td>$3,510</td>
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<tr>
<td>5-basic meal plan, S</td>
<td>$3,900</td>
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<tr>
<td>5-basic meal plan, L</td>
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<tr>
<td>5-basic meal plan, S</td>
<td>$3,830</td>
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</table>

**Shocker Dollar meal plan, S**

<table>
<thead>
<tr>
<th>Meal Plan</th>
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<tbody>
<tr>
<td>$2,540</td>
<td>$3,540</td>
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</tr>
<tr>
<td>$2,740</td>
<td>$3,740</td>
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</table>

*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 layouts on the Wheatshocker Apartments brochure. Studio apartments are reserved for married couples or families. Wheatshocker residents are not required to have a meal plan, but may choose any of the plans offered to Fairmount Towers and Brennan Hall residents. Furnished 1/4 units (layout 3) are $20 extra per month; furnished 1/2 units are $40 extra per month.

**Summer Session Housing**

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

**Fairmount Towers**

<table>
<thead>
<tr>
<th>Type</th>
<th>Double (S)</th>
<th>Single (S)</th>
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</thead>
<tbody>
<tr>
<td>Presession (two weeks)</td>
<td>$289</td>
<td>$328</td>
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<tr>
<td>Four weeks</td>
<td>$511</td>
<td>$592</td>
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<tr>
<td>Eight weeks</td>
<td>$990</td>
<td>$1,155</td>
</tr>
</tbody>
</table>

*A $50 deposit is due upon signing the contract. The deposit is part of the contract amount; it guarantees the reservation of the room and is included in the rates.

**Period of Payment**

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

**Assessment and Collection**

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

**Unpaid Fees**

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

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

**Drop/Add Fee Policy**

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

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

a. The drop and add occurs in one transaction.

b. There is an equal number of credit hours added as being dropped.

**Refund Policy—Complete and Partial Withdrawal**

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

Students are eligible for refunds as published in the Schedule of Courses each semester.

In short-term classes, students will have the first class period to determine if the class is suited for them. Students who register late or fail to attend the first class period in short-term classes will not be eligible for 100% refunds according to the policy. If a short-term class begins on Friday night, Saturday, or Sunday, students will have until the 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 Jar-dine Hall or the Tuition Refund Board of Appeals is authorized to determine the amount of tuition refund a student will receive.

Students who believe their residency status was incorrectly assessed and a representative of the Vice President for Student Affairs constitute the Board of Appeals for students who believe their residency status has been incorrectly assessed. The decision of this committee is final. Forms to initiate this process are available in the Registrar’s Office. The petition must be filed with appropriate documentation in the Registrar’s Office within the semester the course was taken.

Students who may have received approval from the University for the first time and receiving student financial aid (grants, loans, or work assistance) under Title IV or whose parents received 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.

**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.

**Tuition Waiver for Kansas Teachers of the Year**

Kansas Teacher of the Year recipients are allowed to enroll tuition-free in up to 9 credit hours annually provided they are actively pursuing a teaching career in Kansas. To be eligible, a person must be (1) a past or present recipient of the Kansas Teacher of the Year...
General Education Program seeks to provide each student with a body of knowledge that is both a broad foundation for his or her major field of study, and also the beginning of what is necessary to become a genuinely educated person. The General Education Program provides the opportunity for all students to grow in their knowledge and appreciation of the rich variety of human achievements in the arts, humanities, and sciences.

Goals of General Education

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

General Education Outcomes

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

Significant development of oral and written communication, mathematical, and library research skills is expected of all Wichita State University graduates. Students transferring to Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities are considered to have met the requirements of Wichita State University General Education Program as determined by transcript evaluation. This refers only to students with previous college credit and is not applicable to entering freshmen.

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

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

Introducory Courses

An introductory course meets general education objectives and serves as an introduction to the discipline.

Fine Arts Courses

ART H 121, Survey of Western Art: Ancient
ART H 122, Survey of Western Art: Renaissance and Baroque

(Continued on page 17)
## General Education Program Requirements • Worksheet

### Basic Skills*
Complete each with grade of C or higher

<table>
<thead>
<tr>
<th>ENGL 100 or 101</th>
<th>ENGL 102</th>
<th>COMM 111</th>
<th>MATH 111 or 131**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introductory Course</strong></td>
<td><strong>Introductory Course</strong></td>
<td><strong>Further Study/I&amp;P+ Course</strong></td>
<td></td>
</tr>
<tr>
<td>Fine Arts</td>
<td>Humanities</td>
<td>Fine Arts (1)</td>
<td></td>
</tr>
<tr>
<td>Art History</td>
<td>Communication***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dance (History)</td>
<td>English***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Musicology-Composition</td>
<td>History</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theatre</td>
<td>Linguistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modern and Classical Languages and Literatures</td>
<td>Philosophy</td>
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<tr>
<td></td>
<td>Religion</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Women's Studies</td>
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<td></td>
</tr>
</tbody>
</table>

### Social and Behavioral Sciences

<table>
<thead>
<tr>
<th>Anthropology</th>
<th>Geography</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal Justice</td>
<td>Political Science</td>
</tr>
<tr>
<td>Economics</td>
<td>Psychology</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>Sociology</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td></td>
</tr>
</tbody>
</table>

### Mathematics and Natural Sciences

| One class must be from biology, chemistry, geology, or physics |
|------------------|------------------|
| Biology | Geology |
| Biological | Mathematics/Statistics*** |
| Anthropology | Physics |
| Chemistry | Public Health Sciences |
| Computer Science | |

---

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

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

*** Excluding Basic Skills.

* Students must take one Issues and Perspectives (I&P) course; no more than two I&P courses will count for general education credit.

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

**Education** requires PSY 111. All teachers who entered WSU as freshmen since Fall 1995 are required to take STAT 170. Educational Statistics, or a higher level math course. MATH 111 is a prerequisite for STAT 370.

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

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

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

**Liberal Arts and Sciences** requires the following:

- English or foreign language literature (Humanities)
- HIST 131, 132 (Humanities) or POL S 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.
PHYS 213, General College Physics I

student has completed an introductory course in

CHEM 111, General Chemistry

THEA 221, Oral Interpretation

PHYS 315, General College Physics I (without calculus)

ENG 324, Intermediate Latin (P)

PHYS 313, University Physics I (with calculus)

PHYS 350, Modern American Writers

ENG 361, Modern British Writers I

PHIL 313, Analytic Philosophy

ENG 359, American Public Address

PHIL 311, Philosophy of Law

ENG 363, Historical and Theoretical Issues in Communication (P)

ENG 368, Philosophy of Science

ENG 362, American Writers of the 19th Century

ENG 366, Medieval History I

ENG 365, African-American Literature

ENG 369, Medieval History II

ENGL 315, Introduction to English Linguistics

ENG 370, The Nature of Drama

ENG 375, The Italian Renaissance

ENG 376, Modern Italian

ENG 380, The Bible as Literature

ENG 385, Shakespeare's Plays

ENG 390, Modern British Literature

ENG 395, Modern British Writers II

ENG 396, American Writers of the 19th Century

ENG 397, American Writers of the 19th Century

ENG 398, American Writers of the 19th Century

ENG 399, American Writers of the 19th Century

ENG 400, The Literary Imagination: The Tragic, Comic, Heroic, Satiric Modes

ENG 405, The History of American Business

ENG 410, The History of Modern France

ENG 411, The History of Mexico

ENG 412, The History of the Old South

ENG 413, The History of Kansas

ENG 414, Survey of American Indian History

ENG 415, The American West in the 20th Century

ENG 416, Modern France

ENG 417, History of Mexico

ENG 418, The Ancient Near East

ENG 419, Greek History I

ENG 420, Greek History II

ENG 421, Roman History I

ENG 422, Roman History II

ENG 423, Medieval History I

ENG 424, Medieval History II

ENG 425, The Reformation

ENG 426, Europe 1815-1870

ENG 427, Europe 1870-1945

ENG 428, Europe 1945-Present

ENG 429, History of Early Russia

ENG 430, History of Imperial Russia

ENG 431, History of the Soviet Union

ENG 432, Former Soviet Union

ENG 433, European Diplomatic History

PHL 401, Language and Philosophy

PHIL 402, 19th Century Philosophy

PHIL 403, Analytic Philosophy

PHIL 404, Philosophy of Economics

PHIL 405, Philosophy of Law

PHIL 406, Political Philosophy

PHIL 407, Late Modern Philosophy

PHIL 408, Philosophy of Science

PHIL 409, Early Modern Philosophy

PHIL 410, Philosophy of Health Care

PHIL 411, Ancient Greek Philosophy

PHIL 412, Philosophy of Feminism

PHIL 413, Philosophy of Religion

PHIL 414, Ethics and Computers

PHIL 415, Ethical Theory (P)

PHIL 416, 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 362, Women in Society: Cultural Images

WOM S 363, Women's Global Issues

WOM S 364, Women in Early America, 1600-1830

WOM S 365, Women and Reform in America, 1830 to present

WOM S 366, Sociology of Gender Roles (P)
<table>
<thead>
<tr>
<th>Social and Behavioral Sciences Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR 200, Intercultural Relations</td>
</tr>
<tr>
<td>ANTHR 303, World Cultures (P)</td>
</tr>
<tr>
<td>ANTHR 305, World Archaeology</td>
</tr>
<tr>
<td>ANTHR 307, Peoples of Africa</td>
</tr>
<tr>
<td>ANTHR 312, Asia Pacific Cultures</td>
</tr>
<tr>
<td>ANTHR 313, Archaeology of East Asia</td>
</tr>
<tr>
<td>ANTHR 318, Psychological Anthropology</td>
</tr>
<tr>
<td>ANTHR 327, Magic, Witchcraft, and Religion</td>
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<tr>
<td>ANTHR 335, Archaeology of North America</td>
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<tr>
<td>ANTHR 344, Ecological Anthropology</td>
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<tr>
<td>ANTHR 356, Human Variability and Adaptation (P)</td>
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<tr>
<td>ANTHR 361, Law, Politics, and Society</td>
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<tr>
<td>ANTHR 388, Cognitive Anthropology</td>
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<tr>
<td>ANTHR 506, Peoples of the Pacific</td>
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<tr>
<td>ANTHR 508, Ancient Civilizations of the Americas (P)</td>
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<tr>
<td>ANTHR 511, The Indians of North America (P)</td>
</tr>
<tr>
<td>ANTHR 514, Anthropology of Aging (P)</td>
</tr>
<tr>
<td>ANTHR 515, China</td>
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<tr>
<td>ANTHR 516, Japan: People and Culture</td>
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<tr>
<td>ANTHR 519, Applying Anthropology (P)</td>
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<td>ANTHR 522, Art and Culture (P)</td>
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<tr>
<td>ANTHR 528, Medical Anthropology</td>
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<tr>
<td>ANTHR 542, Women in Other Cultures</td>
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<td>ANTHR 611, Southwestern Archaeology</td>
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<td>ANTHR 613, Archaeology of the Great Plains (P)</td>
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<td>CJ 351, The Victim in Criminal Justice</td>
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<td>CJ 355, Special Populations in the Criminal Justice System</td>
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<td>CJ 394, Courts and Judicial Systems</td>
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<tr>
<td>CJ 453, Crime Prevention</td>
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<tr>
<td>CJ 593, Criminal Causation and Criminal Justice Policy</td>
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<td>CJ 652, Juvenile Justice and Social Policy</td>
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<td>ECON 202, Principles of Microeconomics</td>
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<td>ETH S 240, Ethnic Women in America</td>
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<td>ETH S 251, Special Populations in the Criminal Justice System</td>
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<td>ETH S 260, Prominent Ethnic People in the Making of America</td>
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<td>ETH S 330, Ethnic America, ca 1500-1924</td>
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<td>ETH S 331, The Black Family</td>
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<td>ETH S 332, The Native American</td>
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<td>ETH S 333, Issues in the Chicano Community</td>
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<td>ETH S 334, Ethnic America in the 20th Century</td>
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<td>ETH S 360, Dealing with Diversity</td>
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<td>ETH S 390, Asian-American Contemporary Issues</td>
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<td>ETH S 410, The African American Male</td>
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<td>ETH S 512, Aging and Ethnicity</td>
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<td>ETH S 532, Women in Ethnic America</td>
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<td>GEOG 530, Geography of Latin America</td>
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<td>GEOG 542, Geography of Europe</td>
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<td>GEOG 235, Meteorology (P)</td>
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<td>GERON 512, Aging and Ethnicity</td>
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<td>POL S 220, Introduction to International Relations</td>
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<td>POL S 315, The Presidency</td>
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<td>POL S 317, Urban Politics</td>
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<td>POL S 320, Politics of Developing Areas</td>
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<td>POL S 336, International Organizations</td>
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<td>POL S 337, International Force and Intervention</td>
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<td>POL S 345, Classical Medieval Political Theory</td>
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<td>POL S 358, American Political Thought</td>
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<td>POL S 390, Special Topics in Political Science</td>
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<td>POL S 444, Modern Political Theory</td>
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<td>POL S 523, Government and Politics of Latin America</td>
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<td>POL S 524, Politics of Modern China</td>
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<td>POL S 533, Police Development in Foreign Relations</td>
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<td>POL S 534, Problems in Foreign Policy</td>
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<td>POL S 547, Contemporary Political Theory</td>
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<td>POL S 551, Public Law</td>
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<td>POL S 552, Civil Liberties</td>
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<td>PSY 302, Psychology of Learning (P)</td>
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<td>PSY 316, Industrial Psychology (P)</td>
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<td>PSY 322, Cognitive Psychology (P)</td>
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<td>PSY 324, Psychology of Personality (P)</td>
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<td>PSY 332, Psychology of Perception (P)</td>
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<td>PSY 334, Developmental Psychology (P)</td>
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<td>PSY 336, Alcohol Use and Abuse (P)</td>
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<td>PSY 342, Psychology of Motivation (P)</td>
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<td>PSY 402, Psychology of Consciousness (P)</td>
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<td>PSY 404, Psychology of Aging (P)</td>
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<td>PSY 406, Introduction to Community Psychology (P)</td>
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<td>PSY 414, Child Psychology (P)</td>
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<td>PSY 516, Drugs and Human Behavior (P)</td>
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<td>PSY 532, Psycholinguistics (P)</td>
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<td>SOC 301, Computers and Society</td>
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<td>SOC 315, Marriage and Families</td>
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<td>SOC 520, Contemporary Social Problems (P)</td>
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<td>SOC 522, Deviant Behavior (P)</td>
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<td>SOC 325, Parenting</td>
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<td>SOC 330, Social Inequality (P)</td>
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<td>SOC 334, Sociology of the Community (P)</td>
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<td>SOC 338, Health and Lifestyle (P)</td>
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<td>SOC 350, Social Interaction (P)</td>
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<td>SOC 513, Sociology of Aging (P)</td>
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<td>SOC 515, Sociology of the Family (P)</td>
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<td>SOC 516, Sociology of Gender Roles (P)</td>
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<td>SOC 534, Urban Sociology (P)</td>
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<td>SOC 539, Juvenile Delinquency (P)</td>
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<td>Mathematics and Natural Sciences Courses</td>
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<td>BIOL 509, Foundations of Human Heredity</td>
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<td>CHEM 112, General and Inorganic Chemistry (P)</td>
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<td>CHEM 514, Inorganic Chemistry (P)</td>
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<td>CHEM 523, Analytical Chemistry (P)</td>
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<td>CHEM 531, Organic Chemistry (P)</td>
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<td>CHEM 533, Elementary Organic Chemistry (P)</td>
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<td>CHEM 545, Physical Chemistry (P)</td>
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<td>CHEM 601, Introductory Biochemistry (P)</td>
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<td>CS 300, Data Structures and Algorithms I</td>
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<td>GEOG 235, Meteorology (P)</td>
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<td>GEOG 302, Earth and Space Sciences</td>
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<td>GEOG 310, Oceanography</td>
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<td>GEOG 312, Historical Geology (P)</td>
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<td>GEOG 541, Plate Tectonics (P)</td>
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<td>GEOG 560, Geomorphology and Land Use (P)</td>
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<td>POL S 232, Basic Ideas in Political Theory</td>
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<td>GEOL 570, Paleontology (P)</td>
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<td>GEOL 574, Special Studies in Paleontology (P)</td>
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<td>MATH 243, Calculus II (P)</td>
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<td>PHYS 214, General College Physics II (P)</td>
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<td>PHYS 314, University Physics II (P)</td>
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<td>PHYS 395, Solar System Astronomy</td>
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<td>STAT 460, Elementary Probability and Statistics (P)</td>
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<td>STAT 471, Probabilistic Models and Statistical Methods (P)</td>
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<td>STAT 571, Statistical Methods I (P)</td>
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<td>STAT 572, Statistical Methods II (P)</td>
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<td>STAT 574, Elementary Survey Sampling (P)</td>
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<td>STAT 576, Applied Nonparametric Statistical Methods (P)</td>
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**Issues and Perspectives Courses**

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

**Fine Arts/Humanities Courses**

ART E 303, Stimulating Creative Behavior
ART H 326, Architecture
ENGL 343, Great Plains Literature
GERM 341, Germany in the European Context
HIST 308, A History of Lost Civilizations
HIST 330, The-Americans, Conflict and Consensus in the Development of American Society and Culture
HNRS 204, Seminar III: Fine Arts
HNRS 205, Seminar III: Humanities
HNRS 420, Seminar in Humanities
HNRS 450, Seminar in Fine Arts
MUS C 310, Interrelated Arts (P)
PHIL 300, Science and the Modern World
PHIL 302, Values and the Modern World
THEA 365, Theatre as a Mirror of Today's America
WOM S 541, Women, Children, and Poverty (P)
WOM S 586, Gender, Race, and Knowledge

**Social and Behavioral Sciences Courses**

ECON 250, Entrepreneurship and Personal Enterprise
ECON 280, Economics of Social Issues
HNRS 206, Seminar III: Social and Behavioral Sciences
HNRS 430, Seminar in Social and Behavioral Sciences
IB 333, International Business
LAS-I 222, East Asia
LAS-I 300, Global Issues
PA 326, Emerging Health Care Issues of the 21st Century
PADM 400, Issues and Perspectives on the City
PHS 308, Leadership in Self and Society
PHS 310, Understanding the U.S. Health Care System
POL S 232, Basic Ideas in Political Theory
The Emory Lindquist Honors Program provides an opportunity for students to engage in small classes, experienced, highly committed faculty, 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 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 3.500 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 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:

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

**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 study or issues and perspectives courses in the University’s General Education Program, courses in the student’s major, elective courses, or a combination of these.

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

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

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

Lower-Division Courses

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

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

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

> HNRS 107. Seminar I: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education introductory course. Topics vary. Prerequisites: HNRS 104 and 6 additional credit hours, or permission of honors director.

> HNRS 150. Seminar II: Fine Arts. (3-4). General education introductory course. Topics vary. Prerequisite: HNRS 104 and 6 additional credit hours, or permission of honors director.

> HNRS 151. Seminar II: Humanities. (3-4). General education introductory course. Topics vary. Prerequisites: HNRS 104 and 6 additional credit hours, or permission of honors director.

> HNRS 152. Seminar II: Social and Behavioral Sciences. (3-4). General education introductory course. Topics vary. Prerequisite: HNRS 104 and 6 additional credit hours, or permission of honors director.

> HNRS 153. Seminar II: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education introductory course. Topics vary. Prerequisites: HNRS 104 and 6 additional credit hours, or permission of honors director.

Upper-Division Courses

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

> HNRS 205. Seminar III: Humanities. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 104 and 150 and 12 additional credit hours, or permission of honors director.

> HNRS 206. Seminar III: Social and Behavioral Sciences. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 104 and 150 and 12 additional credit hours, or permission of honors director.

> HNRS 207. Seminar III: Mathematics and Natural Sciences. (3-5). 1-3R; 1-2L. General education issues and perspectives course. Topics vary. Prerequisites: HNRS 104 and 150 and 12 additional credit hours, or permission of honors director.

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

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

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

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

> HNRS 430. Seminar in Social and Behavioral Sciences. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 205 or permission of honors director.

> HNRS 440. Seminar in Natural Sciences and Mathematics. (3-5). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 205 or permission of honors director.

> HNRS 450. Seminar in Fine Arts. (3-4). General education issues and perspectives course. Topics vary. Prerequisites: HNRS 205 or permission of honors director.

Honors Mentor Program

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

Cooperative Education

Cooperative education is an academic program for undergraduate and graduate students who wish to combine classroom studies with academically related paid employment. Cooperative education places students both locally and nationally.

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

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

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

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

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

Requirements for Co-op participation vary within the different colleges and departments. Requirements for admission to the Co-op program generally include completion of 24 credit hours and satisfactory academic standing. Interested students should come to the Cooperative Education and Work-Based Learning Office, 223 Grace Wilkie Hall, or call (316) 978-3688. Students are required to complete an application for registration in the office and an online orientation. Students also are expected to attend a professional practice workshop prior to meeting with the appropriate college coordinator. For additional information, check our Web site: www wichita edu/coop.

Internships

The Office of Cooperative Education and Work-Based Learning is the contact place for students interested in obtaining an internship in their area of study. The office offers a large variety of internships across the country in business, government, industry, and social agencies. Internships generally are for one semester and may be paid or unpaid.

Students hired in an internship position are required to enroll in specially designated internship courses and work with a faculty advisor from within the appropriate departments. The internship 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 internships as determined by the student’s faculty advisor. Students are expected to meet project requirements assigned by their advisor. Students accepting a local internship generally are required to
Exchange and Study Abroad Programs

National Student Exchange

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

The program is open to undergraduates, 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 4 hours of credit. For more information, contact the Office of International Programs, 303 Grace Wilkie Hall.

Exchange Program with the University of Orléans

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

Summer Program in Strasbourg, France

Students of French can improve their fluency and broaden their understanding of French culture in the five-week summer program in Strasbourg, France. Students with a minimum of one year of university French or the equivalent are eligible to participate. Students live in university housing and attend intermediate through graduate level courses in French language, culture, and literature. Up to 6 hours of credit may be transferred to WSU. For more information, contact the Department of Modern and Classical Languages and Literatures, 305 Jardine Hall.

Spanish Program in Puebla, Mexico

The Department of Modern and Classical Languages and Literatures offers a program designed to broaden students' comprehension of the language, customs, history, and culture of Mexico.

Students who complete the six-week course may earn 6 hours of undergraduate or graduate credit. For more information, contact the Department of Modern and Classical Languages and Literatures, 305 Jardine Hall.

Midwest Student Exchange Program (MSEP)

This program enables residents of Michigan, Minnesota, Missouri, Nebraska, and North Dakota to enroll at a reduced rate of tuition in designated programs at Wichita State. Tuition for MSEP students is equal to 150 percent of regular in-state tuition, which is substantially less than students would pay as non-residents. 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 Martha.Shawver@wichita.edu.

Field Studies and Workshops

Workshops

Workshops devoted to current topics are offered throughout the summer. Typical courses include workshops for teachers in the areas of business, education, and fine arts; courses in current health issues; an entrepreneurship workshop for people considering creating a small business; and field study in topics such as the agricultural ecology of the Rocky Mountains, the Osage culture in Oklahoma, or a wilderness experience in a national park. A list of the workshops being offered each summer is included in the Summer Schedule of Courses. Special fees are charged for workshops. (See the Financial Information section of the Catalog.)

High School Students

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

Field Geology

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

Applicants should have completed 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, 114 Geology Building.

Academic Resources

Libraries

The University's libraries consist of Ablah Library, the main library, and chemistry and music branch libraries. Through a wide range of materials, facilities, and services, the University libraries support teaching and research at WSU. The collections include more than three million books and periodicals, microforms, government publications, corporate annual reports, scores, videotapes, audio recordings, and more than 90 electronic databases. In 1991, Ablah Library became an official United States Patent and Trademark Depository Library, the only such depository in Kansas.

Ablah Library includes an open stack arrangement, seating for more than 800 people, group and faculty study carrels, electronic carrels containing listening and viewing equipment, microform reading and printing equipment, and photocopies, and typewriters. Computer terminals and printers are provided to access the library's online catalog and electronic databases. A 24-hour study room with a vending area and work stations providing access to the Internet and all library databases as well as word processing programs and a spreadsheet program is also maintained for student use.
The University’s libraries offer students a variety of services, including convenient hours as well as dial-in access to the online catalog and most of the library’s electronic resources. Reference librarians are available to help students locate information and use the computerized systems. These librarians also perform literature searches in numerous remote computerized databases. When materials are not owned, interlibrary loan services will locate and borrow materials from other institutions.

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

Computing Center
The University Computing and Telecommunications Services (UCATS) organization provides the informational backbone for campus communications. In addition to the network infrastructure, UCATS supports the programs and technology for the administration of the University. Responsibilities include phone services, connections to the network, application support and training, programming support, desktop diagnosis and repair, network administration, and operations.

The WSU High Performance Computing Center (HPCC) provides supercomputer research facilities to faculty, staff, and students. See www.wichita.edu/HPCC. Internet2 is a research only high speed network linking WSU to about 200 other universities to develop next generation Internet applications and capabilities. See www.wichita.edu/Internet2.

You will find more details about these and other services provided by UCATS in our Web site, www.wichita.edu/ucats.

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 Hall 120 (24-hour lab)
Open continuously, Monday, 7 a.m.-Friday, 8 p.m.
Saturday, 10 a.m.-8 p.m.
Sunday, 1 p.m.-8 p.m.

Jabara Hall 122 (8 a.m.-10 p.m.)
Open 8 a.m.-10 p.m., Monday-Friday.
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, ucats.wichita.edu, 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 e-mail server, @wichita.edu. This electronic mailbox will allow you to send and receive communication at your convenience. The use of e-mail is provided to you as a supplementary source of communication for your academic pursuits. Application, instructions, and other information about your e-mail account are available at the online WSU E-mail Center: www.wichita.edu/email.

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

The MRC operates the University’s cable television station, WSU-TV, and programs three other channels: channel 22, the College Television Network (CTN); channel 17, the International Channel; and channel 20, the Campus Information Channel (CIC).

The MRC oversees the radio station licensed to the University, KMUW 89.1 FM. A public radio station, KMUW also operates the Wichita Radio Reading Service.

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

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

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

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

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

Math Lab
The Math Lab, 371 Jabara Hall, offers free mathematics tutoring for WSU students enrolled in the following courses: 007, Arithmetic; 011, Beginning Algebra; 012, Intermediate Algebra; 111, College Algebra; 112, Precalculus Mathematics; 123, College Trigonometry; 144, Business Calculus; 242, Calculus I; and 370, Elementary Statistics. Students may spread out their books and study math knowing that help is available when needed. Numerous mathematics faculty members volunteer time in the lab and it is staffed by graduate students and also undergraduate students who are studying mathematics and/or mathematics-related disciplines. No appointment is necessary; students are encouraged to visit the lab during its hours of operation. To determine the hours for the current semester, refer to the schedule posted outside the lab or check the math department’s Web site, www.math.wichita.edu.

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

* The Writing Center is open 9 a.m.-2 p.m. Monday through Friday and 5-7 p.m. Tuesday through Thursday. It opens the first day of classes and closes at the end of the last day of classes each semester. It is not open on Study Day or during finals.

Student Services
The Division of Student Affairs is responsible for enrollment services, student life and development, and student services. The Student Handbook, available to every student, describes relevant policies and procedures and the Student Code of Conduct. Students may receive copies of the code or bring their concerns about student life to 105 Grace Wilkie Hall. This office oversees many of the student services described in the following sections.
Career Services
The Career Services office provides services to students, alumni/alumnae, and community members seeking career advice or employment-related assistance.

Individual career counseling is available to assist students, alumni/alumnae, and community members with planning and decision making. Assessment instruments, including the Strong Interest Inventory, are offered for self-assessment. Workshops, presentations, and classroom instruction are offered to enable people to learn about the responsibilities of various careers, 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 Exploration and Resource Center (CERC).

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 online positions listings.

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

Contact Career Services in 203 Grace Wilkie Hall, at (316) 978-3310, or online at: www.wsucareer.wsu.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, or online at studentaffairs.wichita.edu/cdc.html.

Counseling and Testing
The Counseling and Testing Center provides psychological services and counseling for personal and career/life planning issues. Professional counseling is available on a cost-shared basis to all members of the University community—students, their families, faculty, and staff. Individual, couple, family, and group counseling are aspects of the professional counseling services. Testing services also are part of the center's function. The credit by exam 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 Wilkie Hall, at (316) 978-3440, or online at webs.wichita.edu/cnsptst.

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, voice/TTY
(316) 978-3114, fax
webs.wichita.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 9.) Orientation programs specially designed for new international students prepare 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.

For more information, contact International Programs in 003 Fiske Hall, (316) 978-3730.

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

The RSC has several dining areas to provide a variety of atmospheres and menu as well as a catering department to meet further needs.

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

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

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

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

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

The RSC is supported through revenues generated from within the operation and student fees.

Sports and Recreation
Numerous sports and recreation programs exist at the University. Wichita State is a member of the Missouri Valley Conference; WSU men compete in basketball, baseball, track, tennis, and golf, 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, football, racquetball, men's and women's soccer, men's volleyball, wheelchair athletics, ice hockey, and skiing. Intramural sports include flag football,
basketball, table tennis, badminton, 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 Shockers 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 10,529-seat Henry Levitt Arena which is used for intercollegiate basketball games, volleyball matches, and major entertainment events; Cessna Stadium, a 31,500-seat football and track and field facility which hosts high school and community events; the 7,808 seat Eck Stadium-Tyler Field, home to the Shockers baseball program, which recently underwent a $7.8 million renovation and ranks among the finest college baseball facilities in the country; the Sheldon Coleman Tennis Complex with eight lighted courts, home to WSU's men's and women's intercollegiate tennis programs; and the new 1,000-seat C. Howard Williams Softball Facility for intercollegiate softball for women.

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

**Student Development and Multicultural Affairs**

The administrative office of Student Development and Multicultural Affairs can be reached at (316) 978-3078. The Center for Student Leadership is in 008 Rhatigan Student Center, (316) 978-3022, and the Multicultural Resource Center is in 158 Grace Willkie East (Annex). (316) 978-3034. Visit us online at www.webs.wichita.edu/sdma.

The mission of the Office of Student Development and Multicultural Affairs is to foster an environment that promotes multiculturalism while building community and to coordinate services and programs that allow students and student organizations to participate in leadership, awareness, involvement, and volunteerism opportunities.

The Office of Student Development and Multicultural Affairs has five components:

- **Greek affairs**—formal recruitment, fall and spring all-greek assemblies, greek leadership retreat, and greek convention;
- **Multicultural affairs**—minority student mentoring program, cultural theme-month programming, Jumbie: A Night of Creativity, students of color graduation ceremony;
- **Student organizations and leadership**—student organization registration and support, leadership institutes, student awards and recognition day;
- **Volunteering**—alternative spring break, Building Up Dreams in Urban Youth (BUDUY) mentoring program, Shockers United; and
- **Women's programming and resources**—women's history month events, women's Brown Bag Lecture and Film Series.

**Student Government Association**

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

The legislative, executive, and judicial responsibilities of SGA are vested in the Student Senate, the Executive Officers and Cabinet, and the University Supreme Court. The senate appoints students to many University and Faculty Senate committees, recognizes and allocates funds more than 350 student organizations, and allocates approximately $6 million annually to student fees to campus agencies ranging from the Heskett Center, Rhatigan Student Center, and Student Health Services. SGA also provides opportunities to fund your education through the Rhatigan Leadership Scholarship and provides financial assistance for child care through the Child Care Assistance Program. The cabinet executes the decisions of the senate and the officers. The supreme court issues opinions on constitutional questions and also serves as an appellate court for traffic and academic appeals. Each of these entities also participates in the determination of University policy.

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

For more information, contact the Student Government Association, Room 202, Rhatigan Student Center, Wichita State University, (316) 978-3480.

**Student Health Services**

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

For more information, call (316) 978-3620, or see our Web site, webs.wichita.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 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, Talent Search, McNair Scholars Program, and Upward Bound's Wichita Prep and Regional Math-Science Center/The Galaxy Experience are special programs designed to help students prepare for University life and successfully complete their courses of study.

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

For more information, contact us online at www.webs.wichita.edu/ sss/.

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

The Ronald E. McNair Postbaccalaureate Achievement Program encourages qualified college juniors and seniors to pursue graduate studies. Named in honor of Challenger space shuttle crew member Ronald E. McNair, the program provides services which pre-
Veterans Services
The Office of Veterans Services, 203 Jardine Hall, provides services to veterans and active duty people. The services span the entire range of benefits and include certification for benefits to the VA, tutorial assistance, financial assistance information, and work-study for veterans.

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

Student Organizations

Registration
Student organizations may be granted the privileges of University recognition if they are registered with the Center for Student Leadership and approved by the Student Government Association (SGA). To be approved, each organization must provide a completed WSU Student Organization Registration form, lists of officers with addresses, copies of constitutions and bylaws, and an advisor’s name and address to the Center for Student Leadership. Once an organization has provided all necessary information, it may be granted official recognition by SGA which means it may use Wichita State in its name, use University rooms or grounds for meetings, post announcements on University bulletin boards, request funds from student fees in accordance with established procedures and guidelines of SGA statutes, and be listed 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
A Cappella Choral Society
Alpha Kappa Psi
American Association of Petroleum Geologists
American Production and Inventory Control Society
American Society for Quality
American Society of Mechanical Engineers
Anthropology Club
Association for Computing Machinery
Association of Collegiate Entrepreneurs (ACE)
Association of Information Technology Professionals
Beta Alpha Psi, Epsilon Tau Chapter
Collegiate Music Educators National Conference
Decorative Arts Guild
English Graduate Student Association
Fine Arts Student Association
Geology Club
Health Careers Opportunity Program
Hugo Wall Public Administration Society
Institute of Electrical and Electronics Engineers
Institute of Industrial Engineers
International Business and Studies Association
Japanese Language Organization
Kansas Association of Nursing Students
Master of Physical Therapy Student Association
Philosophy Society
Physician Assistant Student Society
Pi Delta Phi
Pi Mu Epsilon
Potters’ Guild, WSU
Premedical Student Association
Russian Kruzhok, The Russian Club
Social Work Organization of Graduate Students
Society for the Biological Sciences
Society of Automotive Engineers
Society of Automotive Engineers Aerodynamic Club
Society of Physics Students
Society of Traditional Printmakers
Society of Women Engineers
Student Association for the Master of Business Administration
Student Music Teachers Association
Student Society for the Advancement of Exercise Science
Student Speech-Language-Hearing Association
Students in Free Enterprise (SIFE)
Tau Beta Pi Engineering Honor Society
Tutoring Association
Women’s Studies Scholars and Allies
Wu Crue (WSU K-12 Physical Education)

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

Cultural/International
Associated Malaysian Students of Wichita
Association of Thai Students
Black Student Union
Chinese Student Friendship Association
Hispanic American Leadership Organization
Indian Students Association
Japanese Student Association
Muslim Students Association
Pakistani Students Association
Sri Lankan Student Association
Taiwanese Student Association
Turkish Students Association
Vietnamese Student Association

Fraternities and Sororities
Alpha Kappa Alpha
Alpha Phi
Alpha Phi Alpha
Beta Theta Pi
Cultural and Traditional Sisterhood
Delta Delta Delta
Delta Gamma
Delta Sigma Theta
Delta Upsilon
Gamma Phi Beta
Kappa Alpha Psi
Kappa Delta Chi
Kappa Sigma
Phi Beta Sigma
Phi Delta Theta
Pi Kappa Alpha
Sigma Alpha Epsilon
Sigma Eta Epsilon
Olive Alpha Christian Fellowship
Golden Key International Honor Society
Mytery Science Theater 3000 Club
National Residency Hall Honorary
Latter-Day Saint Student Association
Psi Chi
Eta Kappa Nu
Mortar Board
National Residence Hall Honorary
Pinnacle National Honor Society
Psi Chi
Sigma Delta Pi
Sigma Gamma Rho
Sigma Lambda Beta
Sigma Phi Epsilon
Zeta Phi Beta

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

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

Orthodox Christian Fellowship

Pi Kappa Alpha
Engineering Council

Political
College Republicans
Green Shockers

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

Religious
Association of Hindu Students in America
Baha’i Club
Campus Crusade for Christ
Chi Alpha Christian Fellowship
Intervarsity Christian Fellowship
Latter-Day Saint Student Association
Orthodox Christian Fellowship

SHOCKWAVE
St. Paul Parish/Newman Center
University Lutheran Center
Young Life

Residence Hall
Fairmount Towers Activities Council
Residence Housing Association

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

University Facilities
Wichita State’s main campus is located on a 330-acre site bounded by Hillside, Oliver, 17th and 21st streets in northeast Wichita. Some of the University’s facilities are described below.

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

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

Satellite Locations
WSU offers classes and limited enrollment services at three full-service satellite locations: WSU Downtown, 127 North Market, 978-6335; 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.

Continuing education classes and special services including the Speech-Language-Hearing Clinic and the Wichita Radio Reading Service are available at the Hughes Metropolitan Complex, 2900 North at Oliver, 978-3258.

Course locations are listed in the Schedule of Courses.

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 officials.

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 student has been satisfactorily completed. Failure to comply with this procedure may result in administrative withdrawal.

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

Wichita State University reaffirms the principle of intellectual freedom in scholarly activity for University students, and it recognizes the full citizenship rights of students in inquiry, discussion, and such actions as they may choose to take on public issues.

The rights and freedoms of students involve concomitant responsibilities. Incumbent on all students, as on all citizens, is the responsibility to observe the University's rules of orderly procedures and the laws of the larger community of which the University is a part. In the matter of actions on public issues, to speak one's opinion, to petition, to distribute literature, to assemble peacefully and hold meetings, to use the persuasion of ideas and other actions within the bounds of orderly and lawful procedures are sanctioned by the University. But infringement on the rights of others, acts or threats of violence to persons, destruction of property, disruption, or other interference with the normal functioning of the University and its personnel and other disorderly and unlawful acts will not be condoned.

Within its sphere of responsibilities the University will afford students proper procedural safeguards to resolve matters in dispute. Those who willfully violate University standards must expect to face disciplinary action on the part of the institution, which may include reprimand, probation, or suspension, consistent with campus provisions for due process.

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

Academic Honesty

Opportunities for learning at Wichita State University involve the students' rights to express their views and to take 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 detrimental 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 Regent's 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 unreleased exam between a student in an earlier section of a class and a student in a later section.

5. Fraudulent alterations of academic materials. A student who alters documents or other information (such as grade reports, course withdrawal slips, or research data) to provide undeserved credit or advantage has committed an act of academic dishonesty.
6. Aiding and/or abetting an academically dishonest undertaking. A student is responsible for ensuring that his/her work is not misused by other students. Students are required to protect the integrity of their own work by, for example, not allowing, knowingly or through carelessness, another student to plagiarize a term paper or copy answers to an exam.

7. Sabotage of 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; 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 familiarize with University policy on academic integrity and to upholding 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 31.

Academic Progress and Recognition

Academic Progress Reports
Reports on a student's progress are given in several ways.

Midterm Down Reports. At midsemester, 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.

Absent 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 then either process an administrative withdrawal or request that the student initiate an official withdrawal or make arrangements with the instructor to complete the course. Students failing to take either course of action will receive an F at the end of the semester.

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

Academic Recognition
In all colleges, honors criteria are established for Wichita State students by the University and apply equally to all students, whether or not they are in the Emory Lindquist Honors Program.

The Dean's Honor Roll is published each semester and is composed of students enrolled in 12 or more semester hours of graded work who achieve a grade point average of 3.50 or higher for the semester.

Students enrolled in 6-11 hours of graded work per semester who achieve a grade point average of 3.50 or higher for the semester will receive Academic Commendation. The list of such students will be published each semester.

See page 32 for information about degrees conferred with academic distinction.

Departmental Honors
Outstanding students may enroll in their junior or senior years in independent study which leads to a degree with departmental honors if the work is satisfactorily completed. Students with junior standing and a cumulative grade point average of 3.250 are eligible to conduct projects in their major area of study. A student considering such a project should begin planning the work well in advance of the semester during which the work is to be done. In order to enroll in Honors 410, Independent Study, the student must consult with the honors director and obtain the approval of the instructor in the student's major department who will be the advisor for the project. The written application must then be approved by the chairperson of the department and by the dean of the student's college. The completed application form must be filed with the honors director no later than the second week of the semester during which the student desires credit for the work.

An independent study project should consist of original research or creative work. To graduate with departmental honors, a student must complete the independent study project and write the results according to specifications established by the honors director. The student must be examined on their project and other aspects of the major field of study.

A three-member faculty committee conducts the examination and determines the student's eligibility for graduation with departmental honors. Students failing to secure such a degree 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 6 hours of credit for independent study.

Probation and Dismissal Standards (Academic)
Specific regulations governing probation and dismissal standards are established by each college at Wichita State and are given in the introductory statements in the individual college sections of the Catalog. Students should consult 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 6 hours and their WSU grade point average falls below 2.000. Attempted hours are defined as all hours appearing on the transcript with a grade of A, B, C, D, F, W, CR, NC, 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 26.)

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

Enrollment

Auditor

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

Classification of Students

Students are classified according to the following scheme:

Freshmen: less than 30 semester hours earned
Sophomores: 30 to 59 semester hours earned
Juniors: 60 to 89 semester hours earned
Seniors: 90 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, 9 graduate credit hours are considered a full load. (Graduate students who are half-time teaching assistants are considered full time if they take 6 or more hours. Graduate students taking all or a majority of courses which carry undergraduate credit must meet the 12-hour requirement to be certified as full-time students.)

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

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

Course Numbers

Courses numbered 99 or below do not count toward a bachelor's degree program.

Courses numbered 100 to 299 are designed primarily for freshmen and sophomores, but students from other classes may be admitted for lower-division credit.

Graduate students may not take these courses for graduate credit.

Courses numbered 300 to 499 are taught primarily for juniors and seniors. Freshmen and sophomores also may be admitted if they satisfy the course prerequisites given in the Wichita State University Catalog.

Graduate students may not take these courses for graduate credit.

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

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

Courses numbered 800 to 999 are designed for graduate students only and no students may be admitted to these courses unless they have been admitted to the Graduate School. (See the Catalog section on graduate credit for seniors for special conditions under which seniors may be admitted to graduate courses.)

Credit/No Credit Courses

Courses numbered below 100 do not carry credit toward a Wichita State degree and are graded Credit/No Credit (CR/NC). 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/NC. Any department in the University may offer courses on a CR/NC basis. This designation is included in the course description of such courses in the Wichita State University Catalog.

If students withdraw from a CR/NC course before the end of the twelfth 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 the semester (fifth week of the eight-week summer session), they receive a grade of NC, subject to the right of petition to the University's Committee on Admissions and Exceptions.

Credit/NC 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 32.

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 be awarded only if the test scores meet all requirements for successful completion of the test. There are four means by which such credit may be earned:

1. Credit may be earned through an Advanced Placement (AP) examination administered by the College Entrance Examination Board (CEEB) through the school's high school. The AP program is administered by CEEB in cooperation with participating high schools. The tests are graded under the supervision of CEEB and the scores, which range from a high of five to a low of one, are sent to the college or university chosen by the student. Credit by AP examination is awarded at Wichita State in the areas of biological sciences, chemistry, English, French, German, history, Latin, mathematics, physics, Russian, and Spanish. Under the AP program, credit at Wichita State is granted for specific courses. The titles of the specific courses for which credit is granted and the scores necessary for such credit are available from the Wichita State admissions office.

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

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

4. Individuals admitted to Wichita State may earn credit by departmental examination. In general, students may earn credit by examination for many undergraduate courses not covered in the areas given above. Students should apply directly to the chairperson of the department offering the course and consult with the Counseling and Testing Center before taking the exam. The chairperson will be responsible for ensuring that students are informed of the scope of the course, the text used, and other relevant information.

The grade recorded for credit earned by examination is Cr and it is recorded on a student's transcript after enrollment in the University. Students may not take a credit-by-examination test for credit in a course in which they have previously enrolled unless they received a W for the course. They may not retake any such examination. Students may not request an examination for course credit in a course for which they do not have the stated prerequisite credit. Credit earned by examination is treated exactly like that earned by class enrollment for internal purposes at Wichita State (class standing, completion of course prerequisites, college requirements, etc.).

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

All 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. The course requirements shall be permitted only with the consent of the faculty when readmission 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 these 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 GrE.

When students receive a grade of 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).

Incompletes are not counted when computing grade point average.

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 made in writing by the chairperson of a student's major department.

2. Any course may be repeated.

(a) Beginning June 1, 1987, for students first enrolling at a college or university on or after that date, all grades will be included in the computation of the grade point average through Summer 1994.

(b) Beginning with the Fall 1994 semester, for all students, a grade of A, B, C, D, F, or W received at completion of a repeated class at WSU will automatically replace all previous grade(s) 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.

Credit by Examination or by Credentials

Credit by examination or by credentials in lieu of formal enrollment in college coursework. The symbol CRE is used for College Board Advanced Placement (AP) credit, for College-Level Examination Program (CLEP) credit, for course credit awarded on the basis of the American College Test (ACT), for credit by departmental examination and for credit by credentials (military and similar background).

Credit given; no credit points. See Credit by Examination, page 29.

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.

Grades 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 A, W, J, C, NC, S, U, and CRE are always excluded from grade point computations.

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

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

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

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

Graduate Credit for Seniors (Senior Rule)

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

Transfers Within the University

Students may transfer from any undergraduate degree granting college to another provided they meet, as a minimum, the admission requirements of the second college.

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

Exceptions

Academic Forgiveness

Students who have accumulated a grade point average of less than 2.000 may petition the dean of his or her college and the college committee on Exceptions to be admitted to a degree program with no college credit and no grade point average.

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

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

The policy may be applied to Wichita State University enrollment as well as to work at other colleges.

When implemented, the policy waives all previous credits and grades except in the case of credits and grades earned in the special 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 also may 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.

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

In cases where failing grades have been recorded because a student was unable to withdraw officially, the student may petition the dean of the college for a retroactive withdrawal from all courses in the semester in question. The student must provide verifiable evidence of the causes for failing to withdraw properly. If the petition is granted, the grades are changed to W through the usual withdrawal procedure.

If a student requests a change more than a year after the original grades were posted, the student’s petition also must be approved by the University’s Committee on Admissions and Exceptions. The policy applies to all courses in a semester and can be invoked only for Wichita State University courses.

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

Court of Student Academic Appeals

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

The student must file an appeal within one semester after the grade is assigned (excluding summer). The court reserves the right, in exceptional circumstances, to suspend this rule.

Any student may use the appeal procedure. Forms are available in the Division of Student Affairs, 105 Grace Wilkie Hall. The general procedure is explained to students when they pick up the 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 exempted from regulations governing the maximum number of hours allowed students during a semester.

1. They may be exempt from regulations governing the maximum number of hours students may take during a semester in one
department. However, no student shall enroll in more than 21 hours without the permission of their college dean.

3. They may have permission to have course prerequisites waived with the consent of the instructor of the course and the head of the department in which the course is taken.

**Transition Semester**

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

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

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

1. The grade point average for their first regular semester must be below 2.00.
2. Their next semester of enrollment must be at WSU and they must complete at least 6 graded hours with a 2.00 or higher grade point average. "Graded hours" do not include courses taken for Audit, Credit, or Satisfactory.
3. After grades have been issued for that next semester, students must complete a form in their college/advising center office requesting a transition semester. This request must be made before completion of any further college courses.

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

**Graduation**

**Academic Distinction**

Degrees are conferred with distinction upon students who have shown excellence in scholarship. The minimum standard for graduating summa cum laude is a cumulative 3.900 grade point average. The minimum standard for graduating magna cum laude is a cumulative 3.500 grade point average. The minimum standard for graduating cum laude is a cumulative 3.250 grade point average.

**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 commencement ceremonies a year. Fall graduates are invited to attend the December ceremony. Spring and summer graduates are invited to the individual college commencement ceremonies in May.

**Requirements for Graduation**

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

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

Students must have credit for 124 acceptable semester hours toward their degree. Hours of credit earned toward a degree do not include courses with grades of F, W, AU, NCR, or I. In order to graduate in eight semesters, a student must take an average of 15 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 6 hours of such credit may be among the last 30 semester hours.

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

**Second Bachelor's Degree from Wichita State**

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

Students who have received one bachelor's degree from Wichita State University may receive a second upon completion of 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 can obtain a copy of the policy from the Registrar's office.

No one outside the institution shall have access to nor will the institution disclose any information from students' education records without the prior written consent of the student(s) except to personnel within the institution who have a legitimate educational interest, to persons or organizations providing students financial aid, to accrediting agencies carrying out their accreditation function, to persons in com-
Family Educational Rights and Privacy Act

1. Definitions

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

B. Directory Information: That information described in Section 99.3 of the "Final Rule on Education Records, Privacy Rights of Parents and Students." The information is defined 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 or the release, transfer, or other communication of education records of the student or the personally identifiable information contained therein, orally, or in writing, or by electronic means, or by any other means to any party.

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 records of the WSU Police Department maintaining 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.

2. Student Access to Education Records

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

B. The student has the right to a reasonable request for explanation of the records and to copies of the records where necessary to provide full inspection
and review. Such copies will be provided at the student's request and expense; however, the charge to the student for any such records may not exceed $2.25 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 or other 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 from 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 shall obtain written consent of 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 purposes intended.

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

8. Destruction of Records
Each office which maintains education records shall adopt its own policy with regard to destruction of education records. No education record, however, may be destroyed if there is an outstanding request to inspect and review the record. Also, the record of access to the education record and any explanations which are a part of the record must be maintained for as long as the education record to which it pertains is maintained.

9. Maintaining Records of Request and Disclosures
The unit custodian shall maintain records of requests and disclosures of personally identifiable information from a student's education record. The record shall include, whether requests are granted or not, the name(s) of the person(s) who requested the information and their legitimate interests in the information. Records of requests and disclosures will not be maintained:
(1) for requests made by the student him/herself; (2) for requests for which the student has 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, time, and place 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 10 (ten) 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 education record a summary statement commenting upon the information in the record and/or setting forth any reason for disagreeing with the decision. If the questioned document is released to a third person, the student's summary statement shall accompany the release of any such information. The summary information shall be maintained for as long as the contested record is maintained.

(2) If a student challenge to the content of a given record is successful, the University shall amend the education record accordingly and 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 involved and/or the Office of the Vice President for Student Affairs.

If a student wishes to file a complaint with the federal government concerning the University's failure to comply with the Privacy Act, he/she must submit the complaint, in writing, to the Office of the Family Educational Rights and Privacy Act, Department of Health, Education and Welfare, 330 Independence Avenue, S.W., Washington, D.C. 20201. The FERPA office will notify the student when the complaint has been received. The FERPA office will investigate the complaint, and may require further information of its findings and basis for such findings. 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, creed, color, national origin, age, sex, sexual orientation, marital status, status as a Vietnam-era veteran, or disability. Any person having inquiries concerning Wichita State University's compliance with the regulations implementing Title VI, Title IX, or Section 504 is directed to the Office of Equal Employment Opportunity, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0145. The Office of Equal Employment Opportunity has been designated by Wichita State to coordinate the institution's efforts to comply with the regulations implementing Title VI, Title IX, Section 504, and Americans with Disabilities Act. Any person also may contact the Assistant Secretary for Civil Rights, U.S. Department of Education, regarding the institution's compliance with these regulations.

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

Injury or Accident

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

Residence Defined

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

According to the law and regulations, a resident, for tuition purposes, is someone who has resided (been physically present) in Kansas for 12 consecutive 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 full-time every semester after arriving, may not be able to demonstrate the intent to remain in Kansas permanently, as long as that pattern continues. In contrast, certain specific exceptions are authorized by state law. The following people, and their spouses and dependent children, are authorized to pay the equivalent of resident fees immediately: (a) regular employees of the University (does not apply to student assistants or graduate assistants); (b) people on full-time active military duty, stationed in Kansas; (c) people discharged or retired from active military service within the last
thirty days under conditions other than dishonorable and who served at least two years in Kansas; (d) people who graduated from a four-year program at an accredited Kansas high school within 6 months of their enrollment at a state university, and who were Kansas residents for fee purposes at or within 12 months of, high school graduation; (e) dependent students as long as at least one parent is a Kansas resident for fee purposes; and (f) people who were recruited to, or transferred to Kansas within the last 12 months for a full-time job, and their spouse and dependent children.

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

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

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

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

Students must report their correct address at the time of registration each semester. The address given must be the student's actual place of residence, since it will be the one to which all correspondence from Wichita State is sent. Any change in residence must be reported within three days to the Registrar's Office. More complete information on the residence law and regulations can be obtained from the Registrar's Office.

Safety

Campus safety is a priority at Wichita State, and based on FBI statistics reported by universities nationwide, WSU is one of the safest campuses of its kind in the state and nation. Our well-lit campus and parking lots are regularly patrolled by WSU police officers and student cadets. Beginning at 3:30 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) 978-3430.
W. Frank Barton School of Business

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

Mission statement: The W. Frank Barton School of Business prepares individuals to be business leaders in the global entrepreneurial marketplace. In this effort, it:
- provides quality undergraduate, graduate, and professional educational programs in business that encourage lifelong learning.
- engage in scholarly research to develop business and economic knowledge and enhance its applications.
- practice good citizenship by serving our constituencies and the University community.

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

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

This mission is influenced by the location of the school in the largest economic and cultural center in the State of Kansas. As an integral part of the state's designated urban university, the faculty of the Barton School of Business 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 seek positively the Barton School experiences, both while enrolled in courses and afterwards.

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

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

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

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

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

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

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

The Center for Economic Development and Business Research (CEDBR) engages in business and economic research for a wide variety of clients in both private and public sectors. The center collects, analyzes, and disseminates information to support activities of government, education, business, and economic development organizations.

The CEDBR maintains a comprehensive database of economic indicators including population, personal income, employment, construction, and census data. Activities focus on issues related to the economic health of the region. The center publishes the Kansas Economic Report and a supplemental monthly, Kansas Economic Indicators.

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

The Center for Management Development (CMD) offers noncredit management development seminars to Wichita and the surrounding area. The CMD seminars and workshops have been acclaimed for their usefulness to practicing business people and other professionals in a wide variety of organizations.

Degrees Offered

Undergraduate

Bachelor of Business Administration

The undergraduate curriculum of the Barton School of Business leads to the Bachelor of Business Administration (BBA). Areas of emphasis or majors are offered in several fields within the School of Accountancy and the following departments: economics; finance, real estate, and decision sciences; management; and marketing and entrepreneurship.

Students may obtain a second bachelor's degree in the Barton School of Business if they (1) complete a minimum of 30 hours in residence in the Barton School of Business (in addition to the work required for the first bachelor's degree) and (2) satisfy the school's general requirements and emphasis/major requirements in effect at the time they embark on the program leading to a second bachelor's degree.

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 minor in economics. Students from all colleges may minor in accounting, business administration, economics, entrepreneurship, finance, management, and marketing. Students in the College of Education may minor in economics or accounting. A minor in business administration is not available to students pursuing a degree in the Barton School of Business.

A field major in international studies is offered in cooperation with Fairmount College of Liberal Arts and Sciences for students interested in specializing in a foreign area of the world or in international business, economics, or affairs. The major prepares students for careers in international organizations within the U.S. government and in business firms. Additionally, a cooperative chemistry/business program is offered in the Department of Chemistry.

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

Policies

Admission

Degree-bound students who select a business major are admitted to the Barton School of Business in program status. All students in the Barton School of Business must maintain a 2.250 grade point average. Students must complete 6 hours of English composition,
3 hours of communication, and 3 hours of college algebra with a grade of C or better in each within their first 24 hours of enrollment in the Barton School of Business. Failure to complete this requirement will bar a student from enrolling in business courses.

Advanced standing in the Barton School of Business is available to students who have (1) completed 60 semester hours; (2) a cumulative grade point average of 2.250; (3) completed 6 hours of elementary accounting, 6 hours of elementary economics, business 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 and behavioral sciences
  - Principles of economics (6 hours)
  - Psychology, sociology, anthropology, political science (3 hours)
- Natural 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 6 hours of the last 30 hours or ten of the total number of hours required for graduation may be in extension or correspondence courses. Permission of the dean must be secured before a student may take such courses. No extension or correspondence courses are allowed that (1) duplicate courses required for any degree granted by the school, (2) are required for any emphasis within the school, or (3) are offered at the junior or senior level in the school.

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

All Barton School of Business students are limited to enrollment in one course during a summer session, one course in any four-week summer session and two courses in any eight-week summer session. If a student is enrolled in both an eight-week and a four-week summer session, the maximum enrollment is two courses.

Cooperative Education
The Barton School of Business participates in the University’s Cooperative Education program. The program is designed to provide relevant paid employment experiences that integrate, complement, and enhance the student’s academic program. Students are placed in Co-op positions in a variety of business settings, including government agencies, financial institutions, social agencies, accounting firms, entrepreneurial companies, and many others. Individual academic projects are formulated in consultation with the student’s faculty advisor.

Business students may enroll in 1 hour of Co-op per semester with a 2.250 cumulative grade point average as early as their sophomore year. Students enrolling in 2 or 3 hours of Co-op during a single semester must have junior standing and at least a cumulative GPA of 2.25.

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; and
4. Referral to appropriate University resources for students seeking career guidance, personal counseling, or other types of assistance.

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

Types of Advising Assistance Available

Transcript Evaluation. Two aspects of transcript evaluation affect students: (1) the evaluation of course work to be transferred to Wichita State University for a degree, and (2) the continuing evaluation of completion of graduation requirements.

Evaluation of transfer work is accomplished by the school’s student records office, 106 Clinton Hall, working in conjunction with the dean’s office and the various departments within the school.

The student records office also keeps a current record of each student’s progress at Wichita State University. Many students will be able to take advantage of the school’s automated degree audit system. This online system provides students a personal copy of their academic record, including work in progress.

Schedule-Planning. Schedule-planning 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 endorse the statement on academic honesty appearing in the general information section of this catalog.

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

1. Complete at least 62 hours (63 hours for accounting majors) of course work offered outside the school (ECNS 201, 202, 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 144/242; ECON 201, 202, 231, and 232.)
6. Achieve a grade point average of 2.250 or better on (a) all college work, (b) all work taken at Wichita State, (c) all business and economics courses, (d) all business and economics courses taken at Wichita State, (e) all courses counted toward the student's major, and (f) all courses counted toward the student's major/emphasis.

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
- MATH 201-202, Principles of Macroeconomics and Microeconomics
- MATH 311, Calculus I
- MATH 350, Introduction to Information Processing Systems for Business
- ECON 231, Introductory Business Statistics
- ACCT 260, Introductory Information Processing Systems for Business
- ENTRE 310C, The Entrepreneurial Experience
- General education electives

Junior Year
- DS 300, 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: MGMT 362, 462, 661, 662, 663, 680; MGMT 305, 310, 311, 312.

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

1. Students who have close to 60 hours and have enrolled in the required lower-division (100-200 level) courses may enroll in introductory upper-division courses to complete a full schedule.
2. Students with a cumulative grade point average of 2.250 or above may have the junior standing prerequisite waived with the consent of the instructor of the course and the chairperson of the department in which the course is taken.

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

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 201-202, Principles of Macroeconomics and Microeconomics
   D. Mathematics and Statistics
      - MATH 111, College Algebra
      - MATH 144, Business Calculus
      - MATH 242, Calculus I
      - MATH 201-202, Principles of Macroeconomics and Microeconomics
      - MATH 210, Calculus II

II. Environment of Business—provides an understanding of the perspectives that form the context for business
   A. Business Law
      - LAW 431, Legal Environment of Business
      - LAW 435, Law of Commercial Transactions
      - B LAW 436, Law of Business Associations
      - ENTRE 310C, The Entrepreneurial Experience
      - IB 333, International Business
   B. Business Functions
      - MKT 300, Marketing
      - FIN 340, Finance
      - DS 350, Introduction to Production and Operations Management
      - MIS 495, Management Information Systems for Business

III. Business Policy
    - MGMT 681, Strategic Management

In addition, University graduation requirements include courses designed to help develop written and oral communication skills (ENGL 100 or 101, ENGL 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,
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.

Major/Minor Areas
Candidates for the BBA degree must satisfy the additional requirements of one of the following curricular majors. All students may select the indicated minors. The minimum grade point average for a minor field of study shall be the same as the minimum grade point average required for graduation with a major in the same field.

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

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

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

Course  Hrs.
ENGL 210, Composition: Business, Professional and Technical Writing 3
ACCT 310, Financial Accounting and Reporting: Assets 3
ACCT 320, Accounting for Decision Making and Control 3
ACCT 410, Financial Accounting and Reporting: Equities 3
ACCT 430, Introduction to Federal Income Tax 3
ACCT 560, Accounting Information Systems 3
ACCT 570, Law and Accounting 3
ACCT 610, Advanced Financial Reporting 3
ACCT 630, International Accounting 3
ACCT 640, Cost Accounting 3
ACCT 650, Auditing and Assurance Services 3
ACCT 660, Taxation 3

Required Courses  Hrs.
ACCT 310, Financial Accounting and Reporting: Assets (3); ACCT 320, Accounting for Decision Making and Control (3); ACCT 410, Financial Accounting and Reporting: Equities (3); ACCT 430, Introduction to Federal Income Tax (3); ACCT 560, Accounting Information Systems (3).

ECON 301, Intermediate Macroeconomics (3); ECON 302, Intermediate Microeconomics (3); ECON 303, Environmental Economics (3); ECON 304, Managerial Economics (3); ECON 310, Money and Banking (3); ECON 320, Money and Capital Markets (3); FIN 401, International Finance (3); FIN 440, International Business (3); FIN 620, Investments (3); FIN 625, International Financial Management (3); FIN 631, Money and Capital Markets (3); FIN 632, Bank and Financial Institution Management (3).

Certification of Accountants: The Accountancy section of the Catalog Undergraduate section of the Catalog.

Business Administration Minor
A minor in business administration is available to any student who is not pursuing a degree in the Barton School of Business. A minimum of 15 hours in residence and a GPA of at least 2.250 are required. The minor consists of the following:

Course  Hrs.
ACCT 210 3
ECON 201, 202 6
B LAW 431 3
FIN 340 3
MGMT 360 3
MKT 300 3

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

Course  Hrs.
ECON 301, Intermediate Macroeconomics 3
ECON 302, Intermediate Microeconomics 3
ECON 303, Environmental Economics 3

Economics Minor
A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of a minimum of 15 hours (in residence) of economics including ECON 201 and 202 (or equivalent) and 9 hours of upper-division economics, all with at least a 2.250 GPA.

Teaching of Economics: Kansas Department of Education regulations governing the certification of secondary economics teachers are very specific and contain requirements beyond the economics major. Students planning to be teachers of economics should contact a secondary social studies advisor in the College of Education for program planning.

Entrepreneurship Major
Department of Marketing and Entrepreneurship
The entrepreneurship major requires 21 upper-division hours beyond the business core. Students who plan to major or minor in entrepreneurship should contact the Center for Entrepreneurship for special counselling 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.
Students are strongly encouraged to use internships, co-op, or independent study to satisfy this elective.

**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 310 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, all finance majors are required to complete ECON 340, Money and Banking.

**Human Resource Management Major**
Department of Management

**International Business Major**
Department of Management

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

**Human Resource Management Major**
Department of Management

**International Business Major**
Department of Management

**Entrepreneurship Minor**
A minor in entrepreneurship consists of 15 hours, including FIN 340, FIN 440, ACCT 210, and 6 additional hours of finance courses (real estate courses will not count). At least 6 hours of upper-division finance courses must be taken in residence. A minimum GPA of 2.250 in the minor courses is required.
courses related to international business in communications, economics, entrepreneurship, human resources management, management, and management information systems may be substituted.

Within the student's total degree program, at least 10 hours are required in a foreign language. An additional 6 hours of culture/area studies related to a geographic area, selected from an approved list with major advisor's consent, are also required. These courses, including Issues and Perspectives courses, e.g., LAS 300, Global Issues: War and Peace, may be included in the General Education Program.

Management Major
Department of Management

Seven courses selected from the following:

Course                              Hrs.
MGMT 362, Managing People in Organizations ...3
MGMT 430, Business, Government, and Society ...3
MGMT 462, Leading and Motivating ...3
MGMT 464, Communicating Effectively in Organizations ...3
MGMT 600, Designing Effective Organizations ...3
MGMT 661, Coaching, Developing, and Mentoring ...3
MGMT 662, Managing Workplace Diversity ...3
MGMT 663, Building Effective Work Teams ...3
MGMT 680, Making Effective Decisions ...3
HRM 466, Fundamentals of Human Resource Management ...3
HRM 664, Labor Relations ...3
HRM 666, Human Resource Selection ...3
IB 600, International Management ...3

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

Management Minor

A minor in management consists of 15 hours, including MGMT 360 and 9 hours of upper-division management courses chosen from MGMT 430, 462, 464, 600, 601, 605, 606, 607, and 608. At least 9 hours must be taken at WSU with at least a 2.250 GPA in these courses.

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

The MIS major consists of the following courses.

Required Courses                              Hrs.
ACCT 260, Introduction to Information Processing Systems for Business (or computer science equivalent) ...3
MIS 200, Fundamentals of Programming and Programming Languages ...3
MIS 230, Fundamentals of Data Structures, File Design, and Access ...3
MIS 300, Data Communications and Computer Networks ...3
MIS 350, Systems Analysis and Design ...3
MIS 600, Database Management Systems ...3
MIS 650, Problem Solving, Decision Support, and Expert Systems ...3
MIS 696, Management of the IS Function ...3

Marketing Major
Department of Marketing and Entrepreneurship

Required Courses                              Hrs.
MKT 403, Marketing Research ...3
MKT 405, Consumer Behavior ...3
MKT 609, Marketing Programs ...3

Electives, from the following: ...6
MKT 404, Retail Management ...3
MKT 407, Marketing for Service and Nonprofit Organizations ...3
MKT 601, International Marketing ...3
MKT 604, Distribution Management ...3
MKT 606, New Product Marketing ...3
MKT 607, Promotion Management ...3
MKT 608, Selling and Sales Force Management ...3

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

Emphasis in Real Estate

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

Marketing core—12 hours
MKT 403, Marketing Research ...3
MKT 405, Consumer Behavior ...3
MKT 609, Marketing Programs ...3
Choose one of the following: ...3
MKT 407, Marketing for Service and Nonprofit Organizations ...3
MKT 608, Selling and Sales Force Management ...3

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

Real Estate Emphasis

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

Master of Accountancy

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

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

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

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

Professional Designations. Students interested in accounting may pursue several different professional designations. The designation Certified Public Accountant (CPA) requires that the candidate pass the Uniform CPA Examination and meet the requirements of the Institute of Certified Public Accountants (ICPA) and state boards of accountancy.

Students not possessing a bachelor's degree may pursue the designation Certified Management Accountant (CMA) by meeting the requirements of the Institute of Certified Management Accountants. The program includes economics and business finance; or accounting majoring in economics, entrepreneurship, finance, or marketing. See these sections for details.
Admission Requirements

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

Full admission to the MACC professional curriculum, for students who have not yet completed a bachelor's degree, requires:

1. Completion of the preprofessional curriculum described below.
2. A minimum grade point average of 2.750 on all courses identified as Barton School of Business core courses.
3. A minimum grade point average of 3.00 on the following courses: ACCT 310, 320, 410, and 430.
4. A total of 1,600 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 for lacking no more than 9 hours of the preprofessional curriculum may be admitted on a conditional basis. These 9 hours must be completed in the first semester following conditional admission or as soon thereafter when course schedules permit. All students are required to meet with the School of Accountancy's graduate advisor prior to beginning course work.

Probationary Admission

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

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

Preprofessional Curriculum

Students pursuing the Master of Accountancy (MACC) are required to meet 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 63 semester hours. Students planning to sit for the CPA exam are encouraged to take an upper-division economics course as part of the nonbusiness courses. The following courses are specifically required by the School of Accountancy and may be counted within this 63 hours:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201 and 202, Principles of Economics I and II</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>ECON 231, Introductory Business Statistics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECON 232, Statistical Software for Applications in Business</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ENGL 210, Composition: Business, Professional and Technical Writing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 111, College Algebra</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 144, Business Calculus</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COMM 111, Public Speaking</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

2. The candidate must complete a minimum of 24 hours of the following Barton School of Business core requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 210, Financial Accounting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACCT 220, Managerial Accounting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACCT 260, Introduction to Information Processing Systems for Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DS 350, Introduction to Production and Operation Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENTRE 310C, The Entrepreneurial Experience</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENGR 340, Finance</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IB 331, International Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MGMT 360, Management and Organizational Behavior</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MIS 495, Management-Information Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MKT 301, Marketing</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

3. The candidate must complete the following courses required by the School of Accountancy: Preprofessional Accounting Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 310, Financial Accounting and Reporting: Assets</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACCT 320, Accounting for Decision Making and Control</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACCT 410, Financial Accounting and Reporting: Equities</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACCT 430, Introduction to Federal Income Tax</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

During the semester in which the preprofessional curriculum will be completed, the candidate for the MACC 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 39 for details. If a person is admitted without sufficient background, that person's total degree program will be adjusted upward to satisfy any deficiencies.

The following graduate-level course work must be completed:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 515, Financial Accounting and Reporting: Contemporary Issues</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACCT 525, Management Control Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACCT 835, Tax Research and Selected Topics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Acct 840, Advanced Principles of Auditing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACCT 860, Advanced Accounting Information Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Electives outside accounting, selected with consent of graduate accounting advisor</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Additional electives, accounting or nonaccounting, selected with consent of graduate accounting advisor</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

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. Some of the tasks 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 6 hours of English composition, 3 hours of communication, and 3 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.
**Degree Requirements**

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. General Education Requirements</td>
<td>30</td>
</tr>
<tr>
<td>Basic Skills</td>
<td>12</td>
</tr>
<tr>
<td>ENGL 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>COMM 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111, College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and Fine Arts</td>
<td>3-12</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3-12</td>
</tr>
<tr>
<td>Mathematics and Natural Sciences</td>
<td>3-12</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>II. Professional Curriculum</td>
<td>34</td>
</tr>
<tr>
<td>A. Required Courses</td>
<td>19</td>
</tr>
<tr>
<td>B LAW 130, Introduction to Law</td>
<td>3</td>
</tr>
<tr>
<td>LEGAL 230, Introduction to Paralegalism</td>
<td>2</td>
</tr>
<tr>
<td>*LEGAL 231A, Legal Research and Writing L</td>
<td>3</td>
</tr>
<tr>
<td>*LEGAL 233, Litigation I</td>
<td>3</td>
</tr>
<tr>
<td>LEGAL 238, Legal Assistant Internship</td>
<td>2</td>
</tr>
<tr>
<td>*LEGAL 240, Substantive Law: Torts</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 210, Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>B. Required Courses or Validated Equivalents</td>
<td>3</td>
</tr>
<tr>
<td>LEGAL 244, Legal Assistant Computer Skills</td>
<td>3</td>
</tr>
</tbody>
</table>

Legal assistant internship is a requirement for all students. Legal Assistant Computer Skills is a requirement for students who do not have proficiency in utilizing a microcomputer. Microcomputer proficiency may be validated to satisfy the computer skills requirement. However, academic credit will not be granted where this requirement is met by validation.

C. Professional Electives | 12-18 |

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**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 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.)

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**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 220. Managerial Accounting (3). The study of accounting in terms of management's information requirements. Emphasizes the use of accounting information to assist management in planning, analyzing, and implementing business decisions and activities. Prerequisite: ACCT 210.

ACCT 260. Introduction to Information Processing Systems for Business (3). Focuses on the evolving dimensions of hardware, software, data communications and computer networking, and the Internet. Using business situations as examples, students learn about and gain experience with word processing, spreadsheets, database, 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 on 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 410. Financial Accounting and Reporting: Equities (3). A continuation of ACCT 310. Emphasizes liabilities and equity. Prerequisites: ACCT 260 and 310; MATH 111 or 112; junior standing.

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 451. Cooperative Education (1-3).

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

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

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 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, S corporations, and tax-exempt entities. Examines the effect of taxation on business decisions. Prerequisites: junior standing, ACCT 420 or equivalent.

ACCT 640. Principles of Auditing (3). A study of the auditor's attestation of entities, 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 660. E-Commerce (3). Studies e-commerce technology, risk management, security, and control. Accounting background not required. Prerequisite: junior 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. Enrollments govern whether course is offered. Graded SU 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 830. Taxation of Business Entities—Advanced Topics (3). Analyzes various advanced topics in the taxation of business entities and business planning. Focuses on the use of various entity forms to achieve optimal tax and business objectives. Also considers the tax consequences of conducting business internationally.

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

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

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

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

ACCT 890. Seminar in Special Topics (1-3). Repeatable with permission of the School of Accountancy.

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

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

Business Administration—General (BA)

Lower-Division Courses

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

BA 190A. The Right Start: Becoming a Master Student (3). Specifically for first-year business majors. Helps students become master students. Provides an extended exposure to the mission, strategies, and programs of the Barton School of Business. Helps students prepare for success in studying, working with other students, interacting with faculty, and planning their 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 281. Cooperative Education (1). An academic program that integrates academic theory with professional experience through paid employment in a supervised work setting related to the student's career focus. Course does not satisfy elective requirements for any major or minor offered by the Barton School. May be repeated, but limited to a total of 3 credits.
Offered Cr/No Cr only. Prerequisites: sophomore standing and 2.250 GPA.

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

Upper-Division Course

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

Business Law (B LAW)

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

B LAW 130. Introduction to Law (2). 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 481. Cooperative Education (1-3).

B LAW 491. Independent Study (1-5). Offered Cr/No Cr 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/No Cr only. Prerequisites: junior standing and 2.750 GPA in business law and departmental consent.

Courses for Graduate/Undergraduate Credit

B LAW 635. Law of Commercial Transactions (3). Law of contracts, bailments, sales, commercial paper, and secured transactions. Centers on the Uniform Commercial Code. Prerequisite: junior standing. Credit will not be granted for both B LAW 435 and 635.

B LAW 636. Law of Business Associations (3). Law of agency, partnerships, and corporations. Considers the organizational and relational aspects of both small, closely held businesses and large corporate enterprises. Credit will not be granted for both B LAW 436 and 636. Prerequisite: junior standing.

B LAW 690. Seminar in Selected Topics (1-3). Repeatable with departmental consent. Prerequisite: junior standing.

B LAW 750. Workshop in Business Law (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

B LAW 831. Legal Environment of Business (3). An introduction to the legal environment within 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 role of public law from a managerial perspective, including the ethical and social responsibility aspects of business behavior.

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

Decision Sciences (DS)

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

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 production management. Prerequisites: ECON 231 and 232 and MATH 144, or equivalent, and junior standing.

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

DS 390C. International Purchasing (1-3). Cross-listed as IS 390C. Repeatable with departmental consent.

DS 481. Cooperative Education (1-3).

DS 491. Independent Study (1-5). Offered Cr/No Cr 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/No Cr 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 690. Seminar in Selected Topics (1-3). 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. Operations Management (3). An introduction to the operations functions in the business and how it interfaces with the major functions in business. Emphasis is placed on the strategic importance of operations and how a firm can gain competitive advantage through high-quality, cost-competitive products and services. Prerequisites: Intermediate Operations Management and either Introduction to Decision Sciences or any 300-level or higher course in operations research. Prerequisite: 350 or 850.


DS 875. Management Science (3). Provides quantitative methods for the student to develop the analytical abilities for use as a decision maker. Areas of study include mathematical programming, game theory, forecasting, queuing theory, and simulation.
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. Prerequisite: 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. Prerequisite: ECON 201, 202, 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 analyzed; as well as efficiency conditions in consumption, production, distribution, and exchange. Prerequisites: ECON 201, 202, 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, effects of market structure on business decision-making, and decision-making with risk. Prerequisites: ECON 202 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 current state and practice of e-business and the effects of e-business and the Internet on society outside the business realm. Prerequisites: ECON 201 and 202 or instructor's consent.

ECON 340. Money and Banking (3). A study of the financial sector of the U.S. economy, emphasizing the role of money in determining inflation, interest rates, and the level of economic activity. Includes the commercial banking and Federal Reserve systems, credit markets, interest rate theory, and monetary policy. Prerequisites: ECON 201 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 201, 202, 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. Only: Prerequisites: junior standing, departmental consent, and 2.75 GPA in economics.

Courses for Graduate/Undergraduate Credit

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

ECON 611. Economics of Sports (3). An inquiry into the economic aspects of professional and intercollegiate sports. Includes industrial organization of sports, public finance of sports, and the labor economics of sports, as well as the unique competitive nature of the sports enterprise. Not applicable toward the MA in economics.

ECON 614. Industrial Economics and Antitrust Policy (3). Examines behavior of firms within industries emphasizing antitrust policy. Includes pricing behavior, distribution policies, entry deterrence, advertising, and mergers. Prerequisites: ECON 201 and 202 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 201 and 202, 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 201, 202, or 800, and junior standing.

planning. Prerequisites: ECON 201, 202, 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 201 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 201 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 201, 202, 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 wage, employment, and prices. Prerequisites: ECON 201 and 202, 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 work incentives. Prerequisites: ECON 201 and 202, or ECON 800, and junior standing.

ECON 663. Economic Insecurity (3). Cross-listed as GEBS 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 201, 202, 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 underdeveloped economies. Analyzes determinants of real income, resource allocation, investment criteria, balance of payment problems, national policies, and related topics within this framework. Prerequisites: ECON 201, 202, or 800, and junior standing.

ECON 672. International Economics and Business (3). Cross-listed as MGMT 561. A survey of the economic foundations of international trade, finance, and investment. Includes foreign exchange markets, regional integration, trade theories and instruments, U.S. trade policies and treaties, multinational companies, immigration, as well as differences in cultural, political, and economic systems. Includes current events. Prerequisites: ECON 201, 202, 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 201, 202, 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. Stress the application of regional economic analysis in the study of urban areas as economic regions. Prerequisites: ECON 201 and 202, or ECON 800, and junior standing.

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 differentiation and integral calculus, an introduction to matrix algebra, and various constrained optimization and economic modeling techniques. Emphasizes economic applications and modeling. Prerequisites: ECON 201, 202, or 800, and MATH 144 or equivalent, and junior standing.

ECON 721. Applied Econometrics II (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, and software packages. Prerequisites: ECON 201 and 202, or 800, and junior standing.

ECON 740. Monetary Problems and Policy (3). An examination of historical and contemporary monetary issues in the context of the global economy. Prerequisites: ECON 201, 202, or 800, 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 institutions and decision making in the public sector of the American economy, including budget planning and execution, taxation, debt, and fiscal policy. Prerequisites: ECON 201, 202, or 800, and junior standing, or instructor’s consent.

Courses for Graduate Students Only

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


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

ECON 803. Analysis of Business Conditions and Forecasting (3). An intensive study of research methodologies and forecasting for real life business decision-making. Covers formulation of research questions, specification of models, data collection, and interpretation and communication of the results. Prerequisites: ECON 800 or equivalent and one semester of introductory statistics.

ECON 804. Managerial Economics (3). A survey of theoretical and analytical tools of economics that are useful in decision-making by managers. Prerequisites: ECON 201, 202, 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 practice in finance and macroeconomics. Prerequisites: ECON 731 and 702 or equivalent.

ECON 840. Seminar in Monetary Theory (3). An examination of neoclassical and contemporary monetary theories. Includes an analysis and an evaluation of current monetary problems. Repeatable for credit with departmental consent. Prerequisites: ECON 202 and 340.

ECON 847, Speculative Markets (3). Cross-listed as FIN 823. Analysis of the speculative market for commodities 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 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 invest-
Entrepreneurship (ENTRE)
Department of Marketing and Entrepreneurship

Lower-Division Courses

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

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

Upper-Division Courses

ENTRE 310C. The Entrepreneurial Experience (3). Overview of the study of entrepreneurship, including its economic foundations, the principles of venture creation, financial sources of capital, and strategy/business plan creation. Explores the entrepreneurial mindset 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; ECON 201; and junior standing or instructor's consent. Credit can be earned in only one of the following: ENTRE 220C, 310C, and 320.

ENTRE 320. Principles of Entrepreneurship (3). A fundamental course providing a broad overview of the entrepreneurship 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 entrepreneurial issues, international entrepreneurship, licensing, and family business issues. Prerequisite: Junior standing or instructor's consent. ENTRE 320 will not be offered after Fall 2000. Credit can be earned in only one of the following: ENTRE 220C, 310C, 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 232, and junior standing.

ENTRE 420. Developing a Marketing Plan (3). Cross-listed as MKT 420. Emphasizes the analysis and tools required in the development of a marketing plan for a new or existing organization. With extensive use of traditional and web-based research, student develops a marketing plan that positions the firm to achieve a competitive advantage in the marketplace. Prerequisites: ENTRE 220C or 320, MKT 300, 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/Nr only. Prerequisites: junior standing and 2,250 GPA.

ENTRE 491. Independent Study in Entrepreneurship (1-5). Offered Cr/Nr only. Closely adapted to graduate credit. Prerequisites: junior standing, 2,750 GPA in entrepreneurship courses, and departmental consent.

ENTRE 492. Internship in Entrepreneurship (1-3). Offered Cr/Nr 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 organization. Prerequisite: ENTRE 220C or 320 and junior standing or instructor's consent.

ENTRE 666. Developing a Successful Business Plan (3). Emphasizes the development of a comprehensive business plan which incorporates financial and organizational principles associated with entrepreneurial finance including financial structuring of the firm, pro forma development of financial statements and the capitalization of the firm. Explains and illustrates strategies for exiting and harvesting the business. Prerequisite: ENTRE 420, senior standing, or instructor's consent.

ENTRE 690. Special Topics in Entrepreneurship (3). Advanced course with in-depth study of emerging topics in entrepreneurship. Repeatable with departmental consent. Prerequisites: ENTRE 220C or 320 and junior standing or instructor's consent.

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

Courses for Graduate Students Only

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

ENTRE 868. New Venture Feasibility Seminar (3). Focuses on directing students in the appropriate methods of selecting financial sources and in raising seed capital through the preparation of a comprehensive feasibility study. Covers (1) sources of capital, such as venture capitalists, investment bankers, and creative forms of financing; (2) marketing opportunities; (3) pro forma development; (4) feasibility decision making; and (5) actual preparation of the loan package. Prerequisites: ACCT 801 or equivalent, or instructor's consent. Not open to students with credit in ENTRE 668.

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

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

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


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

Courses for Graduate Students Only

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

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

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

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

EMBA 804. Operations Management. (2). Focuses on the processes by which goods and services are supplied, produced, and distributed in organizations. Emphasizes systems for analyzing design and operational problems in the production/operations function. Prerequisite: admission to EMBA program.

EMBA 805. Global Business and Competitiveness. (2). Focuses on applications of economic analysis to international business decisions, international and macroeconomic concepts, the implications of macro policies and developments for the firm's business environment, expansions into foreign markets, foreign investment and the relevance of global changes in technology and labor productivity, and foreign exchange, balance of payments, and trade policy issues. Prerequisite: admission to Executive MBA program.


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

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

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

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

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

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

Lower-Division Courses

FIN 140. Personal Finance (3). Management of the cash flows experienced by individuals and families. Analysis of alternative strategies to meet individual financial goals through various investment media emphasizing risks and 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 390. Special Group Studies in Finance (1-3). Repeatable with departmental consent.

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

FIN 481. Cooperative Education (1-3).

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

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

Courses for Graduate/Undergraduate Credit

FIN 510. Short-Term Financial Management (3). Cross-listed as ENTRE 510. An introduction to short-term financial management. Includes balance sheets, the concept of management, and capital structure. Prerequisites: ACCT 210 and junior standing.

FIN 611. Real Estate Finance (3). Cross-listed as RE 611. Real estate financial management, including the concept of management, and capital structure. Prerequisites: FIN 340.


FIN 620. Investments (3). An analysis of investment risks, financial information, and industry characteristics. Assumes basic market principles of investment, portfolio management, and investment decision making. Prerequisites: 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 IB 625. A study of the international financial and monetary system, emphasizing currency markets. Also examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisites: FIN 340, ECON 201, 202, or 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 632, Bank and Financial Institution Management (3). Presents and analyzes asset and liability management by banks and financial institutions. Also considers financial institution structure, management, regulation, and operations. Covers risk management topics in detail. 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 ACCT 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; 6 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 823, Risk Management with Options and Futures (3). Cross-listed as ECON 847. Discusses the use of futures and options contracts in managing some of the risks associated with business and investment. Also discusses theoretical issues to provide a basis for understanding the practical uses of these securities. Prerequisite: FIN 840 or equivalent.

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

FIN 840, 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: ACCT 800 or equivalent.

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

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

FIN 891, Directed Studies (1-6). 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.

FIN 895-896, Thesis (2-2).

Human Resource Management (HRM)

Department of Management

Lower-Division Course

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

Upper-Division Courses

HRM 390, Special Group Studies in Business (1-3). Repeatable with departmental consent.

HRM 466, Fundamentals of Human Resource Management (3). An analysis of the functions of human resource management, including human resource planning, recruiting, selection, appraisal of performance, training, compensation systems, and employee/labor relations. Covers relevant societal, economic, and regulatory influences on human resource management. Prerequisites: MGMT 360 or concurrent enrollment and junior standing.

HRM 481, Cooperative Education (1-3).

HRM 491, Independent Study (1-5). Offered Cr/NoCr only. Closed to graduate credit. Prerequisites: junior standing and 2.75 GPA in HRM courses.

HRM 492, Internship in Personnel (1-3). Offered Cr/NoCr only. Prerequisites: junior standing, 2.75 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 selection process as implemented in private and public sector organizations. Includes an analysis of the impact of federal and state anti-discrimination legislation on selection practices; as well as human resource planning, recruiting, job analysis, and selection techniques, including testing and interviewing. Also validation of selection techniques. 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 meth-
ods 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 (1-4). 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 (1-3). Repeatable with departmental consent.

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

HRM 895-896. Thesis (2-2). Prerequisites: MCMT 360 or concurrent enrollment, and a minor in management, accounting, or economics.

Upper-Division Courses

IB 333. International Business (3). General education issues and perspectives course. A comprehensive overview of the multifaceted issues in international business and globalization that impact all functional areas of business. Examines contemporary issues, perspectives, and influences on American business, economy, government, labor, society, technology, public policy, and competitiveness. Reviews international trade theories, foreign exchange, monetary systems, balance of payments, trade policies, trade agreements, global trading system, and foreign investment, including cultural diversity, human rights, ethics, and social responsibility issues. Examines implications for small and large businesses, including case studies from Wichita firms engaged in international business.

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

IB 492. International Business Internship (1-3). Offered Cr/NC only. Prerequisites: junior standing and 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, nationalism, protectionism, technology transfer, and trade policies. Prerequisites: MGMT 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. Prerequisites: FIN 340; ECON 201, 202, or 300; 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 required IB courses.

Courses for Graduate Students Only

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

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

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

Legal Assistant (LEGAL)

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

LEGAL 230. Introduction to Paralegalism (2). The new role concept of the legal assistant in the practice of law. An inquiry into what paralegals do, types of paralegal employment, education and licensure, professional ethics, authorized and unauthorized practice of law, and an introduction to paralegal skills. Prerequisite: 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 basic analytical skills. Introduces the student to the components of a law library through a variety of assigned problems, some of which culminate in the writing of a research memorandum or brief. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 232. Legal Aspects of Business Organizations (3). The law of business organizations emphasizing the practical aspects related to formation of operation of proprietorships, partnerships, and corporations. Includes drafting aspects related to employment agreements, partnership agreements, and corporate documents. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 233. Litigation I (3). An introduction to the civil litigation process emphasizing the practical aspects associated with a civil action. Includes civil procedure, preparation and use of pleadings, discovery, law of evidence, and appeals. Prerequisite: admission to the Legal Assistant Program or departmental consent.

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

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

LEGAL 236. Litigation II (3). A continuation of Litigation I. Emphasizes the functions of a legal assistant in trial preparation and execution including gathering and organization of materials, investigating, interviewing, drafting of pleadings and interrogatories, preparing a trial notebook, assisting during trial, etc. Prerequisites: admission to the Legal Assistant Program or departmental consent and LEGAL 233.

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

LEGAL 238. Legal Assistant Internship (2). Internship training in a law office, corporate law department, or government agency. Offered Cr/NC only. Prerequisites: 12 hours of legal specialty courses and internship committee approval.
LEGAL 239. Special Topics (1-3). Repeatable with departmental consent. Prerequisite: admission to the Legal Assistant Program or departmental consent.

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

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

LEGAL 243. Property Law (3). An introduction to the principles of property law emphasizing the practice aspects of real estate transactions. Prerequisite: admission to the Legal Assistant Program or departmental consent.

LEGAL 244. Legal Assistant Computer Skills (3). An introduction to the utilization of microcomputers by legal assistants. Emphasizes word processing, litigation support, and computer-aided research with Lexis or Westlaw. Prerequisites: LEGAL 231A or 233 or departmental consent.

Management (MGMT) Department of Management

Lower-Division Courses

MGMT 101. Introduction to Business (3). Since everyone spends a lifetime dealing with and being influenced by business firms, course introduces students to current issues, concepts, and functions of business and its environment.

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

Upper-Division Courses

MGMT 360. Management and Organizational Behavior (3). An overview of concepts, theories, and practices that apply to the management of work organizations. Includes organizational goals, corporate strategy, structure, decision making, leadership, motivation, communication, group dynamics, organizational change, and the international dimension of business. 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 390. Special Group Studies in Management (1-3). Repeatable with departmental consent.


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 (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in management.

MGMT 492. Internship in Management (1-3). Offered Cr/NCr 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 201 and 202 and junior standing.

MGMT 566. 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 tasks. Course promotes an understanding of the organizational context of a team culture through an analysis of how teams form and group processes that enhance goal accomplishment. Emphasizes skills necessary to manage the organization's culture, improve group performance, and increase collaboration among team members. Prerequisites: MGMT 360 or concurrent enrollment 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 inhibition, 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 the 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 issues, a large and small firms, and various sources of competitive advantage. Prerequisites: DS 350, FIN 340, 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 production definition, research design, data-gathering techniques, analytical techniques, reporting strategies, and communication issues. Prerequisite: ECON 231 or equivalent.

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

MGMT 860. Management of Organizations (3). An introduction to management and organizational theory. Includes classical and contemporary management theory, human relations, group dynamics, motivation, communication, organizational structure and design, and behavioral control.

MGMT 862. Organizational Behavior (3). The study of individual and group behavior as it affects organizational functioning. Applies concepts such as motivation, personality, interpersonal relations, upward management, conflict management, and leadership to organizational settings, emphasizing analysis and action-planning. Prerequisite: MGMT 860 or departmental consent.

MGMT 865. Communication (3). Cross-listed as COMM 865. An analysis of communication models emphasizing their applications to communication problems in organizations. Explores social-psychological processes underlying persuasion in interpersonal relations and through the mass media. Critically analyzes communication systems and techniques within formal organizations. Prerequisite: MGMT 860 or departmental consent.

MGMT 869. Seminar in Research Methodology (3). A study of the concepts and tools in behavioral science relevant to research in organizations. One or two areas such as motivation, cognitive processes, attitudes, and values, may be analyzed in depth. Prerequisite: 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 matrix issues. Prerequisite: to be taken during last semester of student's program, or departmental consent.

MGMT 890. Directed Studies (1-5). Prerequisite: departmental consent.

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

MGMT 892. Special Project in Management (1-4). A special project including original case research, supervised internships, or field research. Prerequisite approval of the MS Committee. Open only to MS in business degree candidates.


Management Information Systems (MIS)
Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

MIS 190. Selected Topics in MIS (1-3). Repeatable for credit with departmental consent.

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 applications 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. Study computer file organizations ranging from sequential to indexed sequential. Prerequisite: MIS 200.

Upper-Division Courses

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 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 390. Special Topics in MIS (1-3). Repeatable for credit with departmental consent.

MIS 481. Cooperative Education (1-3). Offered Cr/NC only. Prerequisites: 2.500 GPA in MIS, junior standing, and departmental consent.

MIS 491. Directed Study (1-3). Individual study for Cr/NC only. Prerequisites: 2.500 GPA in MIS, junior standing, and departmental consent.

MIS 492. Internship in MIS (1-3). Offered Cr/NC only. Prerequisites: 3.000 GPA in MIS, senior standing, and departmental consent.

MIS 495. Management Information Systems (3). A study of the structure and the strategic role of computer-based information systems. Includes information resource management perspective emphasizing issues of information architecture, data integration and administration, and risk management in information systems development efforts. 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 350.

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 SQL, spreadsheets, statistical software, DSS generators, expert system shells, and EIS software to undertake several DSS implementation projects. Prerequisite: MIS 600.

MIS 690. Advanced Topics in MIS (1-3). Repeatable for credit with departmental consent.

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.

Courses for Graduate Students Only

MIS 874. Management Information Systems (3). Focuses on information as an organizational resource to be managed. Explores the links between business strategy and information technology, and addresses the organizational implications of investing in information systems. Goal is to prepare today's manager with the necessary know-how to successfully manage with information technology.

MIS 884. Database Planning and Management (3). Preparing students to deal with issues in planning and managing...
organization-wide integrated databases. Emphasizes logical database design and relational database implementation. Includes SQL, ensuring database integrity, database conversion, database administration, and data management for computer integrated manufacturing. Prerequisite: MIS 674 or instructor's consent.

MIS 890. Seminar in Special Topics (1-3). Repeatable for credit with departmental consent.

Marketing (MKT)
Department of Marketing and Entrepreneurship

Lower-Division Course

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

Upper-Division Courses

MKT 300. Marketing (3). A description and analysis of the U.S. marketing system and an investigation of the factors affecting management of the major policy areas of marketing in the firm. Prerequisite: junior standing.

MKT 390. Special Group Studies in Marketing (1-3). Repeatable with departmental consent.

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

MKT 420. Developing a Marketing Plan (3). Cross-listed as ENTRE 420. Emphasizes the analysis and tools required in the development of a marketing plan for a new or existing organization. With extensive use of traditional and web-based research, student develops a marketing plan that positions the firm to achieve a competitive advantage in the marketplace. Prerequisites: ENTRE 220C or 330, MKT 300, or instructor's consent.

MKT 481. Cooperative Education (1-3).

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

MKT 492. Internship in Marketing (1-5). Offered for Cr/Nr 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 promotional 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. Prerequisite: 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 6 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 801. Marketing Management (3). Focuses on the development of a competitive advantage for the overall marketing system. Also presents the marketing function as a major subsystem within the individual business firm.

MKT 802. Consumer Behavior (3). An examination 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 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 (1-3). Prerequisite: departmental consent.

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


Master of Business Administration (MBA)
Graduate Studies in Business

Courses for Graduate Students Only

MBA 800. Financial Statement Analysis (3). Studies financial statements and related footnote disclosures. Includes tools and procedures common to the interpretation and analysis of financial statements. Prerequisites: graduate standing and permission of a Barton School graduate studies in business advisor.
MBA 801. MBA Basics: Management and Marketing (3).
Highlights foundation knowledge from the disciplines of management and marketing integrated with a strong component of communication skills. Primarily, provides students with a knowledge base in management and marketing from which to build in their MBA course work. Secondly, builds oral and written communication skills necessary for success in the MBA curriculum and beyond. Prerequisites: graduate standing and permission of a Barton School graduate studies advisor.

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

Lower-Division Course
RE 190. Selected Topics (1-3). Repeatable with departmental consent.

Upper-Division Courses
RE 310. Principles of Real Estate (3). Economic, legal, and physical characteristics of real estate. Overview of real estate, including contracts, deeds, title assurance, market analysis, appraisal, brokerage, mortgage financing, investment, and property management principles. Prerequisite: junior standing.

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

Courses for Graduate/Undergraduate Credit
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 (1-3). Offered Cr/Nr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in real estate courses.

RE 492. Internship in Real Estate (1-3). Offered Cr/Nr only. Prerequisites: junior standing, 2.750 GPA in real estate, and departmental consent.

Courses for Graduate Students Only


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

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 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.

College of Education

Jon Engelhardt, PhD, Dean
107 Corbin Education Center
(316) WSU-3300
education.twsu.edu/

The College of Education offers programs to develop skilled and competent teachers, administrators, counselors, school psychologists, speech and language clinicians, and other specialists. College faculty also contribute to the improvement of education at local, state, and national levels through their teaching, research, and professional service.

Curricula listed in the following sections give students an opportunity for systematic study. These programs enable students to develop (1) an understanding of education's place in a democratic society; (2) a philosophy of education consistent with functioning in that society; and (3) a conceptual base to use in relating theory to practice, which includes knowledge of human growth and development and principles of human learning.

The College of Education is accredited by all appropriate agencies, including the Kansas State Board of Education, the National Council for the Accreditation of Teacher Education, the American Speech/Hearing Association, and the National Association of School Psychologists. The college recommends appropriate teacher's certificates be issued to those who complete requirements established by the board.

The college also offers BA degree programs in exercise science and in sport administration. The exercise science degree program prepares students for careers involving exercise physiology, physical therapy, health promotion, clinical exercise-related fields, rehabilitation, medicine, biology of exercise, research and academia, or graduate education. The sport administration degree program prepares students for careers in a variety of sport industry segments, including college athletics, professional and minor league sports, park and recreation departments, sport governing associations, and sport and/or fitness centers.

Degrees Offered

Undergraduate

The college offers teaching and non-teaching programs leading to the bachelor's degree and/or to state teacher certification at the elementary and secondary levels. The State Board of Education regulates standards for all teaching certificates; curricula offered by the college are altered as needed to meet changes in these requirements.

The programs in kinesiology and sport studies provide nonteaching routes to the bachelor's degree.

A student may obtain a second bachelor's degree in the College of Education. This requires (1) admission to the College of Education, (2) completion of a minimum of 30 credit hours in a program not required for the first bachelor's degree, and (3) completion of all the requirements for graduation from the College of Education.

Graduate

The College of Education offers programs leading to the Master of Arts (MA) in communicative disorders and sciences; the Master of Education (MED) in counseling, curriculum and instruction, educational administration, educational psychology, physical education, sport administration, and special education; the Specialist in Education (EdS) in school psychology; the Doctor of Education (EdD) in educational administration; and the Doctor of Philosophy (PhD) in communicative disorders and sciences.

Graduate offerings include courses which help students meet requirements for state certification or licensure as principals, supervisory personnel, district school administrators, school counselors, early childhood teachers, English as a second language/ bilingual education teachers, special education teachers, reading specialists, school psychologists, speech and language pathologists, audiologists, and gifted teachers. Other programs are available to support the continued academic and professional development of teachers. Graduate offerings also are available to support careers in sport-related businesses and exercise-related programs at all levels.

Policies

Undergraduate Admission

Students who have declared a major in one of the programs in the College of Education will be admitted directly into the college upon admission to WSU. Students are required to maintain at least a 2.500 overall grade point average to remain in good standing. Any student denied admission to the college may appeal by filing a written petition with the Standards Committee of the College of Education.

Admission to Teacher Education

Students are advised on the basis of the program (check sheet) in effect when they are admitted into teacher education rather than the program (check sheet) in effect when they began their college or university work.

Admission to the College of Education does not mean that a student is accepted into one of the certification programs in teacher education. Students must satisfy the following requirements to be admitted as a candidate for a Kansas teacher's certificate:

1. Pass CI 271, Introduction to Education, with a grade of B or better, and pass CI 272, Professional Field Experience.

2. Complete 35 hours of General Education courses with a minimum grade point average of 2.750 on the 35 hours.

3. Earn a grade of C or better in ENGL 101 and 102, College English I and II; COMM 111, Public Speaking; and MATH 111, College Algebra.

4. Maintain an overall grade point average (GPA) and a WSU GPA of at least 2.500.

5. Complete a second course in mathematics above College Algebra. Students are encouraged to choose Stat. 370, Elementary Statistics, which may be applied in the Mathematics and Natural Sciences division of the General Education Program.

6. Pass the Preprofessional Skills Test (PPST), a competency test in reading, writing, and mathematics.

To remain in good standing in the teacher education program requires a grade point average of at least 2.500 in all courses on the student's WSU academic plan and for all work taken at WSU. Demonstrated suitability for professional practice, as determined by the teacher education faculty, is also a consideration for remaining in good standing in the teacher education program leading to certificates or endorsements indicating professional practice or achievement.

Enrollment Limits

Students enrolled in the College of Education may not enroll in more than 21 semester hours of work per semester during the academic year. Summer Session enrollments are limited to a maximum of 6 hours for each four-week session or 12 hours during the Summer Session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.000 or better may petition their department chairperson for permission to enroll in excess hours.

Probation and Dismissal

Students in the College of Education are placed on probation at the conclusion of any semester in which their overall WSU grade point average falls below 2.500. These students will be continued on probation if their grade point average for each subsequent semester while on probation is not at least 2.500. Students who fail to earn at least a 2.500 for any semester while on probation may be dismissed for poor scholarship. Students on probation are limited to a maximum enrollment of 12 hours per semester.

Students may not be academically dismissed at the end of a semester unless they began that semester on academic probation. Also, students may not be academically dismissed from the College of Education before they have attempted a total of 12 semester hours at WSU after being placed on probation.
Students dismissed for poor scholarship may reenroll only with the special permission of the Standards Committee.

Students who have been dismissed for academic reasons may seek readmission to the College of Education by appealing in writing for an exception to the regulations. The College of Education requires petitioners to meet with an academic counselor and to prepare a written petition which is considered by the Standards Committee of the College of Education and then 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 readmission counseling session well in advance of the semester for which they wish to be readmitted.

Students develop their own cases for readmission. They should center their petitions around their failure and presentation of evidence for probable future success.

Transfer Students
Transfer students who have been admitted on probation must complete 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 students who have accumulated 12 attempted credit hours after being placed on probation and who do not have a 2.500 grade point average for the most recent semester or Summer Session will be academically dismissed. Students who have been dismissed may seek readmission to the College of Education by appealing, in writing, for an exception to the regulations.

Cooperative Education Internships
The College of Education is one of the participating colleges in the University’s Cooperative Education Internship Program. This program is designed to provide off-campus, paid work experiences that integrate, complement, and enhance the student’s regular academic program. Students are placed in a variety of educational experiences which range from early childhood through university settings. Participation in the program requires enrollment for credit in specific Cooperative Education courses designated by the appropriate academic department in the college. To enroll in the program or for more information, students should contact the Cooperative Education coordinator.

Professional Development School
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 mixess 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.

Teacher Education at Wichita State University, 2000-2001

Pass Information
Number of program completers: 158

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<th># passing assessment</th>
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<th>Kansas pass rate</th>
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Aggregate and Summary Assessment Pass Rate Data

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Summary: 158 157 99% 97%

WSU is ranked in the 1st (top) quartile among institutions of higher education in the state of Kansas.

Notes:
1) Aggregate assessments reflect the combined performance of program completers on all components of a larger assessment (e.g., combined reading, math, and writing components of the PPST).
2) Summary assessment reflects the combined performance of program completers on all assessments (e.g., all PPST component assessments and NTE assessment).
3) PPST = Pre-Professional Skills Tests published by the Educational Testing Service.
   NTE = National Teacher Examination published by the Educational Testing Service.
   PLT = Principles of Learning and Teaching published by the Educational Testing Service.

Program Information

Enrollment: Number of enrolled students in the teacher preparation program:
Full-time = 506 Part-time = 146 Total = 652

Student Teaching: Number of students in teacher preparation program participating in supervised student teaching: 199

Number of faculty supervising student teachers who were:
1) Appointed full-time in professional education: 13
2) Appointed part-time in professional education and full-time in the institution: 1
3) Appointed part-time in professional education and not otherwise employed by the institution: 18

Student/faculty ratio for student teaching supervision: 6:1

Time required in student teaching by students:
Average number of: 1) Hours per week: 40 2) Weeks: 16/semester 3) Total hours: 1,280

Accreditation/State Approval
• WSU’s teacher preparation programs in elementary and secondary education are approved by the Kansas State Department of Education.
• The College of Education at Wichita State University is accredited by the National Council for Accreditation of Teacher Education (NCATE).
• WSU is fully accredited by the North Central Association.

*Title II Disclosure Statement. Questions about any of this information should be directed to Dean, College of Education, Wichita State University, 1845 Fairmount, Wichita, Kansas 67260-0131, (316) 978-3301.
Transition-to-Teaching Program
For those individuals who have undergraduate degrees in major fields that are transferable to secondary certification, and in areas of high need, there is an alternative route to completing teacher certification. All of the standards of the traditional teacher education program are required, but the model of delivery is designed to meet the needs of schools and adults making the transition from another career into teaching.

Requirements for Graduation
Several sets of graduation requirements apply to undergraduates in the College of Education seeking a Bachelor of Arts (BA) in education or the institution’s recommendation for a teaching certificate. Students should study carefully the requirements for their particular area of study.

Under Kansas Department of Education policies students are expected to complete all program requirements in effect at the time they are admitted into teacher education. students transferring to the College of Education will be advised on the basis of the program (check sheet) in effect when they are admitted into teacher education rather than the program (check sheet) in effect when they began their college or university work.

For graduation from the College of Education, students must satisfactorily complete all program requirements, complete a minimum of 124 semester hours of credit, have at least a 2.500 grade point average in the major field, and must have at least a 2.500 overall grade point average.

Requirements for Teacher Certification
All graduates applying for teacher certification in Kansas are required to complete the Principles of Learning and Teaching (PLT) examination established by the Kansas State Department of Education in order to qualify for their initial certificate. A grade of C or better in student teaching is necessary to receive a recommendation for a teaching certificate.

Prospective teachers in specialized fields of art and music are subject to certain departmental requirements and the general and professional education requirements listed under secondary education. (Students planning to teach fine arts should consult the College of Fine Arts section of the Catalog.)

General Education
A total of 42 hours of General Education courses is required for all students in the college, including the following requirements for graduation:

I. Basic Skills courses (12 hours) to be completed with a grade of C or better:
   - ENGL 100 or 101 and 102, College English I and II (6 hours)
   - COMM 111, Public Speaking (3 hours)
   - MATH 111, College Algebra (3 hours)
   - CDS majors may take either Math 111, College Algebra (3), or Math 131, Contemporary Mathematics (3).

II. Distribution requirements
   A. Fine Arts and Humanities
      One introductory course from a fine arts discipline.
      One introductory course from two humanities disciplines.
      One further study course from the same discipline as one of the introductory courses above, or an issues and perspectives course in fine arts or humanities.
   B. Social and Behavioral Sciences
      One introductory course 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.
   C. Mathematics and Natural Sciences
      One introductory course each from two different mathematics and natural science disciplines.
      One further study course from the same discipline as one of the introductory courses above, or an issues and perspectives course in mathematics and natural science.

An introductory course meets General Education objectives and serves as an introduction to the discipline. A further study course is taken in a discipline once a student has completed an introductory course in the same discipline. An issues and perspectives course is an interdisciplinary course or one which informs students of issues or problems from a disciplinary perspective. Students may take either a second course in a discipline represented by an introductory course or an issues and perspectives course from the division housing that discipline. Students must complete at least one and not more than two issues and perspectives courses to fulfill General Education requirements. Courses within the student's major discipline do not count toward General Education requirements.

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 specialization and additional General Education requirements in these areas are summarized on the following pages.

Communicative Disorders and Sciences
I. General Education
   Students majoring in communicative disorders and sciences are expected to meet all General Education requirements. In Social and Behavioral Sciences, courses must be taken in two different departments. At least 3 hours of psychology are required.

Elementary Education
I. General Education
   Students majoring in elementary education should meet all requirements in the General Education Program. In addition, two social science courses and Psychology 111 are required in Social and Behavioral Sciences. In Mathematics and Natural Sciences, a biological science and/or a physical science are required (one must include a lab), along with MATH 301.

II. Professional Education
   Preprofessional Block
   Course  Hrs.
   CI 271, Introduction to Professional Education ........2
   CI 272, Field Experience ..................................1
   Block I
   CESP 304, Growth and Development ....................2
   CI 430, Social/Multicultural Education ................3
   CI 320, Introduction to Exceptional Children ........2
   CI 111, 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

III. Elementary Specialization
   In addition to the General Education requirements and the professional education sequence, students majoring in elementary education must fulfill the teaching specialty emphasis of the elementary program. Students should work closely with a faculty advisor in the College of Education to be sure they meet certification and degree requirements. A check sheet of requirements is available from the College of Education.

Secondary Education
I. General Education
   Students majoring in secondary education should meet the requirements in the General Education Program as listed above.

II. Secondary Teaching Major
   Students must fulfill the teaching specialty emphasis of a program as specified in the teaching field section that follows. Only those specialties listed among the combined curricula and departmental majors and minors in the majors and minors section may be counted.

III. Professional Education
   The following courses are required:
   Preprofessional Block
   Course  Hrs.
   CI 271, Introduction to Professional Education ..........2
   CI 272, Field Experience ..................................1
For majors in 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 Children, 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

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 physical education, art, music

Block I

Course

Hrs.

CESP 334, Growth and Development............ 2
CI 430, Social/Multicultural Education......... 3
CI 320, Introduction to Exceptional Children, 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

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

Social studies

Minors Only

Earth/space science

General science

Health

Journalism

Library media

Speech communication

Teaching English to speakers of other languages

* Needs no minor.

Combined Curricula

The teaching assignment after graduation often involves a combination of related subjects. For this reason, students in the following combined disciplines is offered in lieu of a departmental major and minor.

Students should work closely with advisors to ensure proper course selection for certification and degree. A check sheet of requirements for each teaching field is available from the College of Education.

Natural Science—Biological

This major requires a minimum of 50 hours. A teacher who qualifies under this provision may teach chemistry and general science as well as biology.

Natural Science—Physical

This major requires a minimum of 50 hours. A teacher who completes this program may teach chemistry, general science, and physical science.

Administration, Counseling, Educational and School Psychology

The Department of Administration, Counseling, Educational and School Psychology offers courses at the undergraduate level taken by students both in and outside of the College of Education. In addition, the department offers programs leading to the Master of Education (MEd) in educational administration, the MEd in counseling, the MEd in educational psychology, the Specialist in Education (EdS) in school psychology, and the Doctorate of Education (EdD) in educational administration.

Counseling, Educational and School Psychology (CESP)

Lower-Division Courses

CESP 150. Workshops in Education (1-2).

CESP 152. Special Studies in Education (1-4). For undergraduates with an interest in issues related to counseling, and student development. Different prescheduled areas may be emphasized during a semester. Repeatability 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 111 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 applying these to their own biases. Prerequisites: PSY 111, acceptance into teacher education program, and concurrent enrollment in CI 311, 320, 430.
Courses for Graduate/Undergraduate Credit

**CESP 701. Introduction to Educational Research (3).** Offers an introduction to research in education. Includes (1) a survey of current educational research, (2) the nature of research methodology, (3) an introduction to the preparation of research reports, and (4) criticism of current research.

**CESP 704. Introduction to Educational Statistics (3).** An introduction to statistical methods and their role in educational research, including measures of central tendency, correlation, chi square, median test, t test, and one- and two-way analysis of variance.

**CESP 707. Child Abuse and Neglect (1).** A course designed to acquaint students with the etiological factors, potential indicators, consequences, reporting procedures, and treatment strategies associated with child abuse and neglect. Covers DSM-IV diagnostic categories associated with abuse and neglect.

**CESP 711. Educational Measurement and Evaluation (3).** Issues and techniques for measurement and evaluation in the cognitive, affective, and psychomotor domains.

**CESP 715. Career Development (3).** Designed to introduce graduate students to the field of career development. Covers the history of career development, current trends and issues in career development, and the role of the career counselor.

**CESP 719. 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 720. Learning Theory and Instruction (3).** An introduction to the major learning theories and their application to educational settings. Prerequisite: CESP 701 or instructor's consent.

**CESP 721. Multicultural Issues in Counseling (3).** Students acquire knowledge and skills that enable them to offer help to individuals in a multicultural environment. Focuses on developing a sense of the client's own cultural identity, increasing sensitivity to cultural differences in help-seeking attitudes and behaviors, and understanding the potential sources of cultural misunderstanding, bias, and prejudice and how they may affect the counseling effectiveness. Prerequisites: CESP 701, 803 or 804, or instructor's consent.

**CESP 822. Assessment in Counseling (3).** A survey of standardized tests and their application in counseling, emphasizing their selection, use, and interpretation. Studies the basic concepts and techniques of psychological testing and statistical analysis, including basic measurement theory and the factors involved in the selection of tests. Prerequisites: CESP 701 and 704; CESP 803 or 804.

**CESP 823. Experimental Design in Educational Research (3).** Focuses on the use of inferential statistics for various experimental designs. Parametric topics covered include t-test, one-way and factorial analysis of variance, and multiple regression. Also covers selected nonparametric techniques. Develops all statistical tools through practical application with computer programs. Prerequisite: CESP 704 or instructor's consent.

**CESP 825. Group Counseling Techniques (3).** A survey of counseling groups, their characteristics, and their effective use. Topics include group development, group processes, group leadership, and group decision-making. Prerequisite: CESP 801 or instructor's consent.

**CESP 826. 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 833. Secondary School Counseling (3).** Provides information and skills needed for counseling in secondary schools. Prerequisites: CESP 701, 704, 803, and 804, or instructor's consent.

**CESP 837. Family Issues in Counseling (2).** A survey of the family's role in the counseling process, including family roles, family communication patterns, and family systems. Prerequisite: CESP 801 or instructor's consent.

**CESP 840. Psychology of Exceptional Children (3).** A survey 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. Repeatable. Prerequisite: instructor's or departmental consent.

CESP 853. Law, Ethics, and Multicultural Issues for School Psychologists (3). For school psychology students and practicing school psychologists. Covers issues of legislation, litigation, professional ethics, and cultural diversity that impact the practice of school psychology. Prerequisite: admission to the school psychology program or instructor's consent.

CESP 855. Individual Intelligence Assessment (3). Use of individual tests for assessment of intelligence. Examines the 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 854 within the last calendar year, coordinator's consent, and counseling major or departmental consent.

CESP 857. Professional and Ethical Issues (3). Study of major ethical, legal, and professional issues in counseling, including those issues related to diagnosis and treatment of mental illness using the DSM-IV. Prerequisites: CESP 803, 821, 822, or instructor's consent.

CESP 858. Diagnostic Testing (3). An in-depth examination of the assessment process. Studies the theory, and uses of individual assessment techniques for evaluating the learning difficulties of preschool and school-aged children. Emphasizes planning the assessment, interpreting and integrating assessment data, preparing relevant interventions, and communicating assessment findings to others. Prerequisites: CESP 822, 855, and instructor's consent.

CESP 859. School-Based Interventions (3). Focuses on planning, implementing, monitoring, and evaluating interventions in the school setting with students who are experiencing academic and/or behavioral problems. Prerequisite: CESP 822 or departmental consent.


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

CESP 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 3 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 4 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 II (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 the 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 different topics for a maximum of 8 hours. Prerequisite: 15 hours of related graduate course work.

CESP 928. Seminar: Postsecondary Student Services (2). Intensive study of issues, theories, approaches, and research in topics related to postsecondary student services. Repeatable for different topics for a maximum of 8 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 alternative personality assessment approaches and reviews of personality theory and psychopathology. Includes supervised experience. Prerequisites: CESP 822, 855, post-master's standing or last 6 hours of master's program, and instructor's consent.

CESP 946. Practicum in School Psychology (3 or 6). Supervised practice in providing school psychological services to children in school, clinical, or community agency settings. Requires at least 300 hours applied experience per 3 hours of credit. Repeatable for a maximum of 6 hours. Prerequisite: departmental consent.

CESP 947. Internship in Counseling (2). The internship is a placement appropriate to the intern's career objectives in a position within an agency, institution, or school. The student and University supervisor develop goals and objectives that enhance the student's level of professional functioning. Repeatable up to 6 hours of credit.

CESP 948. Practicum in Marriage and Family Counseling (3). Prerequisite: CESP 930, graduate student status, or departmental consent.

CESP 977. Internship in School Psychology (2). Supervised experience as a school psychologist in a school or agency setting. Requires at least 600 hours of applied experience. Repeatable for a maximum of 4 hours. Prerequisites: CESP 946 and departmental consent.

CESP 990. Special Problems in Counseling and School Psychology (1-3). Directed problems in research for EdS students under supervision of a graduate instructor. Prerequisites: CESP 701 and instructor's consent.

Educational Administration and Supervision (EAS)

Courses for Graduate/Undergraduate Credit

EAS 750. Experienced Administrator's Workshop (1-6). Offers a variety of administrative topics.

EAS 752. Special Studies in Educational Administration and Supervision (1-3). Group study in a preselected specialized area of educational administration and supervision. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Courses for Graduate Students Only

EAS 803. Seminar: Professional Self-Assessment and Inquiry (3). Participants engage in self-assessment and readiness for becoming a school administrator. Includes discussing and learning issues and techniques for measurement in the cognitive, affective, and psychomotor domains. Also reviews the basics of educational research, the nature of research methodologies, and methods for the preparation of research reports. Prerequisite: admission to the MED in educational administration or instructor's consent.

EAS 805. Practicum: School Opening I (1). Participants engage in preparing to open their school for the fall semester with their principal mentor. Participate in an inquiry project in their local school; and read and critique current research lit-
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 concepts related to staffing issues, including selection and recruitment, certification, orientation, staff development, evaluation, transfer and dismissal, and retirement. Cover general concepts of law, interpretations of statutes and court decisions affecting education, and the legal responsibilities of school personnel and professional negotiations. Prerequisite: admission to the MED in educational administration or instructor's consent.

EAS 835. Practicum: School Law and Personnel Management (3). Apply the concepts related to selection, recruitment, certification, orientation, staff development, evaluation, transfer, dismissal, and retirement. Apply general legal concepts and statutes to various situations and personal/professional liability. Prerequisite: admission to the MED in educational administration or instructor's consent.

EAS 842. School Law (3). General concepts of law, interpretations of statutes and court decisions affecting education, and legal responsibilities of staff personnel.

EAS 843. Seminar: Curriculum and Learning Theory (3). Examine theoretical concepts related to curriculum philosophies and developmental processes. Examine recent programs and proposals as well as curriculum development at the building and school systems level. 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 sufficient to propose, implement, and evaluate various building programs. Address applications of prevailing major learning theories and principles as they relate to academic and behavioral aspects of the classroom. Prerequisite: admission to the MED in educational administration or instructor's consent.

EAS 852. Special Studies in Educational Administration and Supervision (1-3). Group studies in new materials, new research, or innovations in advanced educational administration and supervision areas for practicing administrators or advanced students. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

EAS 854. Finance and Facilities Management (3). For those preparing to become administrators at the school-building level. Focuses upon the knowledge and skills necessary to plan and organize work groups, projects, and the resources necessary to carry out day-to-day functional activities of schools.

EAS 860. Research Seminar in Educational Administration and Supervision (3). For students in advanced study. Emphasizes development of research proposals and studies. Prerequisite: completion of master's degree or advisor's consent.

EAS 902. Presentation of Research (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum of 2 hours of credit. Prerequisite: EAS 860.

EAS 875-876. Master's Thesis (2-2). A thesis written under the direction of a graduate advisor. Prerequisite: instructor's consent.

EAS 953. 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. Prerequisite: completion of master's degree and instructor's consent.

EAS 955. Field Project in Administration and Supervision (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 Mac-
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, problem design, 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 on-going analysis of school-related problems and the conceptualization of action programs for addressing such problems. Prerequisite: admission to the EdD program in EAS.

EAS 971. Decision-Making and Problem-Solving Seminar (5). Focuses on approaches to identifying, clarifying, and solving various problems in elementary and secondary education. Decision-making and problem-solving models are reviewed, critiqued, and applied. Prerequisites: admission to the EdD program; EAS 970 and 981, concurrent enrollment in EAS 982.

EAS 972. Administrative Leadership Seminar (5). Facilitates in-depth investigations of research relevant to leadership theory and practice. Activities include clarifying and developing personal leadership skills; identifying, fostering, and supporting the leadership skills of others; and conducting observations of leaders in action. Prerequisites: admission to the EdD program; EAS 970 and 971, concurrent enrollment in EAS 986.

EAS 981. Applied Inquiry Seminar I (3). Provides doctoral students with an introduction to field-based inquiry/problem-solving strategies; begins the development of field-based problems/issues and provides practice in field research design, implementation, and reporting. Prerequisite: admission to the EdD program in EAS.

EAS 982. Applied Inquiry Seminar II (3). Continues EAS 981 and provides opportunities for more sophisticated and complex field-based studies. Prerequisite: admission to the EdD program in EAS.

EAS 983. Applied Inquiry Seminar III (3). Continues EAS 981 and 982. Focuses on the development of individualized research plans leading to small group or individual field-based experiences in the second year of doctoral study. Prerequisite: admission to the EdD program in EAS.

EAS 986. Field-Based Research I (3). This is the first in a sequence (Fall, Spring, Summer) that provides opportunities for field work leading to the EdD dissertation proposal. Prerequisites: admission to the EdD program; EAS 981, 982, 983, and concurrent enrollment in EAS 972.

EAS 987. Field-Based Research II (3). Follows EAS 986 and continues field-based research activities and development of dissertation proposals. Prerequisites: admission to EdD program, EAS 986.

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

EAS 989. Advanced Research Methods in Educational Administration (3). Prepares students to examine research design techniques appropriate for use in educational administration and specifically for doctoral dissertations. Includes qualitative and quantitative research methodology, statistical tools and techniques for analysis of data, and examination of software designed to assist researchers in educational administration. Prerequisites: EAS 981, 982, 983, and 986.

EAS 990. Special Problems in Administration (1-4). Directs 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). For persons who have been employed in their first administrative position and are seeking recertification in Kansas. Course is individually designed by an EAS faculty member with the student and his/her school district supervisor. Addresses the needs of the student and of the district. Must be to assist the student to extend basic skills relevant to a particular administrative assignment. The student must register for 3 hours of credit in EAS 991 to meet recertification requirements. S/U grading only. Prerequisite: completion of master's degree and departmental consent.

EAS 992. Superventure/Internship (0). Two-semester course designed primarily for individuals who are completing course work for certification as a district-level administrator. Focus 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 project administrative interest. Students must file an application for this terminal course.

EAS 993. Dissertation Research (1-6). Taken concurrently with EAS 986, 987, and 988 for 6 credits each semester during the last year of enrollment. Provides students with dissertation proposal and dissertation advisorship and may be taken for 1-6 credits per term for a maximum of 24 credits. Up to 17 credits may be counted toward program completion. Prerequisites: admission to EdD program in EAS and required doctoral course work.

EAS 994. Directed Research in Educational Administration (1-6). For persons who have been employed in their first administrative position and are seeking recertification in Kansas. Course is individually designed by an EAS faculty member with the student and his/her school district supervisor. Addresses the needs of the student and of the district. Must be to assist the student to extend basic skills relevant to a particular administrative assignment. The student must register for 3 hours of credit in EAS 991 to meet recertification requirements. S/U grading only. Prerequisite: completion of master's degree and departmental consent.

EAS 995. Directed Research in Educational Administration (1-6). For persons who have been employed in their first administrative position and are seeking recertification in Kansas. Course is individually designed by an EAS faculty member with the student and his/her school district supervisor. Addresses the needs of the student and of the district. Must be to assist the student to extend basic skills relevant to a particular administrative assignment. The student must register for 3 hours of credit in EAS 991 to meet recertification requirements. S/U grading only. Prerequisite: completion of master's degree and departmental consent.

EAS 999. Dissertation Research (1-6). Taken concurrently with EAS 986, 987, and 988 for 6 credits each semester during the last year of enrollment. Provides students with dissertation proposal and dissertation advisorship and may be taken for 1-6 credits per term for a maximum of 24 credits. Up to 17 credits may be counted toward program completion. Prerequisites: admission to EdD program in EAS and required doctoral course work.

EAS 999. Dissertation Research (1-6). Taken concurrently with EAS 986, 987, and 988 for 6 credits each semester during the last year of enrollment. Provides students with dissertation proposal and dissertation advisorship and may be taken for 1-6 credits per term for a maximum of 24 credits. Up to 17 credits may be counted toward program completion. 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 undergraduate program offers broad, comprehensive, and professional preparation for specialized training, which is offered on the graduate level. Graduate work, culminating in a master's degree, is required to obtain professional certification as a speech-language pathologist or audiologist in the public schools, hospitals, or rehabilitation centers, or to engage in private practice. With an undergraduate, preprofessional major, students completing the master's program will be eligible to apply for certification by the American Speech-Language-Hearing Association, for a Kansas teacher certificate, and for Kansas licensure. The PhD in communicative disorders and sciences prepares individuals to function professionally as independent clinicians, as teacher-scholars in an academic setting, or as program administrators.

Undergraduate Major
The preprofessional, undergraduate major places primary emphasis on the general area of communicative sciences and disorders in the specialized areas of speech-language pathology and audiology. Supervised practicum courses are required as part of the educational program. Students should make formal application for practicum courses one semester prior to enrollment. Evaluation of the student's speech, language, and hearing proficiency will be conducted. Significant deviations in any area must be corrected to maximum ability before enrollment in practice courses or student teaching. In addition, medical clearance is required for all observation and practical classes. Admission to a major in CDS does not constitute assurance of automatic entrance into the practicum or student teaching sequence.

Undergraduate students may major in communicative disorders and sciences in either the College of Education or Fairmount College of Liberal Arts and Sciences. Most students take the program in the College of Education, but those wishing to emphasize applied language study may enroll in the communicative disorders and sciences major in Fairmount College of Liberal Arts and Sciences. In either case, all students must satisfy the General Education requirements of the University. Students in the College of Education must select certain courses from the General Education Program that will satisfy teacher certification requirements. These are stated under general requirements at the beginning of the College of Education section of the Catalog.

The major consists of a combined curriculum in speech-language pathology and audiology. It consists of a minimum of 30 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.

Upper-Division Courses

CDS 240. Introduction to Deaf and Hard of Hearing (2).
Reviews history and philosophies contributing to present trends in education of the deaf. Introduces state and federal laws addressing services to the deaf and hard of hearing, as well as certification and evaluation requirements for teachers and interpreters. Includes a look at etiology of deafness, interventions, and devices for the deaf.

CDS 260. Signing Exact English I (2). R.
Introduces the use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Emphasizes vocabulary and interpreting skills. Prerequisite: CDS 240.

CDS 370. American Sign Language II (3). R.
Introduces vocabulary and speed of the use of ASL. Focuses on a greater fluency in expressive and receptive skills. Develops intermediate conversational skills. Prerequisite: CDS 270.

CDS 380. Practicum in Signing Exact English (1). R.
Provides students with observation of skilled interpreters in various educational K-12 settings throughout the semester. Opportunities to discuss with the interpreters about their responsibilities and roles in providing communication access to students in and outside of the classroom related activities. Repeatable for credit.

CDS 470. Conversational American Sign Language III (3). Pr.
Students demonstrate expressive and receptive mastery of targeted, context specific commands, questions, and statements in ASL and are exposed to ASL as a foreign language. Exposes students to the life and experiences of deaf people. Prerequisite: CDS 370.

CDS 481. Cooperative Education (1-6). S.
Allows students to participate in the cooperative education program. Offered C/NC only.

CDS 490. Directed Study in Speech and Language (1-8).
Research opportunities for advanced study. Prerequisites: CDS 470, CDS 481, and CDS 490.

Courses for Graduate/Undergraduate Credit

CDS 518. Deaf Culture (3). R.
Examines various cultural aspects of the deaf community. Presents the interrelationship of language and culture along with a study of socialization, norms, and values.

CDS 522. Deaf Heritage (3). Pr.
Studies the historical, cultural, and political aspects of the deaf community. Exposes students to the history and culture of the deaf community. Prerequisites: CDS 518.

CDS 540. Senior Seminar (2).
Introduces the pragmatic process required of the interpreter to analyze, organize, and prioritize information from a source for its accurate conveyance. Focuses on diagnosing areas causing breakdowns in interpreting, followed by strategies for improvement of skills. Prerequisites: CDS 240, 260, 330, 360, and 380.

CDS 545. Refining Interpreting Techniques in SEE (3).
Provides strategies for improving skills in expressive and receptive interpreting. Addresses issues such as reading signs, non-manual markers, and grammar, as well as application of pragmatics for proper word and grammar choices in English. Also addresses interpretation of cultural information and effective public speaking. Prerequisites: CDS 240, 260, 330, 360, and 380.

CDS 570. Accent Modification (3).
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 a supervised practicum setting. Clients with speech, language, and/or hearing disorders are the primary focus. Development of a philosophy of clinical processes includes procedures for therapy, writing behavior objectives and progress, and conducting parent/observer/significant others conferences. Prerequisites: 25 clock hours of observation; grade of C or better in CDS 304, 306, 381, 416, 510 (may be concurrent), and 514; 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 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 conduct of interviews, basic counseling strategies, and consideration of the "helping" role as practiced by communication disorders professionals. Focuses on information supportive of developing effectiveness in these roles. Considers multicultural concerns.

CDS 740. Selected Topics in 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 communicative disorders and sciences. Repeatable.

CDS 770. Communication Development and Disorders (3). Identifies communication deviations, differentiating disorders from developmental and/or cultural/linguistic differences. Evaluates potential impact of various communication disorders on academic performance of individuals. Considers strategies for facilitating development of children's communicative skills in educational settings.

Courses for Graduate Students Only

CDS 800. Research Methods (3). A survey of different research methods utilized in the fields of communication sciences and communication pathology. Students acquire the fundamental motivation, knowledge, and skills for conducting clinical and basic science research and for reading and critically evaluating the clinical research literature.

CDS 890. Independent Study in Speech and Language Pathology or Audiology (1-3). Arranged individual, directed study in specialized content areas in speech and language pathology or audiology. Repeatable. Prerequisite: instructor's consent prior to enrollment.

CDS 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 3. Prerequisites: CDS 800 and instructor's consent prior to enrollment.

CDS 895. Thesis Research (1-2). Repeatable, but total credit hours counted toward degree requirements must not exceed 2. Prerequisite: instructor's consent.

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

CDS 935. Advanced Practicum in Communicative Disorders and Sciences (1-6). Supervised internship in one or more of the following sections: Client Management, Clinical Supervision, Academic Instruction, Research, and Clinical and Program Administration. Intended for doctoral students or advanced master's-level students. Repeatable; more than one section may be taken concurrently.

CDS 940. Advanced Selected Topics in Communicative Disorders and Sciences (1-6). 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 111. 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, phonatory, articulatory, and auditory mechanisms from a functional point of view. Prerequisite: CDS 111.

CDS 304. Language I: Normal Acquisition (3). Cross-listed as Ling. 304. The study of the acquisition of language in the child from birth to six years of age. Evaluation of various acquisition theories in the light of current psychological and linguistic thought. Emphasis on the development of phonology, morphology, syntax, semantics, and pragmatics. Prerequisite: CDS 111 or departmental consent.

CDS 305. Phonetics: Theory and Application (3). Cross-listed as Ling. 306. Introduction to the International Phonetic Alphabet and its use in transcribing the sounds of American English with emphasis on the major dialects. Study of physiological, acoustic, and perceptual specification of speech sounds and a survey of current phonetic theory and applications to speech improvement. Extensive practice in transcription of speech. Prerequisite: prior or concurrent enrollment in CDS 111 or departmental consent.


Courses for Graduate/Undergraduate Credit

CDS 501. Speech and Hearing Science (3). Examines elements in the chain of events that lead to human communication. Studies speech production and perception at physiological and acoustical levels, emphasizing acoustics. Prerequisite: CDS 111.
Courses for Graduate Students Only

CDS 801. Advanced Speech and Hearing Science (3). Advanced study of speech and hearing processes, primarily in their normal aspects. Attention to current understanding of speech generation, the speech signal, and the normal function of hearing. Attention also to techniques of investigation of these processes. Prerequisites: CDS 501 or equivalent or departmental consent.

CDS 810. Neurology of Speech and Language II: Motor Speech Disorders (3). Studies speech disorders resulting from upper and lower motor neuron lesions in the central nervous system and emphasizes evaluation and treatment strategies for intervention. Prerequisite: CDS 605.

CDS 811. Dysphagia (3). Covers the disorder of dysphagia as it affects persons of all ages. Addresses normal swallowing in infants, children, and adults. Covers the etiologies which cause dysphagia as well as assessment procedures appropriate for various ages. Examines treatment procedures. Covers the importance of team interventions for dysphagia assessment and treatment. Addresses ethical and funding issues. Prerequisite: CDS 605.

CDS 812. Neurology of Speech and Language III: Normal Aging, Aphasia, and Dementia (3). Examines the continuum of communicative abilities (including speech, language, hearing, and cognition) which may be seen in older persons. Covers normal aging as well as the influence of stroke, dementia, and other neuropsychopathologies on communicative function in the elderly. Prerequisite: CDS 605 or instructor's consent.

CDS 813. Communication Disorders in Medical Settings (2). Provides the principles underlying a transdisciplinary 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 (3). Provides information about assistive technology for persons with special needs across the life span (e.g., autism, cerebral palsy, and degenerative neurological disease). Considered physical, linguistic, and cognitive factors in the design and implementation of assistive technology resources. Studies augmentative and alternative communication systems and computer applications/modifications. Explores resources for funding.

CDS 816. Language Disabilities in Children and Adolescents (3). Examination of various approaches to working with children and adolescents with language disabilities. Practical application of language assessment procedures, individualized planning, and language intervention strategies. Language in the classroom for school-age children and adolescents and collaborative strategies. Multicultural literacy and the multidimensional nature of language in the classroom. Prerequisites: CDS 416 and 516 or departmental consent.

CDS 514. Speech-Sound Disorders (3). Discusses basic methods and procedures of identifying, assessing, analyzing, and remedying speech-sound disorders. Practice in phonetic transcription of highly unintelligible speech samples. Prerequisite: CDS 306.

CDS 516. Language III: Introduction to Assessment and Intervention—Birth to School Age (3). Discussion of current language intervention strategies and programs for infants, toddlers, preschoolers, and school-age children, birth to 5 years. Examination of the development of individual and family plans. Discussion of the multidimensional nature of language and culturally different language patterns. Requires observation of clinical intervention and a laboratory experience. Prerequisites: CDS 416 and 510.

CDS 519. Genetic and Organic Syndromes (3). Introduces human genetics and the impact of chromosomal and structural anomalies of communication disorders. Assessment and remediation of cleft palate speech. Prerequisite: CDS 300.

CDS 605. Neurology of Speech and Language I: Basic Processes (4). A consideration of basic neuroanatomy and neuropsychophysiology necessary for obtaining an understanding of the representation of speech and language in the human central nervous system and of conditions resulting from neurological impairment. Prerequisite: at least senior standing.

CDS 616. The Science of Reading: Current Research in the Identification and Treatment of Dyslexia (3). Teaches students about the relationship between oral language and reading acquisition. Students will differentially diagnose and apply treatment protocols appropriately to individuals who present with specific reading disabilities. Exposes students to the last quarter century of research from the National Institutes of Child Health and Development (NICHD) centers that demonstrate the significant relationship between explicit and direct teaching of oral language aspects of acquiring reading in a written alphabetic language system. Prerequisite: instructor's consent.

CDS 780. Communication Disorders in Educational Settings (2). Organization, administration, and professional relationships in public school speech and language management programs on the elementary and secondary school levels. Emphasizes procedures and materials for surveying, scheduling, writing IEPs, therapeutic management, record keeping, and utilization of various instructional media. Should be taken prior to student teaching. Prerequisite: prior or concurrent enrollment in CDS 510.
ments. Prerequisites: CDS 813, department approval one year prior to enrollment, medical clearance, and insurance.

CDS 824. Graduate Methods and Practicum for External Placements (2). Techniques and methods for development of clinical skills in a supervised 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 conduct of client 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 Diagnos
tics 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, 518 (can be concurrent), instructor's consent, medical clearance, and insurance.

CDS 826. Graduate Methods, Practicum, and Diagnos
tics in Language and Literacy (2 or 4). Techniques and methods for development of clinical skills in a supervised practicum setting in the Clinical Language and Literacy Clinic. Prerequisites: CDS 516, 518 (can be concurrent), instructor's consent, medical clearance, and insurance.

CDS 827. Graduate Methods, Practicum, and Diagnos
tics in Voice (2-4). Techniques and methods for development of clinical skills in a supervised practicum setting in the Voice Disorders Clinic. Prerequisites: CDS 516, 518 (can be concurrent), instructor's consent, medical clearance, and insurance.

CDS 828. Graduate Methods and Practicum in Fluency (2-4). Techniques and methods for development of clinical skills in a supervised practicum setting in the Fluency Clinic. Prerequisites: CDS 516, 518 (can be concurrent), instructor's consent, medical clearance, and insurance.

CDS 829. Graduate Methods and Practicum in Accent Modification (2). Techniques and methods for development of clinical skills in a supervised practicum setting in the Accent Modification Clinic. Prerequisites: CDS 516, 518 (can be concurrent), instructor's consent, 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 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 conduct of client conferences. Prerequisites: department approval one semester prior to enrollment, medical clearance, and insurance.

CDS 900. Speech Acoustics (3). A detailed analysis of the acoustics of speech. Studies the various theories of speech production along with the instrumental analysis of speech sounds and ends with an examination of various speech disorders from the point of view of acoustics. Prerequisite: CDS 801.

CDS 903. Speech Perception (3). A critical review of the theories and empirical research addressing the perception of speech, species-specific communication, and speech recognition systems through artificial intelligence. Discusses both unimodal and bimodal models of perception. Prerequisite: CDS 900.

CDS 904. Speech Physiology (3). A critical review of pertinent research concerning the physiological bases of speech. Emphasizes understanding the instrumental techniques utilized in such studies. Prerequisite: CDS 900.

Audiology

Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.

Lower-Division Courses

CDS 251. Auditory Development and Disorders (2). Introduces the etiology, nature, and symptomatology of auditory disorders and pathologies. Prerequisite: CDS 111.

Upper-Division Courses

CDS 330. Educational Interpreting (1). Addresses the professional development, roles, ethics, confidentiality, and responsibilities of interpreters in educational settings. Includes interpreting principles. Covers ways to efficiently integrate the role of the interpreter into the educational system, as well as current issues in the field of educational interpreting. Prerequisites: CDS 240 and 260.

CDS 340. Pragmatic Process and Analysis in SEE (3). Introduces the pragmatic process required of the interpreter to analyze, organize, and prioritize information from a source for its accurate conveyance. Focuses on diagnosing areas causing breakdowns of interpreting, followed by strategies for improvement of skills. Prerequisites: CDS 240, 260, 330, 360, and 380.

CDS 345. Refining Interpreting Techniques in SEE (3). Provides strategies for improving vital skills in expressive and receptive interpreting. Addresses such issues as reading signs, non-manual markers, and grammar, as well as application of lag time and prioritization for proper word and grammar choices in English. Also addresses interpretation of cultural information and effective public speaking. Prerequisites: CDS 240, 260, 330, 360, and 380.

CDS 351. Introduction to Auditory Assessment (3). History and scope of the field. Surveys audiology threshold testing procedures, immittance audiometric interpretation. Prerequisite: CDS 251.

CDS 380. Practicum in Signs: English English (1). Provides students with observation of skilled interpreters in various educational K-12 settings. Opportunities to discuss with the interpreters about their responsibilities and roles in providing communication access to students in and outside of the classroom. Prerequisite: CDS 380.

CDS 381. 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 audiological evaluation for speech and language pathology students. Discusses procedures for diagnostic evaluation of a broad range of auditory disorders in infants, children, and adults in weekly class meetings, along with procedures for hearing screening, hearing aid maintenance and fitting, counseling, and others as appropriate. Speech and language pathology students engage in practicum experiences in audiological 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). Primarily designed for the graduate student in audiology. Covers the gross and microscopic anatomy of the inner ear and the auditory nerve. Emphasizes the various theories and empirical research addressing the perception of hearing. Prerequisites: CDS 251.

CDS 803. Introduction to Psychoacoustics (2). Basic principles underlying the perceptual hearing process, emphasizing the interdependencies between sound stimuli and subjective auditory experience as related to communication behavior. Prerequisite: CDS 802.

CDS 804. Clinical Audiology I (4). Provides in-depth theoretical and clinical principles associated with the administration and interpretation of the basic comprehensive audiologic and speech testing batteries. Provides hands-on learning of audiologic equipment and test batteries in tandem with the theoretical background for audiologic assessment. Prerequisites: CDS 251 and 351.

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

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


CDS 858. Electrophysiologic Audiology (4). Techniques and procedures for administration and interpretation of electrophysiologic tests of the auditory system, including otoacoustic emissions (OAEs), electrotympanometry (ETM), auditory brainstem response (ABR, AEP), and somatosensory evoked response testing. Addresses diagnostic and research applications of these tests. Prerequisites: CDS 858 and 859. Placement: one semester to complete program. Prerequisites: CDS 858 and 859. Placement: one semester prior to enrollment. Medical clearance and insurance.


CDS 865. Graduate Methods and Practicum in Aural Rehabilitation (2). Provides students with experiences in the provision of aural habituation/rehabilitation on behalf of hearing-impaired children and adults. Prerequisite: CDS 864 (can be concurrent).

CDS 885. Advanced Methods in Auditory Assessment-I (1-3). Methods in audiologic evaluation for audiology students. Discusses procedures for diagnostic evaluation of a broad range of auditory disorders in infants, children, and adults in weekly class meetings, followed by procedures for hearing aid fitting and evaluation, counseling, and others as appropriate. Prerequisites: audiology faculty's consent, medical clearance, and insurance.

CDS 886. Advanced Practicum in Auditory Assessment-I (1-9). Placement in variable credit off-campus practicum experiences in audiology. Placement is contingent upon successful completion of didactic graduate program in audiology and three semesters of CDS 885 and 886. Prerequisites: application one semester prior to enrollment. Medical clearance and insurance.

CDS 887. Internship in Auditory (1-9). Internship in the evaluation and treatment of hearing disorders. Prerequisites: CDS 885 and 886. Placement: one semester to complete program. Prerequisites: CDS 885 and 886. Placement: one semester prior to enrollment. Medical clearance and insurance.

Curriculum and Instruction (CI)

Undergraduate teacher education in curriculum and instruction is a five-stage competency-based program beginning with an introduction to teaching and concluding with reflections on an extended student teaching experience. Through intensive academic and field experience combined with systematic student reflection, the goal of this program is to produce effective, informed, and reflective teachers, capable of independent practice and continued professional growth.

Students enter the set of course work for the teacher education program when they are in their 35th hour with the Preprofessional Block taking CI 271 and 272 concurrently. Each block thereafter contains two to four classes which must be taken concurrently. The courses in each of the blocks must be taken together and completed before entering the next set of course work.

Lower-Division Courses

CI 101. Introduction to the University (3). Helps students make connections with academic programs, faculty, staff, and other students; develop required academic and career competencies; and make sense of the higher education environment.

CI 170. Introduction to Library Research (1). Students learn to locate and retrieve information in both print and electronic formats, including the Internet, and learn to distinguish between scholarly research and non-scholarly publications.

CI 201. The Computer as a Learning Tool I (1). Provides computing skills necessary to succeed in the academic environment. Learn how to use computers and software to organize course work, outline and plan papers, write and edit text, search for information, compile and report data, and integrate data with text. Apply the course content in a computer lab under the supervision of the instructor.

CI 271. Introduction to Professional Education (2). Students examine the career in education, characteristics of good teaching, the nature of teacher education programs, basic historical and philosophical foundations of education, and employment options. After analyzing their own personalities, personal strengths and weaknesses, and values and beliefs about teaching, students reach an informed decision regarding their own suitability for teaching. Prerequisites: C or better in English I and II, Communication, and College Algebra; sophomore standing: 2.75 GPA; in the 35th hour; and concurrent enrollment in CI 272.

CI 272. Preprofessional Field Experience (2). Intended primarily to give prospective teachers the opportunity to consider seriously their suitability for a career in education. In addition, students begin to develop skills in observing educational situations and settings which help them develop a teacher perspective and seeing schools as prospective workplaces and teachers as colleagues. Graded S/U only. Prerequisites: C or better in English I and II, Communication, and College Algebra; sophomore standing: 2.75 GPA; in the 35th hour; and concurrent enrollment in CI 271.

CI 290. Directed Study (2-3).

Upper-Division Courses

CI 303. Clinical Field Experience: English as a Second Language (ESL) I (1-4). Students work with an ESL specialist to learn hands-on strategies for teaching students whose native language is not English. Includes observing the 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 maximize successful performance among this population. Prerequisite: acceptance into the Teacher Education Program and a Professional Development Site Program.

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

CI 305. Clinical Field Experience: Special Education I (1-4). Students learn how special education services are delivered in public schools; gain practical experience interacting with public school students with various labels, abilities, and
selection of children's literature in all genres. Students develop evaluative techniques for identifying materials and practices 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 effects of cultural differences and human development on disabilities. Presents service delivery models and current special education practices. Prerequisites: admission to teacher education; CI 271 and 272; concurrent enrollment in CI 311.

CI 322. Instructional Strategies in Language Arts and Reading: Elementary School (5). Students examine the content and methods of instruction in the subject areas of language arts and reading and practice teach their subjects in a variety of settings. Prerequisites: acceptance into teacher education; CI 311, 316, 320, 326, 430; CESP 334 and 434; 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 and the work of teachers.

Students acquire a knowledge and understanding of instruction, the decisions and processes by which teachers translate goals and objectives into classroom reality. 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 their subject area and teach their subject in a variety of elementary school settings. Prerequisites: CI 312 and 328; CESP 430; 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 evaluate and summarize social studies in the elementary school. Prerequisites: CI 312 and 328 and CESP 433.

CI 413. Preschool Teaching (1-3). This field experience allows students to spend an extended length of time in an appropriate classroom working with a cooperating teacher to plan and implement instruction designed to teach selected objectives and evaluate learning outcomes. Students also evaluate their own instruction, noting strengths and weaknesses and planning for improvement. Graded S/U only. Prerequisite: acceptance into teacher education; CI 312 and 328 and CESP 433.

CI 427. Philosophy and History of Education (2). Presents the major historical and philosophical foundations of American education, and the historical development of educational institutions, the role of the teacher, and the role of society in the education of individuals. Prerequisites: acceptance into teacher education; CI 271 and 272.

CI 430. Social/Multicultural Education (3). Examines the social and cultural foundations of education and society in a changing society. In addition students develop an appreciation for the rich cultural and ethnic characteristics of American society. 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. Prerequisites: admission to student teaching, including the planning of school programs and assuming the responsibilities of a teacher. Graded C or better only. Prerequisites: acceptance into teacher education; CI 322, 412, 460; concurrent enrollment in CI 446 and 457.

CI 447. Student Teaching in the Elementary School (15). The primary purpose of the student teaching field experience is to provide evidence of the preservice teacher's readiness to engage in independent reflective practice as a certificated teacher. Working with one or more cooperating teachers in their 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, 412, 460; concurrent enrollment in CI 446 and 457.

The students teaching seminar 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 January 1 and for the spring semester by September 1. The exception to the required number of semester hours is the transfer student who has taken student teaching elsewhere or students who hold other certificates or who may have taught for a number of years. Any deviations from established grade point averages and other regulations must be approved by the College of Education's Standards Committee.

CI 458. Student Teaching in Early Childhood (4-6). This field experience provides half-time participation in preschool (three- and four-year-olds) under guidance of a master teacher and a college supervisor. Prerequisites: CI 322, 412, 460 and 406 and 9 semester hours of early childhood education. Prerequisites may be waived for equivalent experience with departmental consent. See CI 447 for deadlines for filing an application to enroll in student teaching.

The assignment for student teaching begins with the opening of the public school semester, and enrollees must arrange to meet from 8 a.m. to 5 p.m. daily and be available for selected evening programs throughout the semester.

Prerequisites: acceptance into teacher education, methods in the subject area, and concurrent enrollment in CI 457 and student teaching seminar.

For special areas see CI 462 through 466.

CI 462. Student Teaching: Secondary Art (4). Prerequisites: acceptance into teacher education, methods in the subject area. 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 465. Student Teaching: Secondary English (8-15). Prerequisites: acceptance into teacher education. CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 466. Student Teaching: Secondary Foreign Language (8). Prerequisites: acceptance into teacher education. CI 312, 328, CESP 433, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 468. Student Teaching: Secondary Social Studies (8-15). Prerequisites: acceptance into teacher education. CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 469. Student Teaching: Secondary Music (4). Prerequisites: acceptance into teacher education, methods in the subject area. CI 312 and 328, CESP 433, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 471M. Student Teaching: Secondary Mathematics (8-15). Prerequisites: acceptance into teacher education. CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 471S. Student Teaching: Secondary Science (8-15). Prerequisites: acceptance into teacher education. CI 413 and 454, 2.500 GPA in the major, and concurrent enrollment in CI 457 and student teaching seminar.

CI 481. Cooperative Education (1-8). Provides the student a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Prerequisites: successful completion of 24 credit hours and a 2.500 GPA. Repeatable for credit. Offered Cr/NoCr.

CI 490. Individual Studies in Education (1-3).

Courses for Graduate/Undergraduate Credit

CI 541. Desktop Publishing I (3). Desktop publishers control the entire publishing process, from creation and typesetting to printing and distribution, with equipment from the desktop. Word processing on the personal computer and laser printing are the two technological achievements that make possible a desktop publishing revolution. Stresses type design, harmony, legibility, copy fitting, and layout fundamentals.

CI 542. Desktop Publishing II (3). An intermediate-level course which enhances, enriches, and develops further skills and techniques used in desktop publishing. Students select software packages in which they need additional depth toward master-level. Prerequisite: CI 541.

CI 615. Learning and Reading Strategies (3). Students are provided with the understanding of the development of learning and reading strategies and explore instructional approaches for guiding secondary students in these strategies and their use in content areas.

CI 616. Literature for Adolescents (3). Students participate in extensive reading of literature in all genres consistent with studies of adolescents; reading interests, abilities, and responses to literature. Prerequisite: acceptance into teacher education. Currently and previously certified teachers meet prerequisites.

CI 621. Instructional Strategies: Middle Level Education (3). Students examine the middle grades school as an organization that takes its design specifically from the analysis of 10-14 year olds, their characteristics and needs. Students examine many curricular and instructional alternatives for middle grades education and learn to manage changes.

CI 701. Foundations of Education (3). Students survey the various foundations areas, 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. Fulfill 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. Prerequisites: graduate standing and teaching certificate.

CI 706. Reflective Inquiry into Learning, Teaching, and Schools (5). Fosters the reflective thinking ability of teachers about the relationships among learning, teaching, and schools. Explores various frameworks of growth and development, learning theory, social and multicultural education, and philosophical foundations. Students are engaged in ini-
tional 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 ethical 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 reaches every person's life. Teachers learn to integrate agricultural information into teaching basic subjects like math, language arts, social studies, science, and art.

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

CI 716. Introduction to School Librarianship (3). Introduces the role of the library and the librarian in the school. Studies issues affecting school libraries and librarians. Prerequisites: teacher certification and acceptance into graduate study in curriculum and instruction or departmental consent.

CI 717. Qualitative Inquiry in Education (3). Through readings and guided experiences in acts of inquiry in qualitative research, students acquire the disposition of a reflective inquirer, becoming familiar with the knowledge base for qualitative inquiry. Prerequisite: instructor's consent.

CI 718. Acts of Qualitative Inquiry in Education (3). Through guided experiences and fieldwork in acts of inquiry in qualitative research, graduate students develop and employ the skills of the reflective, qualitative inquirer. Prerequisite: CI 717 or departmental or instructor's consent.

CI 723. Analysis and Management of Behavior (3). Covers behavior management strategies specifically needed by classroom teachers to affect academic and social outcomes. Addresses technical, theoretical, and practical aspects of applied behavior analysis. Prerequisites: C 520 or 702 and CI 430 or 711 or equivalent; admission to graduate program in special education; or instructor's consent.

CI 724. Methods I: Academic and Cognitive Skills, Mild Exceptionalities (3). Introduces students to specific techniques for improving the cognitive skills and academic performance of students with mild exceptionalities (learning disabilities, emotional disturbances, behavior disorders, or mental retardation). Includes competencies for (a) teaching readiness, cognitive, and academic skills as well as content to students with exceptional learning needs; (b) basic instructional decision making; (c) determining where to begin instruction for students with special needs; (d) instructional management and monitoring strategies; and (e) strategies for working with students with exceptional learning needs in general and special education settings. Prerequisites: CI 370 or 702, CI 430 or 711, admission to the Teacher Education Program or to the graduate program in special education as a non-degree-seeking student, or instructor's consent.

CI 725. Improvement of Instruction in Science (3). Assists teachers in improving the way they teach science and the way their students learn science. Includes instructional strategies, curriculum, research, and methodology. Prerequisite: CI 402.

CI 726. Information Technologies in the School Library I (3). Introduces a wide range of information technology applications, including word processing, database, spreadsheet, and presentation software. Emphasizes on using these applications in a library setting. Covers the use of the Internet, options for filtering Internet content, Internet user policies, and basic Web page design. Includes basic computer and software troubleshooting, installation and removal of software, and computer security issues. Prerequisite: Windows 95 or equivalent skills.

CI 727. Information Technologies in the School Library II (3). Introduces a wide range of technologies and equipment in the school library. Covers selection and purchase as well as basic maintenance and repair of equipment. Includes the basics of local area network design. Presents methods of using technology with students including CD-ROM, laser disc, and video. Students learn the basics of multimedia production and strategies for teaching media production to students. Also looks at the future of technology in school libraries. Prerequisite: CI 726.

CI 728. Organization of Information Resources (3). Introduces the organization of information resources in the school library. Includes the organization and cataloging of print and non-print materials in US MARC format, how to assign Dewey Decimal Classification numbers and subject headings, how to identify the sources for copy cataloging records, and the importance of authority control in a library. Prerequisites: CI 726 and 727.

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

CI 730. Curriculum in the School Library (3). Gives students knowledge about the role of the school library in curriculum. Addresses how the school library media specialist teaches information literacy to students and staff. Prerequisite: CI 716.

CI 731. The Reflective and Inquiring Educator (6). Builds a foundation for reflective thinking about (a) the role of the educational practitioner; (b) educational issues in curriculum, instruction, and change theory; and (c) principles and applications of teacher-based action research. Prerequisite: admission to MED in curriculum and instruction.

CI 732. Library Management and Design (3). Provides information and examples on ways to effectively manage a library. Covers budgeting, grants, policies, procedures, and collection/selection/deselection. 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. Prerequisite: graduate standing.

CI 735. Introduction to the Gifted (3). Students are introduced to the educational and socio-cultural perspectives germane to gifted education. Explores issues related to the field of gifted education such as theories of intelligence, identification, delivery modes, characteristics and learning needs, special populations, curriculum differentiation, and underachievement. Prerequisite: graduate standing.

CI 736. Organizing a Reading Program (3). Helps students communicate information about reading to various groups, develop literacy curricula, participate in or lead professional development programs, participate in or conduct research, collaborate or supervise other literacy practitioners, communicate assessment results, and engage in professional activities. Prerequisites: CI 705 and 714.

CI 740. Introduction to Early Childhood Special Education (3). Students are provided a basic introduction to the emerging field of early intervention for children with disabilities and their families. Prerequisites: CESP 726 and CI 761.

CI 741. Early Childhood Special Education Methods: Preschool (3). Provides specific techniques needed to teach children with exceptionalities in preschool settings. Includes
competencies within early childhood special education for (a) legal foundations (IDEA, Part B); (b) characteristics of learners; (c) assessment, diagnosis, and evaluation; (d) report and individualized Education Plan (IEP) development; (e) instructional content and management strategies; (f) instructional content and practice; (g) planning and managing the teaching and learning environment; (h) managing student behavior and social interaction skills; (i) collaborating and forming partnerships with family members and other professionals; (j) professional and ethical practices; and (k) strategies for working with students with exceptional learning needs in general and special education preschool settings. Prerequisites: CI 320 or 702, CI 740, admission to the Teacher Education Program or to the special education graduate program as a non-degree student, or instructor's consent.

CI 743. Alternative Certification Internship I (3). In the alternative teacher certification program, this internship replaces the required student teaching assignment for the purposes of certification. Students teach half-time or more with a provisional certificate. Credit is given for a combination of (a) the teaching experience and (b) attendance and the completion of assignments in the scheduled seminars. Prerequisites: employment by a school district and completion of course work for provisional teacher certification.

CI 744. Alternative Certification Internship II (3). Continuation of CI 743. Prerequisites: employment by a school district and completion of course work for provisional teacher certification.

CI 746. Alternative Certification Internship III and IV (1). Continuation of CI 743 and 744. Prerequisites: employment by a school district, CI 743 and 744, and admission to MED in CI.

CI 747L Practicum: ESL/Bilingual Education (K-12 or adult) (3). Provides full-time participation in an ESL class supervised by a master teacher and a University professor. Focuses on the application of teaching methods for ESL/bilingual learners, the appropriate use of formal and informal assessment procedures, the development of cross-cultural teaching strategies, and the integration of language with content-area instruction. Prerequisites: CI 430 or 711, CI 733U, CDS 676.

CI 748. Alternative Certification Internship III (3). Prerequisites: employment by a school district and completion of course work for provisional teacher certification.

CI 749. Alternative Certification Internship IV (3). Prerequisites: employment by a school district and completion of course work for provisional teacher certification.

CI 750. Workshops in Education (1-4).

CI 751, 752, 753, 754, or 755. Special Studies in Education (1-3). For elementary and secondary school teachers. Repeatable with advisor's consent. Prerequisite: teacher certification or departmental consent.

CI 750. Parent Education (3). An introduction to ways of working with parents of preschool and elementary children and an analysis of formal and informal approaches emphasizing the teacher's role in developing these procedures.

CI 761. Early Childhood Education (3). Students examine programs, problems, and philosophy of educating children in the preschool years. Prerequisite: admission to the Teacher Education Program.

CI 762. Instructional Strategies: Preschool Education (3). Students examine the content and methods of instruction in preschools and observe/teach in a variety of settings. Students study teaching methods for preschool children and prepare materials to enhance the learning experiences of these children. Prerequisite: CI 761.

CI 765. 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 gain a basic knowledge base that will be helpful in other computer-related courses.

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, 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.

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.

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.

CI 780S. Computers in Science (2). Introduces classroom teachers to application of computer technology, CD-ROM, and laserdisc technology in the science curriculum. Appropriate software is evaluated and used in planning for instruction.

CI 781. Cooperative 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 project-based course requires 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 Instructors establish goals and activities appropriate for graduate-level study and applicable in an educational setting. Prerequisite: CI 782 or instructor's consent.

CI 786. Beginning Algorithms and Problem Solving (2). Introduces basic algorithms and principles of computer programming.

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). Investigate 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 772 or departmental consent.

CI 793. Multimedia in the Classroom (2). Prepares educators to plan and create multimedia presentations. Includes digitized audio and video, storyboards, scripting, appropriate hardware, and authoring software.

Courses for Graduate Students Only

CI 802. Seminar on Current Issues in Special Education (3). Analyze and critique research, integrate understandings, evaluate current issues in light of historical events, and draw conclusions relating theory to practice. Students make oral and written presentations. Prerequisite: within 6 hours of graduation, CESF 701.

CI 804. Classroom Research in Curriculum and Instruction (6). Guides students in formulating questions and using appropriate research principles to collect, analyze, interpret, and report data to evaluate the effectiveness of educational policies and/or practices. Sustained exploration of topics from CI 731 expected. Prerequisite: CI 731.

CI 807. Philosophy, History, and Psychology of Secondary and Elementary Education (3). Students survey the concepts of mind, learning, experience, and knowledge, and philosophical, historical, and psychological systems and theories as they relate to current educational problems and practices. Prerequisite: CI 701.

CI 809. Foundations and Characteristics of Mild Exceptionalities (3). Introduces students to the principles, concepts, and historical foundations underlying the provision of services for students with mild exceptionalities. Explanations...
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 273 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 afffective education to children and youth with exceptionality. Prerequisites: full admission to the graduate program, CI 723, 724, 809, and 887, and instructor's consent for majors in other master's degree programs.

CI 811. Family and Professional Collaboration (3). Assists the special educator in developing the skills to collaborate and consult with parents, siblings, regular educators, support personnel, and community agencies to facilitate the needs of children with exceptionality. Prerequisites: full admission to the graduate program, CI 735, 740, 809, and 887, and instructor's consent for majors in other master's degree programs.

CI 812. Transition Across the Life Span (3). Examines aspects of transition, programming for individuals with exceptionalities across their life span. Addresses transitions from (a) early childhood special education settings to the school environment, (b) elementary to middle school, (c) middle school to high school, (d) one special education setting to another (e.g., self-contained classroom to resource room or general education classroom), and (e) high school to post-secondary settings and independent functioning. Discusses roles of individuals with exceptional learning needs, parents, educators, and community personnel. Prerequisites: CI 809, full admission to the MEd program in special education, or instructor's consent.

CI 821. Classroom Reading Practicum (3). Students participate in a practicum experience, delivering developmental and corrective reading instruction in a classroom setting. Prerequisites: CI 615, 705, 714, 734, 776.

CI 835. Instructional Models and Practices (3). For teachers (1) to explore the theories behind, the development of, and the syntaxes for viable instructional practices; (2) to apply instructional models to the analysis and evaluation of various learning environments; and (3) to develop a commitment as a reflective practitioner to more effective instruction through an expanded and integrated repertoire of teaching strategies. Prerequisites: admission to MEd in curriculum and instruction program, CESP 701.

CI 837. Collaborating and Refining Problem-Solving Skills (3). This integrated class guides students in implementing school and classroom improvement practices that have documented success. Emphasizes collaboration skills in the identification, selection, and development of approved school and professional development projects.

CI 842. Early Childhood Special Education Methods: Infants/Toddlers and Families (3). Provides specific techniques needed to provide services, supports, and accommodations for infants/toddlers and their families who face challenges of developmental disabilities. Includes competencies within early childhood special education for (a) legal foundations (IDEA Part C); (b) collaborating and forming partnerships with family members and other professionals; (c) typical and atypical developmental patterns; (d) child assessment, diagnosis, and evaluation; (e) family assessment and evaluation; (f) family service coordination; (g) development of Individualized Family Service Plans (IFSP); (h) family-centered intervention strategies; (i) instructional content and practice; (j) planning intervention strategies in natural environments; (k) transitions for infants/toddlers and families; and (l) professional and ethical practices. Prerequisites: CI 320 or 702, CI 740, full admission to the MEd in special education program, or instructor's consent.

CI 836. Leadership and Sustained Professional Growth (4). Emphasizes commitment to and application of professional leadership in curriculum and instruction and/or school improvement. Sustained exploration of topics from CI 731, 804, and 835 expected. Prerequisite: CI 837.

CI 845. Curriculum Models and Practices (3). Examines theories, development processes, evaluation procedures, and current practices in curriculum. Emphasizes multiple conceptual frameworks for thinking about curriculum and reflective inquiry into the implications of those frameworks in today's classrooms and schools. Prerequisites: admission to MEd in curriculum and instruction program, CESP 701.

CI 847. Practicum/Internship in Special Education (1-10). Provides students with participation in a class for early childhood disability (847A), childhood/adolescents with learning disabilities (847F), educable mental retardation (847G), behavior disorders (847K) supervised by a University professor, emphasizing applied teaching methods for students with mild exceptionality, including formal-informal psycho-educational assessment devices, curriculum strategies, behavior management, and descriptive remediation for academic deficits. Prerequisites: full admission to MEd program in special education and completion of all core courses needed for provisional endorsement in specialty areas.

CI 847B. Practicum: School Libraries (3). Students pursue a professional experience in a school library media center under the supervision of an experienced practitioner in the field and a University supervisor. Prerequisites: CI 716, 727, 728, 729, 730, and 732.

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

CI 847M. Practicum: Gifted (3-6). Stresses applied teaching approaches. Provides opportunities to apply various theoretical, structural, and technological methodologies related to the education of the gifted learner. Prerequisites: CI 735 and 883.

CI 847R. Practicum: Regular Early Childhood (3). Provides opportunities in a traditional setting for the student to develop competencies with young children by working in a classroom setting with a trained professional. Prerequisites: CI 761 and 762.

CI 854. Improvement of Instruction in Social Studies (3). Students examine recent changes in social studies curriculum and instruction to investigate strengths and limitations of various approaches. Stresses competency in teaching for concept development, dealing with value-laden issues, and teaching for inquiry. An inquiry-centered learning environment emphasizes personalizing the social studies curriculum for children. Reviews and practices alternative teaching strategies and complementary evaluative techniques.

CI 855. Models and Practices of Curriculum and Instruction (6). Examines theories behind the development of, current practices and trends in, and evaluation and assessment procedures pertaining to curriculum and instruction. Emphasizes multiple conceptual frameworks for thinking about curriculum and instruction, and reflective inquiry into the implications of those frameworks in today's classrooms. Prerequisite: CI 766.

CI 856. Improvement of Instruction in Mathematics (3). Students examine recent trends in subject matter content and teaching guides to improve understanding of meanings, vocabulary, and mathematical concepts. Includes instructional methods and materials.

CI 860. Seminar on Research Problems (1-3). Helps MEd students formulate either an acceptable agenda for the development of a professional portfolio or an acceptable proposal for a master's thesis to satisfy the applications requirement for the MEd in curriculum and instruction.

CI 861. Seminar in Special Education Research (3). Development and presentation of research proposal. Prerequisites: admission to MEd in special education, CESP 701.

CI 862. Professional Portfolio Development (2). Students develop the professional portfolio proposed and accepted in CI 860. In consultation with their portfolio advisor and other faculty members, students proceed with their approved agendas. Prerequisite: CI 860.

CI 863. Presentation of Professional Portfolio (2). Students complete, present to their faculty portfolio committee, and orally defend the professional portfolio proposed in CI 860. Prerequisites: CI 860 and 862 or concurrent enrollment in CI 862.

CI 870. Trends in Early Childhood Education (3). Students analyze current early childhood education research with an in-depth study of contemporary programs influencing the education of young children.
CI 875-876. Master's Thesis (2-2). Students complete their research proposal that was accepted by their thesis committee. Also required is the completion and oral defense of the student's thesis. Students work closely with their advisor and committee. Students needing an additional semester to satisfy these requirements should enroll in CI 876. Students receive credit for course(s) when their thesis has been completed and defended. Prerequisite: CI 860.

CI 883. Methods in Teaching the Gifted (3). Students examine strategies and techniques for planning qualitatively differentiated curriculum to meet the unique academic needs of the gifted learner. Students explore a variety of curriculum approaches including acceleration, enrichment, compacting, grouping, and combinations of these. Prerequisite: CI 735.

CI 887. Assessment and Analysis of the Learner (3). Students learn the application of standardized and informal evaluation techniques including critical evaluation of standardized tests and their appropriateness for special populations (including school-age individuals with exceptionalities and reading disabilities as well as young children and culturally and linguistically diverse learners), and alternative methods of assessment and intervention techniques based on diagnostic profiles. Prerequisites: CI 320 or 702, 430 or 711, 733 and 724, full admission to the MEd program in special education, or instructor's consent.

CI 889. Action Research in Special Education (3). Students learn the process of classroom inquiry and reflection through the use of action research. Students identify a curriculum or instruction question related to special education settings. Through research, students seek to answer the question and prepare a paper to disseminate findings to professional colleagues. Prerequisites: Completion of the Core 1 provisional sequence in one of the MEd in special ed specializations. For mild exceptionalities: CI 201E 224; 239; 437; 1, and K 112 and 122; and for early childhood special ed: CI 740, 741, 742, 821, 487A Practicum, and 887. For gifted education: CI 755, 847M Practicum, and 883.

CI 894. Advanced Topics in Early Childhood Special Education (1-3). Students participate in topical seminars in early intervention offered periodically to facilitate opportunities for the in-depth study of critical issues or topical research in this rapidly developing field. Prerequisites: CI 740, 741, 742, 821, and 887 or instructor's consent. Repeatable for credit.

Kinesiology and Sport Studies (KSS)
The mission of the Department of Kinesiology and Sport Studies is to prepare students for careers in exercise science, physical education, and sport administration, as well as to provide the University community with physical activity experiences. Students are provided with quality instruction and practical experiences by faculty who engage in intellectual inquiry and service to the community and profession. The following degrees are offered: a BA degree in sport administration, a BA degree in physical education: K-12, and a BA degree in exercise science. Each degree area provides students with a quality education leading to numerous career opportunities.

Physical Education: K-12
Wichita State's elementary and secondary physical education teacher preparation degree program offers a quality physical 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.

Exercise Science
Wichita State's exercise science program is for those interested in careers involving exercise physiology, physical therapy, health promotion, clinical exercise-related fields, rehabilitation, medicine, biology of exercise, research, and academia or graduate education in health-related fields. The department also has a comprehensive human performance laboratory that is available for students completing exercise science coursework.

Sport Administration
Wichita State's sport administration degree provides students with a quality curriculum including courses such as sport marketing, sport law, sport management, and sport facility management. Students pursuing the sport administration degree program complete a two-semester internship requirement (or its equivalent). Graduates of this program work in a variety of sport settings including intercollegiate sports, minor league professional sports, major league professional sports, park and recreation departments, and in the health club/fitness industry.

Minor in Exercise Science
The exercise science minor consists of 23 credit hours including the following courses: KSS 201E, 328, 331, 440, 470, and 530; HS 331; and a prerequisite course in Anatomy and Physiology. This program provides minimum knowledge for careers in the fitness industry and for certification exams.

Minor in Sport Administration
The sport administration minor consists of 18 credit hours including the following courses: KSS 525, 560, and 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.

Physical Activity Service Program
The Physical Education Activity Program represents a variety of 1-credit-hour courses in areas including team activities, individual activities, combatives, fitness activities, and aquatics. Activity courses in the service program may be repeated for credit. Students should consult their college requirements to ascertain whether the activity courses will count toward degree requirements.

Lower-Division Courses
KSS 111. Foundations in Physical Education, Sport, and Fitness (3). Introduction to the history, principles, philosophy, and foundations of physical education with concomitant outgrowths for modern society.

KSS 112. Introduction to Sport Administration (3). Introduction to the discipline of sport administration and its vast array of career opportunities (since the sport industry represents the eleventh largest industry in the U.S.).

KSS 117. Community First Aid and Community CPR (2). Community first aid and community cardiopulmonary resuscitation with certification by the American Red Cross.

KSS 125. Health/Wellness Concepts (1). Teaches health and wellness concepts to promote living a positive, healthy life. Covers behavior-change theory to maximize the chances that behavior changes stimulated during the class will become permanent.

KSS 150. Workshop (1-3).

KSS 152. Special Studies in Health, Physical Education, and Recreation (1-3). Group activities in selected areas of physical education, exercise science, or sport administration. Offered CR/NCR only.

KSS 201A. Introduction to Physical Activity (2). Introduces basic skills and strategies of individual sports/activities. Prerequisite: K-12 physical education major.

KSS 201B. Introduction to Physical Activity (2). Introduces activities focusing on life adventures. Prerequisite: K-12 physical education major.

KSS 201C. Introduction to Physical Activity (2). Introduces fundamental motor patterns and movement education. Prerequisite: K-12 physical education major.

KSS 201D. Introduction to Physical Activity (2). Introduces basic skills and strategies of team sports. Prerequisite: K-12 physical education major.

KSS 201E. Introduction to Physical Activity (2). Introduces activities appropriate for students majoring in exercise science or K-12. Focuses on basic concepts of exercise physiology and fitness instruction. Prerequisite: KSS major.

KSS 201F. Introduction to Physical Activities (2). Introduces fitness activities such as aerobics, fitness games, fitness testing, healthy heart games, strength, and conditioning.

KSS 210. Practicum—Sport Administration (3). Integrates course work with planned and supervised professional experiences for a minimum of 15 hours per week. Prerequisite: KSS 112.

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

KSS 280. 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. Students must show proficiency at the American Red Cross Swimmer skill level within three weeks after enrolling. Prerequisite: KSS 107A or departmental consent.

KSS 310. Methods in Physical Education (3). Presentation and participation in methods of teaching physical education, emphasizing techniques, skills, organization of activities, and classroom procedures. Prerequisites: KSS 270 and 201A, B, C, D, admission to teacher education block, and completion of Preprofessional Block.

KSS 311. Physical Education in Middle School (3). Methods, techniques, teaching progression, analysis, and skill development of the Physical Education curriculum. Requires 15 hours of field experiences and observation in selected middle schools. Prerequisite: Block I of teacher education program.

KSS 312. Physical Education in High School (3). Methods, techniques, teaching progression, analysis, and skill development of the Physical Education curriculum for high school. Requires 15 hours of field experience and observation in selected high schools. Prerequisite: Block I of teacher education program.

KSS 326. Physical Education in the Primary Grades (3). 3R; 2L. Second in the series for an emphasis in elementary school physical education. Focuses on development activities for children in grades K-2. Includes 15 hours of laboratory experiences with primary school children. Prerequisite: Block I of teacher education program.

KSS 327. Physical Education in the Intermediate Grades (3). 3R; 2L. Final course in the series for an emphasis in elementary school physical education. Assists students in developing the necessary skills to teach physical education in grades 3-6. Includes 15 hours in laboratory experiences with intermediate grade school children. Prerequisite: Block I of teacher education program.

KSS 328. Kinesiology and Biomechanics (3). The understanding of the kinemetics and mechanics of human motion with respect to performance of sport activities. Prerequisite: KSS 229 or equivalent.

KSS 331. Care and Prevention of Athletic Injuries (3). For prospective coaches, athletic trainers, health and physical educators—to aid in the recognition, evaluation, and care of athletic injuries. Techniques in taping, prevention, and rehabilitation of injuries. Prerequisite: KSS 229 or equivalent.

KSS 332. Technology for K-12 Physical Educators (3). Provides knowledge, skills, and tools to effectively implement technology into health and physical education. Examines computer technology as well as technology associated with the HPER disciplines. Students have opportunities for practical applications of technological skills.

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

KSS 360. Adapted Physical Education (3). Assists students in developing the necessary skills for the implementation of enjoyable physical activity into the lives of persons impaired, disabled, or handicapped. In addition to classroom work, students participate in at least two hours per week in 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 380. Organization and Administration of Sport (3). Discusses the fundamental aspects of a management within any sport-related entity. Addresses management, marketing, facility management, human resources, legal issues, budgeting/finance, purchasing, and communication.

KSS 425. Methods in Physical Education and Health (2). Methods of teaching physical education, health, and wellness. Acquaints elementary and middle school classroom majors with organizational skills and instructional materials. Not open to students in physical education. Prerequisite: Admission to teacher education block.


KSS 440. Concepts in the Prescription of Exercise (3). An introduction of techniques appropriate for prescripting, 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 465. Psychology of Sport (3). Explores the observations, descriptions, and explanations of various psychological and physiological factors that influence diverse aspects of sport and physical activity. Prerequisites: KSS 112, 380.

KSS 470. Fitness Practicum (3). Application of theory to practice by assisting in various activities associated with the field of exercise science (i.e., fitness instruction, weight management, weight training, athletic training, etc.) a minimum of 15 hours per week. Prerequisites: KSS 117, 201E, 530; a 2.500 GPA; or departmental consent.

KSS 471. Student Teacher—Physical Education—Secondary (4). Prerequisite: completion of all courses in major field and Block III of teacher education program.

KSS 472. Student Teacher—Physical Education—Elementary (4). Application for student teaching must be made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for student teaching begins with the opening of the public schools, and the student is expected to follow the public school calendar for a semester. Prerequisite: completion of all classes in the major field and Block III of teacher education program.

KSS 473. Student Teaching Seminar (1). Weekly seminar evaluates strategies for managing classrooms and assesses instructional strategies. Students also discuss the employment process and the requirements for teacher certification. Prerequisite: concurrent enrollment in KSS 471 and 472.

KSS 475. Issues and Trends in Sport Administration (3). A basic understanding of the developments, trends, and social processes that explain the widely popular sporting experiences in society today. Prerequisites: KSS 112, 380, 465, and 526.

KSS 481. Cooperative Education (4). Allows students to participate in the Cooperative Education program. Offered Cr/No Cr only. Prerequisites: 2.500 GPA and admission to College of Education.

**Courses for Graduate/Undergraduate Credit**

KSS 500. Health Education K-12 (3). Provides practical applications of theoretical models of change for the health field. Discusses health problems, strategies for affecting change, and outcome assessment. Develops selected instructional materials. Two field trips to preselected local health agencies. Additional projects required for graduate students. Prerequisite: Block I of teacher education program.
KSS 515. Rhythmic Activities in K-12 (3) Teaches methodology and curricular content of rhythmic activities appropriate for elementary and middle school children. Prerequisite: Block I of teacher education program.

KSS 520. Sport Tournament and Event Management (3). A detailed account of the structural designs, mathematical calculations, scheduling principles, procedures, and thought processes involved in organizing and conducting sport tournaments and events. Prerequisite: KSS 112.

KSS 525. Sport Facility Management (3). Focuses on various aspects of facility management, such as mission development, funding and budget, site selection/planning/design, floor surfaces, risk management, equipment purchase and maintenance, and personnel management. Prerequisite: KSS 112.

KSS 526. Sport Public Relations (3). Focuses on the application of public relations principles in a sport-related setting. Significant attention to media relations with specific topics including media guides and publications, handling statistics, and crisis management. Prerequisite: KSS 380 and 465.

KSS 528. Sport Finance (3). Introduces the sport administration student to financial challenges, financial statements, financial planning, and related issues within sport organizations. Prerequisite: KSS 380 and 465.

KSS 530. Physiology of Exercise (3), 3H; 1L. Provides a working knowledge of human physiology as it relates to exercise. Prerequisite: KSS 229 or equivalent.

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

KSS 543. Organization and Administration of Exercise Science (3). Introduces the various organizational and administrative issues existing in the field of exercise science. Addresses the concepts and issues involved with administering and organizing facilities such as corporate-sponsored wellness programs, sports medicine clinics, exercise laboratories, athletic training departments, physical therapy centers, cardio-pulmonary rehabilitation clinics, and health and fitness centers.

KSS 544. Organization and Administration of Physical Education Programs (3). The organizational and administrative problems of physical education programs and the management of the physical plant.

KSS 547A. Internship in Sport Administration (8). Culminates activity for students in sport administration. Students spend the equivalent of full-time employment in an appropriate agency for a total of at least 520 hours. Prerequisites: 90 hours of accumulated course credit, KSS 475, 2.50 GPA overall, and internship coordinator’s permission.

KSS 547B. Internship in Sport Administration (8). Second internship experience for students in sport administration; takes place in a different setting than KSS 547A. Students spend the equivalent of full-time employment in an appropriate agency for a total of at least 520 hours. Prerequisites: KSS 475A, 2.50 GPA overall and in major, senior standing in College of Education, advisor’s approval.

KSS 557. Internship in Exercise Science (8). Culminates activity for students completing the BA in exercise science. Students spend the equivalent of full-time employment in an appropriate agency for one full semester. Prerequisites: senior standing, departmental consent, KSS 470, 2.50 minimum GPA overall and for major, admission to College of Education.

KSS 560. Legal Aspects of Sport and Physical Activity (3) Focuses on the concepts of tort law, constitutional law, and statutory law as they relate to the sport professions. Emphasizes liability-related issues as they impact sport administrators, exercise professionals, and teachers/coaches of physical activity. Prerequisites: KSS 112, 380, and 465.

KSS 565. Marketing Sport and Physical Activity Programs (3). Introduces concepts and tools used in market sport and physical activity. Emphasizes marketing strategies that are applicable to the sport administrator, teacher/coach, and exercise professional. Prerequisite: MKT 301.

KSS 590. Independent Study (1-3). Prerequisite: departmental consent.

KSS 720. Teaching Strategies (3). Non-traditional and innovative techniques and strategies for increasing student participation and motivation in the physical education lesson. Prerequisites: senior standing, graduate standing, or instructor’s consent.

KSS 726. Communication in Sport (3). Since a sport organization’s success is largely dependent on the degree to which it can effectively communicate with key constituents, this class addresses a variety of communication-related topics, including public relations management, image, media relations, and community relations.

KSS 732. Introduction to ECGs (3). Develops a foundation in electrocardiography. Includes ECG leads, rate and rhythm, ECG complexes and intervals, conduction disturbances, arrhythmias, ECG differentiation of myocardial infarction, location, and drug effects on an ECG. Prerequisites: KSS 530 and senior standing, full standing in the Graduate School, or instructor’s consent.

KSS 750. Workshop in Education (1-4).

KSS 752. Special Studies in Kinesiology and Sport Studies (1-3). Group study in a prescheduled area of health, physical education, or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

KSS 760. Sport in Society (3). Impact of sports on American culture, with focus on competition, economics, mythology, education, religion, ethics, professional sports, and sports and minorities.

KSS 762. Tests and Measurement in Human Performance (3). Introduces testing, measurement, and evaluation techniques used in human performance and related fields. Students learn to conduct valid, reliable, and objective laboratory/field testing, measurement, and evaluation procedures commonly used in human performance settings. Prerequisites: KSS 111, 211E, 229, 320, and 530.


KSS 780. Physical Dimensions of Aging (3). Covers the complex physiological changes that accompany advancing age and how exercise affects the aging process. Includes an appreciation for how functional consequences affect mental and social dimensions of life. Emphasizes factors associated with the preparation, implementation, and evaluation of research projects involving elderly populations.

KSS 781. Cooperative Education Field Study (1-8). Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Individualized programs must be formulated in consultation with appropriate graduate faculty. The Plan of Study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education; graduate credit. May be repeatable for credit with a limit of 8 hours counting toward the graduate degree. Offered Cr/No only.

KSS 790. Applied Exercise Physiology (3). Focuses on the applied aspect of exercise physiology. Includes the areas of environmental influences on performance, optimizing performance through training, nutrition, and ergogenic aids, training and performance of the adolescent athlete and of elderly, and the differences in performance and training between genders. Prerequisite: KSS 530 or 630.

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 of physiological study as metabolic energy systems, cardiovascular and skeletal muscle adaptation, muscle fiber type differentiation, and responses to extreme environmental conditions. Discovers parameters for performance and establishes guidelines for training at high levels of performance.

KSS 796. Motor Integration (3). Examines the principles of motor skill acquisition, human motor performance, and motor control. Emphasizes the use of transfer, memory, practice schedules, motivation, knowledge of results, neuromotor functioning, and differences in motor abilities that are involved in motor skill performance. Prerequisite: graduate standing at WSU.

Courses for Graduate Students Only

KSS 800. Recent Literature in the Profession (3). Survey and critical analysis of research, and other pertinent materials in the field.
KSS 801. Leadership and Management in Sport (3). Initial introduction into the administration of sports in public schools, institutions of higher education, and commercial and professional sports organizations. Learn about the various components of sports administration by reading appropriate materials and entering into dialogue with practicing administrators.

KSS 803. Sport Marketing (3). Focuses on the application of marketing principles in a sport-related setting. Addresses such content areas as corporate sponsorships, ticket sales, broadcast agreements, promotional events, and direct marketing in the sport entertainment, sport participation, and sporting goods sectors of the industry.

KSS 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. Prerequisites: 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. New concepts, recent trends, methodology, programming, and supervision.

KSS 830. Advanced Physiology of Exercise (3). In-depth study into the physiological basis of exercise. Includes energy metabolism, respiratory dynamics, cardiovascular function, and regulation during rest, steady state, and exhaustive physical activity. Emphasizes immediate and long term adaptation to exercise and training. Prerequisite: KSS 530.

KSS 835. Legal Issues in the Profession (3). Acquaints the graduate student with legal research and the role that law plays in governing the sport and fitness industries. Actively research various theories of law and how they affect the nature of sport, fitness activity, the participants, and consumers. Investigates the basic concept of negligence utilizing illustrative cases from sports, physical education, and fitness activities. Also focuses on specific situations regarding injury and subsequent lawsuits.

KSS 847. Internship (6). Internship in selected areas of specialization in sport administration. Prerequisite: departmental consent.

KSS 847. Internship (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 847. 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 856: 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 827. Professional Portfolio Development (1-2). Students develop the professional portfolio proposed and accepted in CI 860. In consultation with their portfolio advisor and two other faculty members, students proceed with their approved agendas. Prerequisite: CI 860.

KSS 863. Presentation of Professional Portfolio (1-2). Students complete, present to their faculty portfolio committee, and orally defend the professional portfolio proposed in CI 860. Prerequisites: CI 860 and KSS 862 or CI 862 (or concurrent enrollment in 862).

KSS 875. Thesis Research (1-2). Development of a research problem and proposal with the direction of a graduate faculty member. Repeatable but total credit hours counted toward degree requirements must not exceed 2. Prerequisites: admission to graduate school in good standing, KSS 880, and departmental consent.

KSS 877. Thesis (1-2). Repeatable but total credit hours counted toward degree requirements must not exceed 2. Students must be enrolled in this course during the semester in which all requirements for the thesis are met. Prerequisites: KSS 875 and consent of the student's committee chair.

KSS 900. Special Topics (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent.

KSS 995. Applied Research (1-4). Provides opportunity for student to develop, in collaboration with a departmental faculty member, objectives and protocol for independent work.

Music Education
See School of Music section, College of Fine Arts.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R:2L means 4 hours of lecture and 2 hours of lab.
College of Engineering

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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, computer, 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 College of Engineering in program status. Students must complete the following courses, each with a grade of C or better, within the first 24 hours: (a) English 101/100, English 102, and Communications 111, and (b) Mathematics 242, or their equivalents.

Transfer students must present an earned GPA of 2.00 or higher on a 4.000 scale for all prior college work in order to be fully admitted into the College of Engineering. Transfer students with a GPA of less than 2.00 may petition for probationary admission.

Probation

Students are placed on academic probation if any of the following grade point averages is less than 2.00 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, NC, I, S, or U. Academic probation is not removed until all grade point averages are at least 2.00. Transfer students admitted on probation must complete at least 12 semester hours of credit work at Wichita State before probation may be removed.

Students on academic probation may not enroll for more than 12 semester hours in a 16-week term, 6 semester hours in an eight-week term, or 3 hours in a four-week term. Exceptions to these limitations may be made on the recommendation of the student's department advisor with the approval of the student's department chairperson.

Academic Dismissal

Students on academic probation are subject to academic dismissal from the College of Engineering if they fail to attain a cumulative WSU grade point average of 2.00 in the next 12 hours attempted, or a cumulative major grade point average of 2.00 in the next 9 hours attempted in their major field, and the grade point average for the most recent semester or Summer Session is below 2.00.

Academic Advising and Enrollment

Students in the College of Engineering are invited to seek academic advice from their advisors or the department chairperson any time during the school year. Engineering students are strongly urged to register early for courses during published registration dates to avoid closed classes. Late registration or adding engineering courses will be allowed only during the first week of a regular semester or the first three days of a Summer Session.

Students in the College of Engineering may not enroll in more than 20 hours per semester during the academic year. Summer Session enrollments are limited to a maximum of 5 hours for each four-week session or 10 hours during the eight-week session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.00 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: (A) WSU General Education requirements; (B) College of Engineering requirements; and (C) the Accreditation Board for Engineering and Technology (ABET) requirements. Guidelines for these are given below.

WSU General Education Requirements

(1) Communications skills courses: All WSU students must complete three courses in communication skills: English 101 or 100 (for non-native speakers), English 102, and Communication 111, each with a grade of C or better.

(2) Four Introductory courses in the disciplines, to include one course each in the divisions of Fine Arts, Humanities, and Social and Behavioral Sciences, and an additional course in a different discipline in either Humanities or Social and Behavioral Sciences.

(3) Two additional courses that are not Introductory. One is to be a Further Study course in one of the disciplines 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) Effective fall 2001, PHIL 385, Engineering Ethics, is a required course in Humanities under the General Education requirements described above.

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

(3) Core requirements (13 hours): AE 223, Statics (3 hrs.); ECE 282, Circuits I (4 hrs.); ENGR 255, Engineering Economy (3 hrs.); and ME 396, Thermodynamics (3 hrs.). These are courses that all engineering students must complete, regardless of major.

(4) Department requirements: Each department has specific courses that must be completed. These courses and their prerequisites are in the departmental sections of the Catalog and are listed on the department check sheets.

(5) Technical electives: Additional courses required, but not specified, by the department. Each should be chosen in consultation with a department advisor.

ABET Requirements

ABET expects the curricular content of an engineering program to include the equivalent of at least three years of study in the areas of mathematics, basic sciences, humanities and social sciences, and engineering topics. The course work must include at least (1) one year of an appropriate combination of mathematics beyond trigonometry and basic sciences, (2) one-half year (17 hours) of humanities and social sciences, and (3) one and one-half years (51 hours) of engineering topics.

Studies in basic sciences must include both general chemistry and calculus-based general physics at appropriate levels, with at least a two-semester sequence of study in either area. The courses in humanities and social sciences must provide 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 Internship Program described in this Catalog.

The Co-op plan is a voluntary program in which the student works part-time (parallel program) or alternates paid professional work periods with classroom periods during the junior and senior years. The two most typical plans are illustrated in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>3</th>
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<th>5</th>
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<tr>
<td>Semester</td>
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<tr>
<td>Plan A</td>
<td>W C W</td>
<td>C W C</td>
<td>C C</td>
</tr>
<tr>
<td>Plan B</td>
<td>C W C</td>
<td>W C W</td>
<td>C C</td>
</tr>
</tbody>
</table>

C Indicates in college. W Indicates at work.

These plans make it possible for each industrial position to be filled by two students, one from Plan A and one from Plan B. Other plans can be developed in cooperation with the coordinator.

To be eligible for the Co-op program, a student must demonstrate by academic performance during the freshman year the potential to complete the degree program satisfactorily. Generally this means the earning of a grade point average of 2.500 or higher. Also the student's character and personality must be acceptable to the cooperating employer. Transfer students with the above qualifications should contact the cooperative education coordinator at the beginning of their first semester at WSU. To continue in the program, a student must maintain a satisfactory academic standing.

Students interested in participating in the program should contact the College of Engineering Co-op coordinator who will provide the necessary application information. Upon acceptance into the program, the coordinator will assist the student in arranging interviews with cooperating industries.

Engineering—General Engineering (ENGR)

The following course explores general engineering topics.

Lower-Division Course

Engr. 101. An Introduction to Engineering (3). Assists engineering students in exploring engineering careers and opportunities. Provides information on academic and life skills essential to become a successful engineering student. Promotes connections to specific engineering majors and provides activities to assist and reinforce the decision to major in engineering. Recommended for all new engineering students. Offered fall and spring.

Aerospace Engineering (AE)

The educational objectives of the aerospace engineering program are to provide (a) an undergraduate education that will allow successful graduates to become engineers who are sufficiently trained in the principles of aerospace engineering to meet the needs of potential employers and to provide (b) the foundation for capable students to pursue graduate studies in aerospace engineering and related fields.

Aerospace engineering students participate in an academic program of study in technical areas such as aerodynamics, performance, propulsion, flight mechanics, and structures. After developing a background of skills in these technical areas, senior students complete a two course sequence in aerospace design.

The aerospace engineering curriculum also gives students the opportunity to develop a comprehensive knowledge in mathematics, physics, general engineering, digital communications, written and oral communications, and humanities and social sciences.

Students have access to an excellent array of laboratory facilities including six wind tunnels, a water tunnel, a computer lab, a structural testing lab, and a composite structures lab. These facilities are among the finest found in academic institutions.

The aircraft industries in Wichita include The Boeing Company, Cessna Aircraft Company, Bombardier Learjet Corporation, and Raytheon Aircraft. The presence of these companies has a strong positive influence on WSU's aerospace engineering program.

Bachelor of Science Degree in Aerospace Engineering

Sequence of Courses

The undergraduate program requires the completion of 135 semester hours for graduation, minus advanced placement credit. The suggested course of study for aerospace engineering students is given in the following table.
Model Program

Freshman

Course  
ENGL 101 or 102, College English I and II  .6
CHEM 111, General Chemistry  .5
MATH 242 and 243, Calculus I and II  .10
PHYS 313 and 315, University Physics I and Lab  .5
EN 222, Engineering Graphics  .3
AE 227, Engineering Digital Computation  .3

Sophomore

Course  
COMM 111, Public Speaking  .3
MATH 344, Calculus III  .3
MATH 555, Ordinary Differential Equations  .3
PHYS 314, 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

Junior

Course  
MATH 521, Fluid Mechanics  .3
AE 415, Introduction to Space Dynamics  .3
AE 424, Aerodynamic Theory  .4
AE 502, Aerospace Propulsion I  .3
AE 514, Flight Mechanics and Controls  .3
AE 525 and 625, Flight Structures I and II  .6
EN 255, Engineering Economy  .3
PHIL 385, Engineering Ethics  .3

Senior

Course  
AE 512, Experimental Methods in Aerodynamics  .2
AE 607, Flight Control Systems  .3
ECE 282, Circuits I  .4
AE 526 and 626, Aerospace Design I and II  .5
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 student records office.
**Refer to graduation requirements at the beginning of this section for details.

Lower-Division Courses

AE 115. Introduction to Astronautics (1). An introduction and overview of astronautics. Historical, technical, and practical aspects of rocketry, space dynamics, spacecraft design, and the space environment. Intended for freshman and sophomore AE students who have not taken AE 324, however, it may be taken by students at any level in other engineering departments or colleges.

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 propulsive aspects of atmospheric flight vehicles. Intended for freshman and sophomore AE students who have not taken AE 324, however, it may be taken by students at any level in other engineering departments or colleges.

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 313.


AE 281A. 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/Nr only. Prerequisites: 30 hours toward a Bachelor of Science degree in aerospace engineering 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 6 hours of course work including this course in addition to 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/Nr.

Upper-Division Courses


AE 373. Dynamics (3). A study of the kinematics and kinetics of particles and rigid bodies. Includes force-mass-acceleration, work-energy, and impulse-momentum methods. Prerequisites: AE 223 and MATH 344.

AE 415. Introduction to Space Dynamics (3). Fundamentals of orbital mechanics and rigid body dynamics; two-body problems; orbital maneuvers and orbital determination; rigid body kinematics and kinetics. 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 matter warrants. Prerequisite: instructor's consent.

AE 481A. Co-op Education (1). See AE 281A. Graded Cr/Nr 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/Nr 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). Lumped 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. Prerequisites: AE 522, 524, and 525.


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 528.

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 633. Basic Composite Material Technologies (3). Introduces basic composite material technologies including mechanical behavior, material classification, testing for mechanical properties, manufacturing methods, nondestructive inspection, and design. Prerequisite: AE 333.

AE 654. Manufacturing Composite Structures (1-2). Manufacturing methods and tooling for fiber-reinforced polymer structures and structural components. Prerequisites: both ME 250 and AE 633 are 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 703. Rotor Aerodynamics (3). Aerodynamics of rotors, including propellers, wind turbines, and helicopters; momentum, blade element, and potential flow analysis methods; helicopter dynamics, control, and performance. Prerequisite: AE 424.

AE 707. Modern Flight Control System Design I (3). Modern multi-loop design methods for stability and control augmentation and guidance systems, specifically for aerospace vehicles. State variable model. Optimal state feedback gains and Riccati's equation, tracking systems, sensors, actuators, discretization of continuous dynamic systems, optimal design for digital controls, and effect of non-linearities and trim conditions on design considerations. Prerequisite: AE 534 or 607 or ECE 684 or ME 659.

AE 711. Intermediate Aerodynamics (3). A study of potential flow equations of motion, singularity solutions, principle of superposition, conformal mapping, thin airfoil theory, finite wing theory, effects of fluid inertia, three-dimensional singularities, swept wing theory, delta wing theory, introduction to panel methods, and an introduction to automobile aerodynamics. Prerequisite: AE 424 or ME 521.

AE 712. Advanced Aerodynamics Laboratory (3). 1R; 2L. Advanced topics in wind tunnel testing including analysis and sensitivity, modeling techniques, force design and calibration, control surface loadings, 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 716. Compressible Fluid Flow (3). Analysis of compressible fluid flow for one- and two-dimensional cases, moving shock waves, one-dimensional flow with friction and heat addition, linearized potential equation, method of characteristics, conical shocks, and subsonic similarity laws. Prerequisites: AE 424, ME 521 or equivalent.

AE 719. Introduction to Computational Fluid Dynamics (3). Classification of partial differential equations, numerical solution of parabolic, elliptic, and hyperbolic differential equations, stability analysis, boundary conditions, scalar representation of the Navier-Stokes equations, incompressible Navier-Stokes equations. Prerequisite: AE 424 or ME 521.

AE 722. Finite Element Analysis of Structures I (3). Advanced treatment of the theoretical concepts and principles necessary for the application of the finite element method in the solution of differential equations in engineering. Prerequisite: AE 625 or equivalent or instructor's consent.

AE 731. Theory of Elasticity (3). Develops the equations of the theory of elasticity and uses them to determine stress and displacement fields in linear elastic isotropic bodies. Uses Airy stress functions to obtain solutions and introduces energy principles and variational methods. Prerequisite: instructor's consent.


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

AE 759. Neural Networks for System Modeling and Control (3). Introduces specific Neural Network architectures used for dynamic system modeling and intelligent control. Includes theory of feed-forward, recurrent, and Hopfield networks; applications in robotics, aircraft and vehicle guidance, chemical processes, and optimal control.
Courses for Graduate Students Only


AE 807. Modern Flight Control Systems Design II (3). Continuation of AE 707, emphasizing the effects of atmospheric turbulence and correlated measurements; state estimation using the Kalman filter; output feedback design methods for flight controls; robustness requirements in the design and extension to digital systems. Prerequisites: AE 707 and 714.

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


AE 817. Transonic Aerodynamics (3). Experimental and analytical difficulties in flow and flight near Mach one; basic equations and solution methods: linearized potential equation; shock occurrence criteria on wings; transonic area rule; nozzle throat design; detached shock wave computations; computational methods. Prerequisites: AE 424 or equivalent; and AE 711 or 716.

AE 818. Hypersonic Aerodynamics (3). Classical hypersonic theory and approximations; Newtonian flow; flight corridors and trajectories; hot gas effects; experimental difficulties; short time test facilities; computational techniques; propulsion methods: airframe-engine integration; scramjets. Prerequisites: AE 711 and 716 or equivalent.

AE 822. Finite Element Analysis of Structures II (3). Formulation of the finite element equations by variational methods; the use of isoparametric and higher order elements for analyzing two- and three-dimensional problems in solid mechanics; introduction to solutions of nonlinear problems. Prerequisites: AE 722 and 731.

AE 831. Continuum Mechanics (3). Introductory treatment of the fundamentals, uniting 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 theory of thin shells. Prerequisite: AE 731.


AE 860. Selected Topics (1-3). Prerequisite: instructor's consent.

AE 876. MS Thesis (1-6). Graded SU only. Repeatable for credit. Prerequisite: admission to doctoral aspirant status.

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 academic advisor.

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 fixed wings in steady flow and thin airfoils oscillating in incompressible flow. Includes extension to compressible and three-dimensional airfoils and modern methods for low aspect ratio lifting surfaces. Prerequisites: AE 711 and 777 or instructor's consent.

AE 919. Advanced Computational Fluid Dynamics (3). A study of structured grid generation schemes, transformation of the governing equations of fluid motion, numerical algorithms for the solution of Euler equations, parabolized Navier-Stokes equations, and Navier-Stokes equations. Explore the fundamentals of unstructured grids and finite volume schemes. Prerequisite: AE 719 or ME 858.

AE 936. Theory of Plasticity (3). Includes criteria of yielding, plastic stress-strain relationships, and stress and deformation in thick-walled shells, rotating discs and cylinders, bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Includes two-Dimension and axially-symmetric problems of finite deformation and variational and extremum principles. Prerequisite: AE 731.
programs have a minimum of 93 credit hours in common. The common hours are made up of communications skills (9 hours), math and science courses (29 hours), general education courses (18 hours), and the courses covering the fundamentals common to each of the degree programs at WSU (13 hours). The remaining common courses are computer software and digital design courses and courses stressing the laws governing the individual behavior of electrical systems as well as their behavior when included as parts of more complex electrical systems (24 hours). The programs are structured to assure that electrical engineering students are familiar with computers and computer hardware and computer engineers have a strong background in electrical engineering principles.

Electrical and computer engineering students should have a strong interest in mathematics and science. As part of the curriculum, senior-level students are required to take a two-semester senior project sequence. This project gives the students the opportunity to apply skills acquired during their course work to "real-world" problems.

The electrical engineering degree has a sufficient number of technical electives to allow the student to develop skills in specialized areas such as communications and signal processing, control systems, electric power systems, electronics, and digital systems.

The computer engineering degree is a more specialized degree with more required courses and fewer electives.

Specific requirements and a suggested academic year breakdown for the electrical and computer engineering programs are given below.

**Model Program—Electrical Engineering**

Freshman
Course | Hrs.
--- | ---
ENGL 101/102, College English I and II | 6
MATH 242 and 243, Calculus I and II | 10
ECE 194, Introduction to Digital Design | 4
COMM 111, Public Speaking | 3
ECE 282, Circuits | 4
ECE 229, Engineering Computing in C | 3
General education courses | 3

Sophomore
Course | Hrs.
--- | ---
MATH 555, Differential Equations | 3
PHYS 313 and 314, University Physics I and II | 8
ECE 284, Circuits | 4
ECE 238, Assembly Language Programming for Engineers | 4
ECE 394, Introduction to Computer Architecture | 3
General education courses | 3

Junior
Course | Hrs.
--- | ---
IEN 254, Engineering Probability and Statistics | 3
ECE 383, Signals and Systems | 3
ME 396, Thermodynamics | 3
ECE 492, Electronic Circuits | 3
ECE 493, Electronic Circuits II | 3
ECE 688, Power Electronics | 4

Senior
Course | Hrs.
--- | ---
IEN 255, Engineering Economy | 3
MATH 344, Calculus III | 3
General education courses | 6
CHEM 111, General Chemistry | 3
Technical electives | 3

Technical electives | 12

* Refer to graduation requirements at the beginning of this section for details.

** Model Program—Computer Engineering**

Freshman
Course | Hrs.
--- | ---
ENGL 101/102, College English I and II | 6
MATH 242 and 243, Calculus I and II | 10
ECE 194, Introduction to Digital Design | 4
MATH 341, Calculus II | 3
ECE 229, Engineering Computing in C | 3
General education courses | 3

Course | Hrs.
--- | ---
ECE 585 and 595, Electrical Design Project I and II | 4
ECE 363, Electromagnetic Field Theory | 3
ECE 424, Digital Design Techniques | 3
ECE 488, Electric Machines and Transformers | 3
ECE 586, Introduction to Communication Systems | 3

Technological Electives | 16

Technical electives | 6

* Refer to graduation requirements at the beginning of this section for details.

** Lower-Division Courses**

ECE 101. Introduction to Electrical Engineering (3).

An introduction to electrical engineering design concepts. Includes number systems, Boolean algebra, Karnaugh maps, combinational circuit design, adders, multiplexers, decoders, sequential circuit design, state diagrams, flip-flops, sequence detectors, and test design. Covers combinational and sequential circuits. Uses CAD tools for circuit simulation. Prerequisite: MATH 111 or equivalent.

ECE 229. Engineering Computing in C (3).

An introduction to computer programming using C with applications to elementary engineering problems. Stresses both C syntax rules and problem solving approaches. Laboratory exercises given for programming on personal computers. Prerequisite: MATH 111 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 (3).

Circuit analysis and applications. Includes d.c. circuits, network theorems, capacitance and inductance, a.c. circuit analysis, frequency response, two-port networks, and transformers. Application to transistor circuit analysis, and the application of computer-aided analysis software toward circuit analysis and design. Prerequisites: ECE 282 and MATH 243.

ECE 284. Circuits II (3).

Circuit analysis and applications. Includes circuits with mutually coupled elements, transfer functions, 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.

ECE 294. Digital Design Techniques (3).

Digital design techniques include modules and register transfer language, RTL state design, memory, memory interfacing, and microprogramming, programmable logic devices, different types of PLDs, combinational and sequential circuit design using PLDs; ABEL; CMOS family; TTL; CMOS and CMOS to TTL interfacing. Uses CAD tools for circuit simulation. Prerequisite: ECE 194.
Upper-Division Courses

ECE 363. Electromagnetic Field Theory (3). A vector development of electric and magnetic fields, including experimental laws, polarization phenomena, and Maxwell's equations. Prerequisites: ECE 282, MATH 344 and 555.

ECE 383. Signals and Systems (3). Properties of signals and systems, convolution and its application to system response, Fourier series representation of periodic signals, Fourier transforms and continuous spectra, filters, time domain sampling, and Z-transforms. Many of these topics involve discrete as well as continuous systems. Prerequisites: MATH 555 and ECE 229. 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 410. Distributed Parameter Circuits (3). 2R; 3L
A study of the theory and applications of distributed parameter circuits with emphasis on transmission lines. Treats telegraphers' equations, transient signals on lossless lines, steady state signals on lossless lines, effects of lumped impedances, and Smith Chart techniques. Prerequisite: ECE 383.

ECE 477. Selected Topics in Electrical Engineering (1-4). New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

ECE 481A. Co-op Education (1). Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating course work with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full-time on their Co-op assignment and need not be enrolled in any other course. Offered CR/NC only. Prerequisites: junior standing and approval by appropriate faculty sponsor.

ECE 481B. Co-op Education (1). Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating course work with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of course work including this course in addition to a minimum of 20 hours per week at their Co-op assignment. Offered CR/NC only. Prerequisites: junior standing and approval by appropriate faculty sponsor.

ECE 488. Electric Machines and Transformers (4). 3R; 3L
Theory and analysis of transformers, AC machines, and AC machines. Includes single-phase and three-phase transformers, DC machines, synchronous machines, and induction motors. Prerequisites: ECE 282 and ENGL 102.

ECE 492. Electronic Circuits I (3). Introduces semiconductor devices and applications in discrete and integrated circuit design. Applications include, but are not limited to, op-amp circuits, rectifiers, and transistor amplifiers. Prerequisite: ECE 229. Corequisite: ECE 284.

ECE 493. Electronic Circuits II (4). 3R; 3L
An investigation of the theory and application of discrete and integrated circuits. Includes op-amp construction, frequency response, feedback and stability, power amplifiers, and non-linear integrated circuits. Prerequisites: ECE 492 and ENGL 102.

Courses for Graduate/Undergraduate Credit

ECE 510. Optics (4). 3R; 1L
A study of the theory and application of optics. Includes geometrical optics, physical optics, Fourier optics, optical image processing, lasers, and nonlinear optics. Prerequisites: PHYS 314, ECE 383.

ECE 585. Electrical Design Project I (2). 3L
A design project under faculty supervision designed according to the student's interest. Prerequisites: COMM 111 and departmental consent. May not be counted toward a graduate electrical major.

ECE 586. Introduction to Communication Systems (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 PAM and PSK digital communication systems covered as time permits. Prerequisites: ECE 383 and either STAT 471 or ECE 254.

ECE 588. Advanced Electric Motors (3). Advanced electric motor applications and theory. Includes single-phase motors, adjustable speed ac drive applications, and stepper motors. Prerequisites: ECE 488 and 492.

ECE 594. Microprocessor Based System Design (4). 3R; 1L
Presents development of microprocessor based systems. Studies interfacing the address bus, data bus, and control bus to the processor chip. Memory systems and I/O devices interfaced to the appropriate busses. Vendor-supplied, special-purpose chips, such as interrupt controllers, programmable I/O devices, and DMA controllers, integrated into systems designed in class. Lab gives hands-on experience. Prerequisites: ECE 394, or 236 and 294.

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

ECE 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 656. Telecommunications (3). Topics in circuit and packet switching, layered communication architectures, state dependent queues, traffic engineering, call processing, software organization, routing, and common channel signaling. Prerequisite: ECE 586 or departmental consent.

ECE 664. Advanced Digital Lab (2). An open laboratory experience for computer engineering students. Gives the student an opportunity to use state-of-the-art devices and equipment in designing complex digital systems. Will not count towards an electrical engineering degree. Prerequisites: ECE 394 and 594.

ECE 684. Introductory Control System Concepts (3). An introduction to system modeling and simulation, dynamic response, feedback theory, stability criteria, and compensation design. Prerequisite: ECE 383.

ECE 688. Power Electronics (4). 3R; 3L
Deals with the applications of solid-state electronics for the control and conversion of electric power. Gives an overview of the role of the thyristor in power electronics application and establishes the theory, characteristics and protection of the thyristor. Presents controlled rectification, static frequency conversion by means of the DC link-converter and the 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, MOSFET, 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 overall view of the engineering fundamentals of distribution system. Discusses distribution system planning and automation, primary and secondary distribution networks. Presents voltage regulation, protection, and reliability. Prerequisite: ECE 598 or departmental consent.

ECE 726. Digital Communication Systems I (3). Presents the theoretical and practical aspects of digital and data communication systems. Includes the modeling and analysis of information sources as discrete processes; basic source and channel coding; multiplexing and framing; spectral and time domain considerations related to ASK, PSK, DPSK, QPSK, FSK, MSK, and other techniques appropriate for communicating digital information in both base-band and band-pass systems; intersymbol interference; effects of
tional coding, interleaver, Walsh code orthogonal modulation, Barker 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 area in engineering under 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 (BSE) and another in manufacturing engineering (BSMfGE). The BSE 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 concentrations in engineering systems, ergonomics/human factors engineering, and manufacturing systems engineering. The MEM program is geared toward helping engineers/technologists develop planning, decision making, and managerial skills while receiving advanced technical knowledge.

The department also offers graduate certificate programs in the following five areas: systems engineering and management, computer-aided design and manufacturing, industrial ergonomics and safety, production systems, and quality engineering and management.

Modern, well-equipped laboratories are available to supplement classroom theory in ergonomics, manufacturing engineering, and computer analysis. The department's 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, man-machine systems, simulation, project planning, inventory management, ergonomics, and optimization.

2. Some of the graduates will pursue graduate studies in engineering or business.

3. Graduates will enjoy professional success because of the program’s emphasis on solving real-world problems in industries and organizations in the metropolitan area.

Sequence of Courses

The BS in industrial engineering program requires the completion of 128 semester hours for graduation, minus hours commensurate with advanced placement credit. Students may select 12 hours of technical electives to emphasize their study of engineering systems, ergonomics, or manufacturing engineering. This allows students to specialize in a specific area of industrial engineering. Students' programs are determined by their own interests in consultation with their faculty advisors. Specific requirements and a suggested schedule for the industrial engineering program are given in the accompanying table.
**Model Program**

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101/100 and 102, College English I and II</td>
<td>6</td>
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<tr>
<td>MATH 242 and 243, Calculus I and II</td>
<td>10</td>
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<tr>
<td>PHYS 313, University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>IEN 222, Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>MFG E 258, Manufacturing Method I</td>
<td>3</td>
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</table>

**Sophomore**

<table>
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<tbody>
<tr>
<td>COMM 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>MATH 511, Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 385, Engineering Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 314, University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>AE 223, Statics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 229, Engineering Computing in C</td>
<td>3</td>
</tr>
<tr>
<td>IEN 254, Engineering Probability and Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 255, Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>IEN 452, Work Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>IEN 524, Engineering Probability and Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>IEN 550, Introduction to Operations Research</td>
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**Junior**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MATH 344, Calculus III</td>
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</tr>
<tr>
<td>ECE 282, Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>ME 250, Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IEN 549, Industrial Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td>IEN 553, Production and Inventory Control</td>
<td>3</td>
</tr>
<tr>
<td>IEN 554, Statistical Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>IEN 563, Facilities Planning and Design</td>
<td>2</td>
</tr>
<tr>
<td>IEN 565, Systems Simulation</td>
<td>3</td>
</tr>
<tr>
<td>Technical electives*</td>
<td>9</td>
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<tr>
<td>Humanities, social or fine arts electives*</td>
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**Senior**

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<tbody>
<tr>
<td>ME 398, Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 556, Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>IEN 390, Industrial Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 690, Industrial Engineering Design II</td>
<td>3</td>
</tr>
<tr>
<td>Technical electives*</td>
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*Refer to the College of Engineering graduation requirements in the WSU Undergraduate Catalog for details.

**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 BSMFG program at Wichita State is its emphasis on the following three manufacturing engineering areas: materials and processes; product engineering and assembly; and manufacturing quality and productivity. Manufacturing engineers can apply their broad and comprehensive skills in a wide spectrum of industries.

**Program Educational Objectives**

Educational objectives of the manufacturing engineering program are driven by WSU's mission as a metropolitan university. Specifically, our MFG E program educational objectives are:

1. A majority of our graduates will be employed in a major related to design, planning and control, implementation, and improvement of manufacturing processes.
2. Some of the graduates will pursue graduate studies in engineering or business.
3. Graduates will enjoy professional success because of the program's emphasis on solving real-world problems in industries and organizations in the metropolitan area.

**Sequence of Courses**

The BS in manufacturing engineering program requires the completion of 128 semester hours for graduation, minus hours commensurate with advanced placement credit. Students may select 9 hours of technical electives to emphasize their study of advanced manufacturing engineering concepts and related topics in other engineering disciplines. Selection of appropriate courses would allow the students to tailor their study to fit their individual interests and needs. Students’ programs of study are determined in consultation with their faculty advisors.

Specific requirements and a suggested schedule for the manufacturing engineering program are given below.

**Model Program**

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<td>3</td>
</tr>
<tr>
<td>IEN 255, Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>MFG E 502, Manufacturing Measurement Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MFG E 558, Manufacturing Methods and Materials</td>
<td>4</td>
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**Junior**

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<tr>
<th>Course</th>
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<tbody>
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<tr>
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<td>4</td>
</tr>
<tr>
<td>AE 333, Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ECE 282, Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 524, Engineering Probability and Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>IEN 554, Statistical Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>MFG E 545, Manufacturing Systems</td>
<td>3</td>
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<td>MFG E 554, Manufacturing Tools</td>
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**Senior**

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<th>Course</th>
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<tbody>
<tr>
<td>ME 439, Mechanical Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>IEN 664, Engineering Management</td>
<td>3</td>
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<tr>
<td>MFG E 590, Manufacturing Engineering Design I</td>
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<tr>
<td>MFG E 590, Manufacturing Engineering Design II</td>
<td>3</td>
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*To be chosen from an approved list (a minimum of 6 hours must be taken within the MFG E department).

**Industrial Engineering (IEN)**

**Lower-Division Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
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<tbody>
<tr>
<td>IEN 101, Introduction to Industrial and Manufacturing Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IEN 222, Engineering Graphics (3), 1R; 3L</td>
<td>3</td>
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</table>

**Industrial Engineering (IEN)**

**Upper-Division Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEN 222, Engineering Graphics (3), 1R; 3L</td>
<td>3</td>
</tr>
<tr>
<td>IEN 250, Topics in Engineering Graphics (2), 1R; 3L</td>
<td>3</td>
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**Industrial Engineering (IEN)**

**Senior**

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<tr>
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<tr>
<td>MFG E 545, Manufacturing Systems</td>
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**To be offered from time to time in various topics in industrial engineering.**

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**Industrial Engineering (IEN)**

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**Industrial Engineering (IEN)**

**Upper-Division Courses**

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*Refer to the College of Engineering graduation requirements in the WSU Undergraduate Catalog for details.

**To be chosen from an approved list (at least 6 hours must be from one of the engineering departments).

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 Co/No only. Prerequisites: 30 hours toward bachelor of science in industrial engineering degree or approval by 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 demand. Repeatable for credit. Prerequisite: departmental consent.

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

IEN 490. Independent Study (1-3). Arranged individual independent study in specialized areas of industrial engineering under the supervision of a faculty member. May be repeated for credit. Prerequisite: consent of supervising faculty member.

Courses for Graduate/Undergraduate Credit

IEN 524. Engineering Probability and Statistics II (3). A study of hypothesis testing, regression analysis, analysis of variance, correlation analysis, and design of experiments emphasizing applications to engineering. Prerequisite: IEN 254 or STAT 471.

IEN 549. Industrial Ergonomics (3). A systematic approach to the optimization of the human-task-environment system. Includes work space design, manual materials handling, cumulative trauma disorders, and environmental factors. Emphasizes applications in industry. Prerequisite: IEN 482. 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. Prerequisite: IEN 452 and ECE 229.

IEN 557. Safety Engineering (3). Environmental aspects of accident prevention, industrial compensation, and safety legislation. Fundamental concepts of occupational health and hygiene. Prerequisite: IEN 254 or STAT 471.

IEN 563. Facilities Planning and Design (2). Quantitative and qualitative approaches to problems in facilities planning and design, emphasizing activity relationships, space requirements, materials handling and storage, and plant layout. Prerequisites: IEN 550 and MFG 254. Corequisite: IEN 452.


IEN 664. Engineering Management (3). An introduction to the design and control of technologically based projects. Considers both the theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development, and personal skill assessment. Prerequisites: IEN 254 and 255.

IEN 724. Statistical Methods for Engineers (3). For graduate students majoring in engineering. Students study and model real-life engineering problems and draw reliable conclusions through applications of probability theory and statistical techniques. Designed to fulfill degree requirements for the BS degree in industrial and manufacturing engineering. Prerequisite: MATH 243.


IEN 740. Analysis of Decision Processes (3). Decision analysis as it applies to capital equipment selection and replacement, process design, and policy development. Explicit consideration of risk, uncertainty, and multiple attributes is developed and applied using 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 quantifying, assessing, and verifying reliability. Presents various factors that determine the capability of components emphasizing practical applications. Examples and problems cover a broad range of engineering fields. Prerequisite: IEN 524.

IEN 755. Design of Experiments (3). Application of analysis of variance and experimental design for engineering studies. Includes general design methodology, single-factor designs, randomized blocks, factorial designs, fractional replication, and confounding. Prerequisite: IEN 524 or instructor's consent.


IEN 760. Ergonomics Topics (3). New or special courses on topics in ergonomics and human factors engineering. May be repeated for different topics. Prerequisite: departmental consent.

IEN 764. Systems Engineering and Analysis (3). Presentation of system design process from the identification of a need through conceptual design, preliminary design, detail design and development, and system test and evaluation. Studies operational feasibility, reliability, maintainability, supportability, and economic feasibility. Prerequisites: IEN 254 and 255.

IEN 770. Industrial Automation (3). 2R; 3L. 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, DSC machine tools, and their integration into automated systems. Prerequisites: ECE 229 or knowledge of a programming language.

IEN 775. Computer Integrated Manufacturing (3). A study of the concepts, components, and technologies of CIM systems; enterprise modeling for CIM; local area networks; CAD/CAM interfaces; information flow for CIM;
shop floor control; and justification of CIM systems. Prerequisite: ECE 229 or knowledge of a programming language, MFG E 558.

IEN 780. Topics in Industrial Engineering (3). New or special courses are presented under this listing. Repeatable for credit when subject matter warrants.

IEN 781. Cooperative Education (1-6). A work-related placement with a supervised professional experience to complement and enhance the student's academic program. Intended for master's level or doctoral students in IE. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite: departmental consent and graduate GPA of 3.00 or above. Cr/No Cr only.

IEN 785. Tolerancing in Design and Manufacturing (3). Provides a basic understanding of the theory and application of tolerancing in design, manufacturing, and inspection. Reviews current literature in the area of tolerancing and inspection. Includes detailed discussion of the ASME standards on geometric dimensioning and tolerancing (GD&T), GD&T verification procedures, tolerance analysis and allocation, statistical tolerancing, and Taguchi's approach to tolerancing. Prerequisite: IEN 254 or instructor's consent.

Courses for Graduate Students Only

IEN 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 analyzing output from simulation models. Also studies variance reduction and model validation techniques. Prerequisite: IEN 565 and 524.

IEN 854. Quality Engineering (3). A broad view of quality tools and their integration into a comprehensive quality management and improvement system. Covers the theory and approaches of the major quality leaders such as Deming, Juran, and Crosby. Explores off-line and on-line quality engineering techniques, including cost of quality, the seven "old" and seven "new" tools, Quality Function Deployment, and statistical process control methods. Explores design of engineering experiments, including Taguchi's methods. Prerequisite: IEN 524.

IEN 857. Environmental Hygiene Engineering (3). Evaluation and control of mechanical, physical, and chemical environments. Environmental factors considered include heat, cold, noise, vibration, light, pressure, acceleration, radiation, and air contaminants. Prerequisite: IEN 549.


IEN 877. Foundations of Neural Networks (3). For students from a variety of disciplines. Introduces the theory and practical applications of artificial neural networks. Covers several network paradigms, emphasizing the use of neural networks as a solution tool for industrial problems which require pattern recognition, predictive and interpretive models, pattern classification, optimization, and clustering. Presents examples and discusses them from a variety of areas including quality control, process monitoring and control, robotics control, simulation modeling, economic analysis models, diagnostic models, combinatorial optimization, and machine vision. Prerequisite: instructor's consent.

IEN 878. MS Directed Project (1-3). A project conducted under the supervision of an academic advisor for the directed project option. Requires a written report and an oral presentation on the project. Graded S/U only. Prerequisite: consent of academic advisor.

IEN 880. Topics in Industrial Engineering (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject matter warrants.

IEN 890. Independent Study in Industrial Engineering (3). Analysis, research, and solution of a selected problem. Prerequisite: instructor's consent.

IEN 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 229 or AE 227 or departmental consent.

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

IEN 976. PhD Dissertation (1-6). Graded S/U only. Repeatable for credit. Prerequisite: admission to doctoral aspirant status.

IEN 990. Advanced Independent Study (1-3). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent.

Manufacturing Engineering (MFG E)

Lower-Division Courses

MFG E 101. Introduction to Industrial and Manufacturing Engineering (1). Cross-listed as IEN 101. An introduction and overview of the discipline areas within industrial and manufacturing engineering. Combines design, case study, and hands-on experience with lectures on the different emphasis areas.

MFG E 258. Manufacturing Methods and Materials I (3). Prerequisite: COI only. Provides a basic understanding of materials and processes used to manufacture products. Some of the major manufacturing processes covered include metal machining, metal forming, extrusion, casting, joining, and plastics forming. Emphasizes the use of materials, sciences and mathematics to understand the behavior of materials undergoing the manufacturing process. Includes an introduction to process planning. Students gain an extensive hands-on experience in different manufacturing processes and in teamwork. Prerequisite: MATH 123.

MFG E 490. Independent Study (1-3). Arranged individual study in specialized areas of industrial engineering under the supervision of a faculty member. May be repeated for credit. Prerequisite: consent of supervising faculty member.

Courses for Graduate/Undergraduate Credit

MFG E 502. Manufacturing Measurement Analysis (3). Prerequisite: IEN 553. A study of measurement and analysis of variables in the production of industrial parts. Topics include basic principles of measurement, data acquisition, data analysis, dimensional measurement techniques, basic understanding and evaluation of GD&T, force, temperature, surface finish measurement, principals of gage design, gage capability studies, process capability studies, and sampling techniques. Includes a laboratory component to familiarize students with different kinds of measurement devices such as CMM, non-contact optical measurement devices, surface profilometer, optical flats, and automatic data collection. Prerequisites: IEN 254 and MFG E 258.

MFG E 545. Manufacturing Systems (3). Cross-listed as IEN 553. A study of the design, planning, implementation, and control of manufacturing systems. Discusses types of manufacturing systems, material requirement planning, capacity planning, facilities planning, scheduling, and an introduction to computer-aided process planning. Prerequisite: MFG E 558.

MFG E 554. Manufacturing Tools (3). Introduces the principles behind the design and fabrication of machine
tools and production tooling. Discusses tool materials, machine tool kinematics, accuracy, instrumentation, and control; and designing fixtures and jigs. Includes an introduction to design of inspection tools, machine and press working tools, and modular fixturing. Application of theories to labs and design problems. Prerequisite: MFG E 258.

MFG E 558. Manufacturing Methods and Materials II (4), 3R, 3L. Covers theoretical and practical aspects of manufacturing processes, including material properties and behavior as influenced by the manufacturing process. In-depth study of such manufacturing processes as casting, heat treatment, bulk forming, sheet metal forming, metal cutting, non-traditional machining, and process monitoring through measurement of manufacturing process variables. Also includes laboratory experience and plant tours. Prerequisites: MFG E 258 and ME 250.

MFG E 622. Computer-Aided Design and Manufacturing (3). Introduction to 3-D computer graphics. Discusses concepts of CAD/CAM/CAE, 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.

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


Mechanical Engineering (ME)

Mechanical engineering is one of the broadest engineering fields. Mechanical engineers are found in virtually all productive industries, from aircraft and automotive to consumer products and building equipment. In these jobs, mechanical engineers design products, machines, and processes for manufacturing. They analyze, test, and develop these products, machines and manufacturing processes to attain the best performance and durability within cost and time limits. Examples of specific mechanical engineering jobs include:

- design, development, and manufacturing of automotive engines and vehicle systems;
- design, development, and manufacturing of gas turbine and other aircraft engines;
- design and construction of electrical power plant energy conversion and generating systems;
- design, development, and manufacturing of consumer products, ranging from appliances such as refrigerators, washers, and electric drills, to the manufacturing systems for producing facial tissue and processed foods and packaging of these items;
- design and specification of heating, air-conditioning, and ventilating systems used in aircraft, automobiles, and buildings;
- analysis of the complex flow of gases and fluids such as air flow in aircraft inlet ducts and fluid flow in hydraulic and pumping systems;
- study of heat flow, ranging from boilers and automotive radiators to heat management problems in orbiting spacecraft.

The mechanical engineering program prepares students for these job possibilities, as well as possible entry to graduate school for those so inclined. This is accomplished through a broad course of study that covers not only the technical aspects required, but the ethical, professional, and communications skills needed to be a successful practicing engineer. The program includes components in mathematics and natural science, written and oral communications skills, humanities and social sciences, and core of engineering science subjects and a specified set of required technical courses covering the basic areas of mechanical engineering. In addition, students select elective courses that allow them to develop specialized knowledge in areas such as robotics, manufacturing, entrepreneurship, biomechanics, materials structure and behavior, heat transfer, and energy conversion. Modern laboratories and a wide variety of computer facilities provide students with hands-on experience in experimental work and computer-aided design and engineering.

Bachelor of Science Degree in Mechanical Engineering

Educational Objectives

1. Prepare students for employment as mechanical engineers
2. Enable interested students to pursue graduate education
3. Utilize the unique opportunities of a metropolitan location to provide graduates with industry-based project experiences.

Sequence of Courses

The program requires the completion of 128 semester hours for graduation, minus hours commensurate with advanced placement credit. Specific requirements and a suggested course of study for the mechanical engineering program follow.

Model Program

Freshman Course  
ENGL 101/100 and 102, College English I and II .................................................. 6

Mechanical Engineering Practice (3), 3R, 3L. Production processes, including material properties and behavior as influenced by the manufacturing process. In-depth study of such manufacturing processes as casting, heat treatment, bulk forming, sheet metal forming, metal cutting, non-traditional machining, and process monitoring through measurement of manufacturing process variables. Also includes laboratory experience and plant tours. Prerequisites: MFG E 258 and ME 250.

Sophomore Course  
MATH 344, Calculus III .................................................. 3
MATH 555, Differential Equations I ........................................ 3
PHYS 314, University Physics II ......................................... 4
AE 223, Statics .......................................................... 3
ECE 282, Circuits I ......................................................... 4
IEN 222, Engineering Graphics ......................................... 4
IEN 255, Engineering Economy ........................................ 4
ME 250, Materials Engineering .......................................... 3
ME 251, Materials Engineering Lab ..................................... 1
ME 325, Computer Applications ........................................ 2
Humanities and fine arts or social and behavioral sciences electives* ........................................ 3

Junior Course  
AE 333, Mechanics of Materials ......................................... 3
AE 373, Dynamics ........................................................ 3
ME 399, Design of Machinery ........................................... 3
ME 396, Thermodynamics ............................................... 3
ME 403, Mechanical Engineering Laboratory ..................... 3
ME 439, Mechanical Engineering Design I .......................... 3
ME 502, Thermodynamics II ............................................ 3
ME 521, Fluid Mechanics ............................................... 3
ME 522, Heat Transfer .................................................... 3
PHIL 305, Engineering Ethics ........................................... 3
Natural science electives** ............................................. 3

Senior Course  
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
Additional mechanical engineering electives§ ........................ 6
Humanities and fine arts or social and behavioral sciences electives* ........................................ 6

* Refer to graduation requirements at the beginning of this section.
** To be chosen from a list of approved courses available from the College of Engineering.
§ One thermal design elective and one mechanical design elective must be taken from those being offered.

Lower-Division Courses

ME 101. Introduction to Machines and Design (2). 6L
Students participate in mechanical dissection where they disassemble and reassemble a machine to learn how it oper-
ates 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 major declared or departmental consent.

ME 150. Workshop in Mechanical Engineering (1-3). Provides specialized instruction in areas relevant to mechanical engineering. Variable format. Repeatable for credit.

ME 250. Materials Engineering (3). Studies important structural materials used in engineering, including metals, polymers, and composites, primarily from a phenomenological viewpoint. Prerequisites: CHEM 111, MATH 242.

ME 251. Materials Engineering Laboratory (1). Companion laboratory course to ME 250. Experimental study of important structural materials used in engineering, including metals, polymers, and composites. Corequisite: ME 250.

Upper-Division Courses

ME 325. Computer Applications (3). Introduces the essential computer tools necessary for the mechanical engineering (ME) curriculum. Covers basic word processing and spreadsheet skills, C programming language as applied to ME problems. Also covers Matlab. Includes fundamentals of linear algebra and other computational tools. Prerequisite: MATH 243.

ME 339. Design of Machinery (3). Introduces engineering design process; synthesis and analysis of machine elements. 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 to engineering design; projects on practical engineering projects in machinery. Prerequisite: ME 250. Corequisite: AE 373.

ME 360. Selected Topics in Mechanical Engineering (1-3). New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisites: as published or departmental consent.

ME 398. Thermodynamics I (3). An introduction to the terminology and analysis techniques specific to thermodynamics centered around a study of the First and Second Laws of Thermodynamics. Prerequisites: MATH 243 and PHYS 313.

ME 403. Mechanical Engineering Laboratory (3). 2R; 3L. Introduces the basics of engineering measurements. Discusses related theory, followed by applications in such areas as strain, sound, temperature, and pressure measurements. Format includes lectures, recitation (which presents the concept of the experiment to be performed and the required data analysis), and laboratories. Analyzes the data obtained from measuring systems set up and operated in the laboratory to demonstrate and reinforce fundamental concepts of engineering mechanics. Prerequisites: ECE 282, ME 339, 521. Corequisite: ME 522.

ME 439. Mechanical Engineering Design I (3). Principles of mechanical design, emphasizing practice in the application of many mechanical design elements: shafts, bearings, gears, brakes, clutches, threads, fasteners, etc. Includes machine elements design, materials selection, fatigue, stress concentration, statistical concepts, and cost standardization. Innovative practical applications demonstrating integration of machine elements into a practical device. Prerequisites: ME 250 and 251, AE 333, and MATH 555.

ME 450. Selected Topics in Mechanical Engineering (1-3). New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 451. Technical Entrepreneurship (3). A junior/senior level course which carries design credit and integrates into the design project 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" toward taking their own engineering ideas beyond the prototype stage and to the marketplace. Explores the student to a wide range of business topics, including marketing 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, the appropriate faculty sponsor and cooperative education coordinator. Intended for students who will be working full-time on their Co-op assignment and need not be enrolled in any other course. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated, Offered Cr/NC only.

ME 481P. Co-op Education (1). Introduces the student to engineering practice by working in industry in an engineering-related job and provides planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, the appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working part-time on their Co-op assignment and be currently enrolled in courses leading to a mechanical engineering degree. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated. Offered Cr/NC only.

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 ME 398, emphasizing cycle analysis, thermodynamic property relationships, and psychrometrics, with an introduction to combustion processes and chemical thermodynamics. Prerequisite: ME 398 with a grade of C or better.

ME 503. Mechanical Engineering Systems Laboratory (3). 2R; 3L. Selected experiments illustrate the methodology of experimentation as applied to mechanical and thermal systems. Experiments include the measurement of performance of typical systems and evaluation of physical properties and parameters of systems. Group design and construction of an experiment is an important part of the course. Team and individual efforts are stressed as are written and oral communication skills. Prerequisites: ME 403, ENGL 102. Corequisite: ME 522.


ME 522. Heat Transfer (3). Temperature fields and heat transfer by conduction, convection, and radiation. Steady and transient multidimensional conduction, forced and natural convection, and combined heat transfer. Discusses various analytical methods, analogies, numerical methods, and approximate solutions. Prerequisite: ME 521.

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 decision-making process, 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 psychrometrics, thermodynamics, and heat transfer fundamentals. Focuses on design procedures for space air-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. Repeatable for credit when subject material warrants. 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 major pollutants, their major sources, their effects, and their attainment levels set by the U.S. Environmental Protection Agency. Emphasizes engineering systems for pollution control. Prerequisites: ME 398, AE 225, IEN 255, 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 (2). 2R, 3L. Integrates computer-aided design, finite element analysis, kinematics analysis, heat transfer analysis, and other considerations for design of mechanical components and systems. Provides a blend of theory and practice. Prerequisite: ME 439 or equivalent.

ME 639. Applications of Finite Element Methods in Mechanical Engineering (3), 2R, 3L. Introduces the finite element method (FEM) as a powerful and general tool for solving differential equations, arising from modeling practical engineering problems. Finite element solutions to one- and two-dimensional mechanical engineering problems in fluid mechanics, heat transfer, solid mechanics, and vibrations. Includes Galerkin’s and variational finite element models. Introduces commercial finite element computer tools such as ALCOR 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 521, 522.

ME 650. Selected Topics in Mechanical Engineering (1-3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 653. Internal Combustion Engines (3). A broad coverage of the basics of internal combustion engines emphasizing spark ignition and diesel engines. Definition of engine types and configurations and important variables used to evaluate performance and efficiency. Fundamentals learned in thermodynamics, chemistry, and mechanical design are used to understand engine design, performance, and control. Applications discussed are focused primarily on automotive use and involve power output, fuel consumption, and exhaust emissions. Prerequisite: ME 398.

ME 659. Mechanical Control (3). Modeling and simulation of dynamic systems. Theory and analysis of the dynamic behavior of control systems, based upon the laws of physics and linear mathematics. Concerns classical methods of feedback control systems and design. Prerequisites: ME 403, ECE 282, and MATH 555.

ME 662. Mechanical Engineering Practice (3). 1R, 6L. An exercise in the practice of mechanical engineering: students engage in a comprehensive design project requiring the integration of knowledge gained in prerequisite engineering science and design courses. Team effort and both oral and written presentations are a part of the experience. Prerequisite: mechanical engineering students in their last semester of study.

ME 664. Introduction to Fatigue and Fracture (3). Deals with the primary analytical methods used to quantify fatigue damage. These are the stress life approach, strain life approach, and the fracture mechanics approach. Prerequisites: ME 250, AE 333.

ME 665. Selection of Materials for Design and Manufacturing (3). Focuses on the selection of engineering materials to meet product and manufacturing requirements. Solution to various product and manufacturing problems by appropriate selection of materials is illustrated through the use of numerous examples and case studies. Prerequisites: ME 250, AE 333.

ME 666. Materials in Manufacturing Processes (3). Deals with fundamental principles of materials and their applications to manufacturing processes. 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 fracture toughness. Includes some review of basic mechanics of materials and elasticity as needed. Prerequisite: ME 250 or departmental consent.

ME 669. Acoustics (3). Fundamentals of acoustics including the study of simple harmonic systems, acoustic waves, transmission phenomena, and environmental and architectural acoustics. Prerequisites: MATH 555, AE 373.

ME 678. Studies in Mechanical Engineering (1-3). Arranged individual, independent study in specialized content areas in mechanical engineering under the supervision of a faculty member. Requires written report or other suitable documentation of work for departmental records. Three (9) hours maximum technical elective credit. Not for graduate credit. Prerequisite: departmental consent.

ME 719. Basic Combustion Theory (3). Introduction to the fundamental principles of combustion processes. Examines the chemistry and physics of combustion phenomena, that is, detonation and flames, explosion and ignition processes. Prerequisites: CHEM 111 and ME 502.

ME 729. Computer-Aided Analysis of Mechanical Systems (3). Modeling and analysis of planar motion for multibody mechanical systems including automatic generation of governing equations for kinematic and dynamic analysis, as well as computational methods and numerical solutions of governing equations. Open-ended student projects on engineering applications such as vehicle ride stability simulations for different terrains. Prerequisites: ME 399, AE 473, and MATH 555.

ME 737. Robotics and Control (3). A systems engineering approach to robotic science and technology. Fundamentals of manipulators, sensors, actuators, end-effectors, and product design for automation. Includes kinematics, trajectory planning, control, programming of manipulator, and simulation, along with introduction to artificial intelligence and computer vision. Prerequisite: ME 659 or equivalent.

ME 739. Advanced Machine Design (3). A broad coverage of principles of mechanical analysis and design of machine elements. Emphasizes dynamic system modelling, prediction of natural frequencies and forced response; support, 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 modelling, 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 which is most relevant to interfacing and implementation of control theory in computer-based systems. Laboratory sessions involve interfacing microcomputers to mechanical systems and software development for control methods such as PID. Prerequisite: ME 659 or instructor's consent.

ME 750. Special Topics in Mechanical Engineering (1-3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 755. Intermediate Thermodynamics (3). Laws of thermodynamics, introduction to statistical concepts of thermodynamics, thermodynamic properties, chemical thermodynamics, Maxwell's relations. Prerequisite: ME 502 or departmental consent.

ME 759. Neural Networks for Control (3). Introduces specific neural network architectures used for dynamic system modeling and intelligent control. Includes theory of feed-forward, recurrent, and Hopfield networks; applications in robotics, aircraft and vehicle guidance, chemical
ME 760. Fatigue and Fracture (3). Covers fracture mechanics in metals, ceramics, polymers and composites. Suitable for graduate and undergraduate study in metallurgy and materials, mechanical engineering, civil engineering, and aerospace engineering where a combined materials-fracture mechanics approach is stressed. Prerequisite: ME 250 or departmental consent.

ME 762. Polymeric Composite Materials (3). A basic understanding and knowledge about the structure and mechanical properties of polymeric composite materials is presented in detail. Discusses both short fiber and continuous fiber composites. Emphasizes special design considerations for composite materials including fracture mechanics and performance of composites under adverse conditions (fatigue and impact). Prerequisite: ME 250 or equivalent or departmental consent.

ME 764. Thermodynamics of Solids (3). Presents basic thermodynamic concepts which will form the working tools throughout the course. Emphasizes the interpretation of certain types of phase diagrams-not upon the use of thermodynamics to assist phase diagram construction but upon the use of phase diagrams to obtain thermodynamic quantities. Also, the thermodynamics of defects and defect interactions in metals, ceramics, polymers, elemental semiconductors, and composites. Prerequisites: ME 250 and 398 or departmental consent.

ME 766. SEM and EDAX (3). Introduces Scanning Electron Microscopy (SEM), a powerful tool in materials science and engineering which can be used to analyze structural defects in materials. Discusses both the theory and experimental methods, as well as the application of these methods. Prerequisite: ME 250 or departmental consent.

ME 767. X-Ray Diffraction (3). Theory of X-ray diffraction, experimental methods, and applications which can include determination of the crystal structure of materials, chemical analysis, stress and strain measurements, study of phase equilibria, measurement of particle size, and determination of the orientation of a single crystal. Prerequisites: ME 250 and AE 333 or departmental consent.

ME 781. Cooperative Education (1-8). A work-related placement with a supervised professional experience to complement and enhance the student’s academic program. Intended for master’s level or doctoral students in mechanical engineering. Repeatable for credit. May not be used to satisfy degree requirements. Prerequisite: graduate standing, department’s consent, and graduate GPA of 3.000 or above. Offered Cr/N Credit only.

Courses for Graduate Students Only

ME 801. Boundary Layer Theory (3). Development of the Navier-Stokes equation, laminar boundary layers, transition to turbulence, turbulent boundary layers, and an introduction to homogeneous turbulence. Prerequisite: ME 521 or departmental consent.

ME 802. Turbulence (3). An overview of the theory, practical significance, and computation of turbulent fluid flow. Prerequisites: ME 521 and 801.

ME 829. Advanced Computer-Aided Analysis of Mechanical Systems (3). Computational methods in modeling and analysis of static and dynamic 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 biomechanics. Prerequisite: ME 729 or instructor’s consent.

ME 832. Failure Analysis Applications in Mechanical Design (3). Application of engineering fundamentals to the study of mechanical failure brought about by the stress, strain, 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 to engineering practice with the analysis, design, and construction of operating control systems. Experiment with pneumatic, hydraulic, and electromechnical servosystems. Implementation of feedback and feedforward control schemes for various industrial systems and machine tools. The experiments are project-oriented and intended to be representative of the current state-of-the-art in classical and modern control practice. Prerequisite: ME 659 or equivalent.

ME 850. Special Topics in Mechanical Engineering (3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 851. Principles and Applications of Conduction Heat Transfer (3). Theory and measurement, Fourier’s equation, steady and unsteady state with and without heat sources, and sinks and numerical methods. Prerequisites: ME 522, MATH 757, or departmental consent.

ME 852. Principles and Applications of Convective Heat Transfer (3). Free and forced convection in laminar and turbulent flow. Includes analysis and synthesis of heat transfer equipment. Prerequisite: ME 522 or departmental consent.

ME 853. Principles and Applications of Radiative Heat Transfer (3). Radiative properties of real surfaces, configuration factor analysis, radiative transfer in participating media, exchange factor analysis, Monte Carlo methods. Prerequisite: ME 522 or departmental consent.

ME 854. Two-Phase Flow Heat Transfer (3). Thermodynamic and mechanical aspects of interfacial phenomena, boiling, and condensation near immersed surfaces, pool boiling, internal flow convective boiling, and condensation. Prerequisites: ME 522, MATH 555, or departmental consent.

ME 858. Computational Fluid Dynamics and Heat Transfer (3). Basic finite difference/volume methods; finite difference/volume representation of partial differential equations; stability analysis; finite difference/volume methods for solution of fluid and heat flow equations; grid generation and use of modern computer codes/software for analysis and visualization. Prerequisites: ME 521 and 522 or equivalent.

ME 860. Introduction to Ceramics (3). Introduces the fundamental principles of ceramic science and engineering with application on ceramics processes and fabrications. Presents the concepts and properties utilizing the crystal structure background. Discusses nonequilibrium aspect of phase relation in ceramics systems and their influence on processing parameters. Covers the microstructure form by liquid, liquid-solid, and solid-state reaction with some detail in combination with heat treatment. Students are expected to have backgrounds in chemistry, physics, math, thermodynamics, mechanics of solids, and introduction to materials in undergraduate engineering courses.

ME 864. Physical Metallurgy (3). Covers a range of basic concepts in physical metallurgy essential for further study in materials engineering. Topics include structure and dislocation, defects and thermal processes, solid solution and hardening, diffusion, and phase transformations. Prerequisites: ME 250 and 398, AE 333, 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; and various hardening and strengthening mechanisms. Concludes with discussion of physical properties and testing methods to measure these properties. Prerequisite: ME 665 or departmental consent.

ME 876. Thesis (1-4). Graded SU only. Repeatable for credit toward the MS thesis option up to 6 hours. Prerequisite: consent of MS thesis advisor.
ME 878. MS Directed Project (1-3). A project conducted under the supervision of an academic advisor for the directed project option. Requires a written report and an oral presentation on the project. Graded SU only. Prerequisite: consent of academic advisor.

ME 890. Independent Study in Mechanical Engineering (1-3). Arranged individual, independent study in specialized content areas. Prerequisite: instructor's consent.

ME 901. Advanced X-Ray Diffraction Theory (3). First part concentrates on the fundamental X-ray diffraction theories including dynamical theory of X-ray and anomalous absorption, with which a serious student in this field must be thoroughly familiar. Second part emphasizes the general theory of X-ray diffraction in a concise and elegant form using Fourier transforms. The general theory is then applied to various atomic structures, ideal crystals, imperfect crystals, and amorphous bodies. Prerequisites: ME 767, MATH 757.

ME 958. Computational Fluid Dynamics and Heat Transfer II (3). Vector form of the Navier-Stokes and energy equations; generalized transformation of the flow equations to the computational domain; numerical methods for inviscid flow equations, boundary layer-type equations, "parabolized" Navier-Stokes equations, and the Navier-Stokes equations. Prerequisite: ME 858 or equivalent.

ME 960. Advanced Selected Topics (1-3). New or specialized advanced topics in mechanical engineering. Prerequisite: instructor's consent.

ME 962. Advanced Ceramics (3). Covers concepts in ceramics science and engineering essential to understanding and using advanced ceramic materials such as high temperature 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 976. PhD Dissertation (1-16). Graded SU only. Repeatable for credit. Prerequisite: admission to doctoral aspirant status.

ME 990. Advanced Independent Study (1-16). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites advanced standing and instructor's consent.

The following abbreviations are used in the course descriptions; R stands for lecture and L for laboratory. For example, 4R; 2L means 4 hours of lecture and 2 hours of lab.
College of Fine Arts

Walter J. Myers, Dean
415 Jardine Hall • (316) WSU-3389
finearts.wichita.edu

The College of Fine Arts is responsible for instruction, scholarly inquiry, performance, teacher education (excepting theatre/dance), and applied study in music, dance, theatre, and visual arts. The School of Art and Design, the School of Music, and the School of Performing Arts (Dance, Theatre, and Musical Theatre) offer both general arts study and professional training programs at the undergraduate level; professional degrees are offered at the graduate level.

Students are presented with a complete spectrum of choices according to their interest in professional activities, teaching careers, graduate study, or acquiring an appreciation of the arts. They have the opportunity to explore various art forms as well as to develop their ability to respond to changes and challenges within the world of the arts. The college strives to develop and utilize new artistic techniques, current historical research, and recent technical innovations to achieve these ends.

The School of Music is an accredited member of the National Association of Schools of Music, and the 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 concentrations in elementary music, instrumental music, choral music, and music in special education; and a Master of Music (MM) with concentrations in history-literature, performance, piano pedagogy, instrumental conducting, opera performance, and theory-composition.

For information concerning requirements for entrance and curricula, consult the Wichita State University Graduate Bulletin.

Special Academic Area

Cooperative Education

The College of Fine Arts participates in the University Cooperative Education Internship program. The program is designed to provide relevant paid employment experiences that integrate with and complement the students’ academic programs. Degree credit is awarded. Students are placed in a variety of positions including education and business settings in theatre, music, and art disciplines. For further information, contact the fine arts coordinator in the Cooperative Education office.

Policies

Admission

All entering freshmen who declare a major within a discipline in the College of Fine Arts, or who enter as a general “undeclared” 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 must present an earned GPA of 2.000 or higher for all prior college work in order to be fully admitted into one of the schools within the College of Fine Arts. Transfer students with a GPA of at least 1.700 but less than 2.000 may petition for probationary admission.

Probation and Dismissal

Students are expected to make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the University.

Students are required to maintain an overall 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 Certifications 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 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.

General Education Requirements

Basic Skills

- English 100 or 101, and 102
- Communication
- Mathematics 111 or 112
- Fine Arts and Humanities
- One introductory course from a fine arts discipline
- One introductory course from two humanities disciplines
- One further study course from the same discipline as one of the introductory courses above or an Issues and Perspectives course in fine arts or humanities
- Social and Behavioral Sciences
- One introductory course each from two different social and behavioral science disciplines
- One further study course from the same discipline as one of the introductory courses above or an Issues and Perspectives course in social and behavioral sciences
- Natural Sciences and Mathematics
- An introductory course each from two different natural sciences and mathematics disciplines
- One further study course from the same discipline as one of the introductory courses above or an Issues and Perspectives course in natural sciences and mathematics

An introductory course meets general education objectives and serves as an introduction to the discipline. A Further Study course is taken in a discipline once a student has completed an Introductory course in the same discipline. An Issues and Perspectives course is designed as an interdisciplinary course or is intended to inform students of issues or problems from a disciplinary perspective. Students may take either a second course in a discipline represented by an introductory course or an Issues and Perspectives course from the division housing that discipline. Students must complete at least one and not more than two Issues and Perspectives courses to fulfill General Education Program requirements. Courses within the student’s major discipline do not count toward General Education Program requirements.

Fine Arts—General (FA)

Lower-Division Course

FA 101. Introduction to the University (3). An elective class which helps the incoming freshman/tranfer 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 shown to do better academically and enjoy their university experience more and are more likely to complete their degree.

Upper-Division Courses

> FA 301. 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 key concepts of marketing and artistry, goal setting, financing, legal issues, and public demographics.

> FA 310. Arts and Technology (3). General education further study course. Multimedia, high-technology, fast-paced presentations describing each of the arts disciplines (music, theater, 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 COD-ROM. Presents ideas and information on how technology has affected the arts and how the arts have actually affected technology.

FA 481. Cooperative Education (1-6). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the student’s academic program. 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 theater). 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 programs: graphic design, studio art, art history, and art education. These programs offer professional courses within the BA, BAE, and BFA degrees to train and educate art and design majors. Students in academic programs other than art are encouraged to enroll in art history and studio courses to gain an understanding of art and extend their visual literacy. The programs of study at the School of Art and Design demand from each student the self-discipline needed to expand options while pursuing a chosen direction. Many entering students have not yet identified the art discipline in which they wish to develop their strength. Others enter the school with a clear professional direction. Through structured programs which provide ample opportunity for experimentation, the school meets the needs of all its students.

During the first year of study, the Foundation curriculum develops technical skills. These fundamental skills provide the basis for the development of understanding and creating art forms. The same professional faculty members who teach advanced art courses teach these fundamental skills.

Art students have excellent classroom and laboratory facilities in the McKnight Art Center and renovated Henriksen Annex. The center provides extensive space for exhibiting student work. The Clayton Staples Art Gallery offers guest artist and thematic exhibits in addition to featuring BFA and MFA 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 excused in a course, or given a lowered grade, on the basis of excessive absences. In high enrollment demand classes, a student can be given the first two class meetings to decide to drop the course. In cases of serious illness or extended absence, the Chair of the School of Art and Design should be notified.

Supplies Charge

As part of University fees, the School of Art and Design requires that students pay a supplies charge on a per-course basis for enrollment in certain courses where materials such as clay, plaster, or printers ink must be provided for the class rather than purchased individually.

Transfer Students

The School of Art and Design accepts transfer students from accredited institutions of higher education and strives to keep the loss of credit to a minimum. The transfer student must be prepared to complete a minimum of 30 semester hours of undergraduate art 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 ensure student art work for exhibition purposes or take responsibility for its loss or damage under any circumstances. At the end of each semester, all students are required to remove from classrooms, laboratories, lockers, and studios all personal supplies and valued art work.

Graduation Requirements

Minor in Art

All students except art and design majors may complete 18 credit hours of art and be awarded the Minor in Art. Recommended plans of study for studio art, art history, graphic design, advertising design, or art education are available in the School office, 302 McKnight.

Certificate in Decorative and Ornamental Painting and Design

The 18-credit hour Certificate in Decorative and Ornamental Painting and Design introduces introductory studio courses in color theory, drawing, and painting which lead 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. Contemplative art, utilitarian art, decorative art, foundation painting, and fine art are studied. The certificate is recognized by the National Society of Sibley and Decorative Painters, Inc.

Bachelor of Arts in Art

The School of Art and Design offers a Bachelor of Arts degree (BA) in Art with a concentration in either studio art or graphic design. This program is designed for students who want a strong liberal arts education with a concentration in art. By requiring two-thirds the number of art requirements of the BFA degree, the BA allows the student to attain a more developed academic education while still gaining a breadth of art experiences. The core curriculum and the required introductory art courses prepare students for the advanced level courses listed in the concentrations. In addition to the University’s scholastic, residence, and general education requirements, candidates for the BA must complete the core curriculum (15 hours), art history (6 hours), introductory art (15 hours), fine art electives (9 hours), and the concentration (15 hours). The specific course requirements for the BA with a concentration in studio art or graphic design are given in the studio art or graphic design sections of the Catalog. Model programs of study are available in the School office.

Bachelor of Arts in Art History

The Bachelor of Arts degree in art history has a liberal arts perspective and is the initial professional degree that prepares students for graduate study in art history. The introductory art history curriculum and the foundation courses prepare students for advanced-level courses in the concentration. In addition to the University’s scholastic, residence, and general education requirements, candidates for the BA in art history must complete the introductory curriculum (9 hours), foundation (9 hours), art history concentration (21 hours), and a reading proficiency in at least one foreign language to support research of primary source materials. A model program of study is available in the School office.
Bachelor of Fine Arts

The Bachelor of Fine Arts degree is the initial professional degree in art and design. Its primary emphasis is on the development of skills, concepts, and sensitivities essential to the professional artist or designer.

The School of Art and Design offers the Bachelor of Fine Arts degree (BFA) in graphic design or studio art—ceramics, painting/drawing, printmaking, or sculpture. In addition to the University's scholastic, residential, and general education requirements, candidates for the BFA must complete the foundation curriculum (21 hours), art history (6 hours), introductory art (21 hours), art electives (9 hours), and the concentration (24 hours). The specific requirements for the BFA with a concentration in design or studio art are described under the appropriate program sections of the Catalog. Model programs of study are available in the School office.

Bachelor of Art Education

Competence in basic studio skills is emphasized in the Bachelor of Art Education (BAE) degree. In addition to the common core of studio skills and general studies, the student selecting a career in teaching develops competencies in professional education and in specific studio areas. The professional education component is dealt with in a practical context, relating the learning of educational theories and strategies to the student's day-by-day artistic experiences. Students are provided opportunities for various types of teaching and directed observation through the period of undergraduate art education study.

In addition to meeting the University's scholastic, residential, and general education requirements for graduation, candidates for the BAE must complete the foundation curriculum (21 hours), art history (6 hours), introductory art (12 hours), art specialization (9 hours), the art education concentration (21 hours), and professional education courses (32 hours). Courses within the art education curriculum fulfill both the University general education requirements for graduation and the Kansas certification requirements for teaching art at the elementary and secondary levels. The specific requirements for the BAE are given in the Art Education section of the Catalog. Model programs of study are available.

Foundation Studies (ART F)

The following courses are required of all undergraduate art major students. Either the Foundation curriculum (21 hours) or the Core curriculum (15 hours) as designated in respective BFA or BA programs must be completed by the time students have completed 60 credit hours or junior status or prior to entry to classes where individual courses serve as prerequisites.

Transfer students with 60 hours and Foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Lower-Division Courses

ART F 102. Introduction to Art and Design (3).
ART F 136. Foundation Design I (3).
ART F 136. Foundation Design II (3).
ART F 145. Foundation Drawing I (3).
ART F 146. Foundation Drawing II (3).
ART F 189. Foundation 3-D Design (3).

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 pursuits, such as art history, museum studies, conservation, criticism, and art education.

Bachelor of Arts in Art History

The Bachelor of Arts degree in art history has a liberal arts perspective and is the initial professional degree that prepares the student for graduate study in art history. The primary emphasis is on the monuments and artists of all major art periods of the past, a broad understanding of the art of the 20th century, and acquaintance with the art history of non-Western cultures. This knowledge is augmented by study in greater depth and precision of several periods in the history of art and concentration in at least one area to the advanced seminar level.

Requirements. A major in art history requires the completion of a minimum of 124 credit hours, including the University's General Education Program and 36 course hours in art and art history (9 hours in lower-division courses, 9 hours in the foundation curriculum, and 21 hours in upper-division work) with a minimum grade point average of 2.00. 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:........................................9
ART H 112, Survey of Art: Ancient
ART H 113, 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 Africa Art

Foundation Curriculum .....................................9
ART F 102, Introduction to Art and Design
ART F 136, Foundation Design I
ART F 145, Foundation Drawing I

Art History Concentration: five upper-division or 500-level courses chosen in consultation with faculty advisor ......................................21
ART H 426. Seminar: Techniques of Art History (3). General education  Further study course. A study of the art of Europe and Byzantium from the time of Constantine to Charlemagne. Emphasizes the function and iconography as it develops in mosaics and illustrated manuscripts.

ART H 520. Seminar in Art History (3). Systematic study in selected areas of art history. Course content varies but individual areas are not repeatable for credit.

>ART H 521. Italian Renaissance (3). General education Further study course. Painting, sculpture, and architecture in Italy from the 13th to the 16th centuries. Prerequisite: ART H 422 or instructor’s consent.

>ART H 524. 18th and 19th Century American Art (3). General education Further study course. Survey of American art from the colonial period through the 19th century, emphasizing its political and social developments. Prerequisite: ART H 421 or instructor’s consent.

>ART H 525. 20th Century Art Before 1945 (3). General education Further study course. A survey of modernist movements in European art from Post-Impressionism to Surrealism. Prerequisite: ART H 421 or instructor’s consent.

>ART H 526. Art Since 1945 (3). General education Further study course. An introductory survey of modern and contemporary European and American art. Prerequisite: ART H 421 or instructor’s consent.
Courses for Graduate Students Only

ART H 828-829. Thesis (2; 2).

ART H 832. Independent Study (1-3). Individually supervised work in a specialized area of the study of art history. Directed readings, research, and projects. Repeatable for credit. Prerequisites: suitable preparation for graduate work in art history (e.g., BA or BFA in art history) and instructor's consent.

Graphic Design—Visual Communication Art (ART G)

Design programs are often classified as the communication arts, advertising, or visual communication. The professional practitioners are concerned with ideas and problem-solving to effectively meet the communication needs of clients as diverse as corporations, publishers, advertising agencies, public and private institutions, and television stations. Design majors are trained to analyze visual communication problems as presented by client case studies, define the most appropriate approach, and implement creative and aesthetic solutions. The broad range of media used to investigate solutions to design problems include print, advertising, packaging, presentation, computer graphics, photography, video, illustration, and television.

Bachelor of Fine Arts in Graphic Design

The design area offers the Bachelor of Fine Arts in Graphic Design which is the professional education and training degree for the visual communication arts field. The Foundation Curriculum and the preparatory course work in the graphic design program 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.

Artifact G 316. Typography 2
ART G 330. Still Photography for Graphic Design

Art Electives

ART G 334, Graphic Design Studio 3
ART G 335, Graphic Design Studio 4
ART G 337, Drawing for Visual Communication I
ART G 338, Junior Portfolio Review
ART G 434, Graphic Design Studio 5
ART G 435, Graphic Design Studio 6
ART G 437, Drawing for Visual Communication
ART G 439, Graphic Design Senior Exhibition

Note: 40- upper-division hours are required for graduation.

Courses eligible for the concentration and electives:
ART G 321, Film/Video for Graphic Design
ART G 339, Package Design
ART G 350, Graphic Design Workshop
ART G 400, Television for Graphic Design
ART G 423, Design Media Topics
ART G 431, Multimedia
ART G 493, Editorial Illustration
ART G 494, Cooperative Education
ART G 495, Book Design and Production
ART G 500, Advanced Television
ART G 530, Advanced Computer Graphics
ART G 550, Advanced Computer Graphics
ART S 251, Introductory Watercolor Painting
ART S 252, Introductory Acrylic Painting
ART S 260, Printing I
ART S 340, Life Drawing Studio
ART S 345, Intermediate Drawing
ART S 362, Intermediate Intaglio Print II
ART S 364, Printing III—Lithography
ART S 365, Basic Screenprinting and Papermaking
ART S 545, Advanced Drawing Studio
ART S 549, Independent Study in Drawing
ART S 560, Advanced Printing Studio—Intaglio
ART S 561, Advanced Printmaking

COMM 324, Introduction to Integrated Marketing Communications
COMM 570, Magazine Production
COMM 626, Integrated Marketing Communications Campaigns

MKT 300, Marketing
THEA 345, Stage Lighting
THEA 399, Directing I
THEA 544, Advanced Stagecraft

*No more than two courses can be used to fulfill the concentration requirement.

Lower-Division Courses

ART G 200. Introduction to Computer Graphics (3). Introduces computer graphic programs in the Macintosh computer environment. Prerequisites: ART F 136 and 145 or instructor's consent.

ART G 210. Visual Communication (3). Introductory study of visual images and their use as symbols in communicating information in the mass media.

ART G 215. Typography 1 (3). Introduces typography, including history, compositional skill, character counting and copyfitting, stylistic considerations, and visual and informational hierarchal arrangement upon a single page. Prerequisite: ART F 137.

ART G 230. Introduction to Photography (3). Introduces beginning photo students to basic camera operations, film and paper characteristics, darkness procedures, and a historical overview of the development of photography. Students have an opportunity to acquire skills and techniques appropriate to photographic materials emphasizing the application of fundamentals of design. For students not majoring in graphic design.

ART G 231. Basic Photography (Motion Picture) (3). Introduces film production. Students may be required to furnish their own cameras.

ART G 234. Graphic Design Studio 1 (3). Studies graphic design theory, philosophy, history, and approaches to problem-solving in visual communication. Prerequisites: ART F 136 and 137.


ART G 238. Graphic Materials and Processes (3). Introduces a variety of graphic processes and materials including printing processes, cut-paper technique, linoleum cutting, embossment, foil and blind stamping, letterpress printing, marbling, box building, and assorted binding and presentation techniques. Prerequisite: ART F 137 or instructor's consent.

ART G 281. Cooperative Education (1-8). Allows students to participate in the cooperative education program. Graded Cr/No Cr only.

Upper-Division Courses

ART G 316. Typography 2 (3). Studies type as form, symbol, and communication with exploration of letterforms and their applications utilizing traditional and computer skills and media. Prerequisites: ART G 200 and 215.

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. Students may be required to furnish their own cameras. Prerequisite: ART F 137 or instructor's consent.
ART G 331. Film/Video for Graphic Design (3). Introduces film 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. Prerequisite: ART F 137, and ART G 200 and 330.

ART G 334. Graphic Design Studio 3 (3). Continuation of ART G 259 emphasizing the use of color with image and type. Prerequisite: ART G 255.


ART G 339. Package Design (3). Box construction and surface treatment in product design. Prerequisites: ART G 258 and 334.

ART G 350. Graphic Design Workshop (1-3). Repeatable for credit. Area covered is determined at the time the course is offered.

ART G 353. Junior Portfolio Review (1). A forum for the student to analyze and present their portfolio to the faculty and invited community design professionals for commentary. Prerequisite: prior to the last 30 hours or prior to entering senior standing within the graphic design program.

ART G 430. Television for Graphic Design (3). Examination and application of creative technical design aesthetics. Graphic design application of traditional order and conceptualized 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 photography, cinematography, or television with a design emphasis. Repeatable for credit. Prerequisites: ART G 330, 331, or instructor's consent.


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 438. Advanced Color and Design (3). Studies color as it relates to format, typography, visual images, and print reproduction in communication design. Includes integration of computer and hand techniques for visualization and production. Prerequisites: ART G 200 and 234.

ART G 439. Editorial Illustration (3). Concentration in editorial and narrative illustration emphasizing visualization and creative problem solving while exploring a variety of color media and techniques. Prerequisite: ART G 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 by their superior demonstration of concept and layout execution involving a variety of visual communication problems. The student presents the exhibit in a professional manner. Prerequisite: completed during the last semester of the senior year.


ART G 493. Book Design and Production (3). A laboratory course encompassing design and production of high-quality books including design, type composition, proofreading, illustration, manufacturing, packaging, binding materials (cloth, paper, and boards), distribution, copyright, royalties, and remuneration. 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.

Certificate in Decorative and Ornamental Painting and Design

Bachelor of Arts in Studio Art

The Bachelor of Arts in Studio Art degree provides a liberal arts emphasis on studio and design studies rather than the more intensive professional program of the BFA. The curriculum aims primarily towards breadth of experience and understanding rather than professional specialization.

Requirements: A minimum total of 124 semester hours is required for the BA in Studio Art and includes 60 semester hours of art courses as listed below.

Area

Core Curriculum..................................................15
ART F 102, Introduction to Art and Design
ART F 136, Foundation Design I
ART F 145, Foundation Drawing I
ART S 250, Introductory Oil Painting
ART S 251, Introductory Watercolor Painting
ART S 252, Introductory Acrylic Painting
ART S 252, Decorative and Ornamental Painting and Design
ART S 559, Terminal Project: Decorative and Ornamental Painting and Design

Certificare in Decorative and Ornamental Painting and Design

The certificate offers each student a broad range of experiences in a variety of media and processes in addition to an understanding and awareness of design and conceptual concerns in decorative ornamentation. Courses in color theory, drawing, oil painting, watercolor painting, acrylic painting, mixed media ornamental design, and a terminal project are required of each student and provide the foundation for successfully completing ornamental commissions after the certificate is completed. The knowledge and experience attained from these courses allow each student the flexibility necessary to pursue individual directions in ornamental design at a professional level. Students are required to complete a terminal project in decorative and ornamental painting and design prior to completion of the certificate program.

Requirements: 18 semester hours are required for the certificate:

Certificate curriculum.......................................18
ART F 137, Foundation Design II
ART F 145, Foundation Drawing II
ART S 250, Introductory Oil Painting
ART S 251, Introductory Watercolor Painting
ART S 252, Introductory Acrylic Painting
ART S 252, Decorative and Ornamental Painting and Design
ART S 559, Terminal Project: Decorative and Ornamental Painting and Design

Bachelor of Arts in Studio Art
Studio focuses area in either ceramics, painting/drawing, printmaking, or sculpture.

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 to 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.

### General

#### Upper-Division Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART S 270</td>
<td>Basic Ceramics Studio</td>
</tr>
<tr>
<td>ART S 272</td>
<td>Handbuilding with Clay</td>
</tr>
<tr>
<td>ART S 280</td>
<td>Sculpture</td>
</tr>
<tr>
<td>ART S 340</td>
<td>Life Drawing Studio</td>
</tr>
<tr>
<td>ART S 340</td>
<td>Intermediate Drawing</td>
</tr>
<tr>
<td>ART Electives</td>
<td>Courses which complement the Introductory Art courses and the Ceramics Concentration</td>
</tr>
</tbody>
</table>

#### Courses for Graduate Students Only

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ART S 570</td>
<td>Advanced Ceramics Studio I (4)</td>
</tr>
<tr>
<td>ART S 572</td>
<td>Advanced Ceramics Studio II (4)</td>
</tr>
<tr>
<td>ART S 573</td>
<td>Advanced Ceramics Studio III (3)</td>
</tr>
<tr>
<td>ART S 574</td>
<td>Kiln Methods (3)</td>
</tr>
<tr>
<td>ART S 576</td>
<td>Study of Ceramic Glazes I (3)</td>
</tr>
<tr>
<td>ART S 577</td>
<td>Study of Ceramic Materials II (3)</td>
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</tbody>
</table>

#### Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ART S 370</td>
<td>Intermediate Ceramics Studio I (3)</td>
</tr>
<tr>
<td>ART S 371</td>
<td>Intermediate Ceramics Studio II (3)</td>
</tr>
</tbody>
</table>

#### Foundation Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ART F 189</td>
<td>Foundation 3-D Design</td>
</tr>
<tr>
<td>ART F 240</td>
<td>Foundation Life Drawing</td>
</tr>
<tr>
<td>ART H 124</td>
<td>Survey of Western Art: Modern</td>
</tr>
<tr>
<td>ART H 300</td>
<td>Introductory Art</td>
</tr>
</tbody>
</table>

**Foundation Requirements:**

<table>
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<tr>
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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ART F 250</td>
<td>Introductory Oil Painting</td>
</tr>
<tr>
<td>ART S 251</td>
<td>Introductory Watercolor Painting</td>
</tr>
<tr>
<td>ART S 260</td>
<td>Printmaking I</td>
</tr>
<tr>
<td>ART S 270</td>
<td>Basic Ceramics Studio</td>
</tr>
<tr>
<td>ART S 272</td>
<td>Handbuilding with Clay</td>
</tr>
<tr>
<td>ART S 280</td>
<td>Sculpture</td>
</tr>
<tr>
<td>ART S 340</td>
<td>Life Drawing Studio</td>
</tr>
<tr>
<td>ART S 340</td>
<td>Intermediate Drawing</td>
</tr>
<tr>
<td>ART Electives</td>
<td>Courses which complement the Introductory Art courses and the Ceramics Concentration</td>
</tr>
</tbody>
</table>

**Ceramics Concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ART S 360</td>
<td>Intermediate Intaglio Print I or ART S 361, Intermediate Lithography Print I</td>
</tr>
<tr>
<td>ART S 370</td>
<td>Intermediate Ceramics Studio I</td>
</tr>
<tr>
<td>ART S 371</td>
<td>Intermediate Ceramics Studio II</td>
</tr>
<tr>
<td>ART S 372</td>
<td>Intermediate Handbuilding</td>
</tr>
<tr>
<td>ART S 374</td>
<td>Advanced Drawing Studio</td>
</tr>
<tr>
<td>ART S 375</td>
<td>Advanced Ceramics Studio I or ART S 376, Advanced Ceramics Studio II</td>
</tr>
<tr>
<td>ART S 380</td>
<td>Advanced Ceramics Studio III</td>
</tr>
<tr>
<td>ART S 381</td>
<td>Advanced Handbuilding Studio II</td>
</tr>
</tbody>
</table>

Note: 40+ upper-division hours are required for graduation.

**Lower-Division Courses**

<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ART S 270</td>
<td>Basic Ceramics Studio</td>
</tr>
<tr>
<td>ART S 272</td>
<td>Handbuilding with Clay</td>
</tr>
<tr>
<td>ART S 275</td>
<td>Study of Ceramic Materials I (3)</td>
</tr>
<tr>
<td>ART S 276</td>
<td>Study of Ceramic Materials II (3)</td>
</tr>
</tbody>
</table>

**Area Hrs.**

| Foundation Curriculum | 21 |
| ART F 102, Introduction to Art and Design | 1 |
| ART F 136 & 137, Foundation Design I & II | 2 |
| ART F 145 & 146, Foundation Drawing I & II | 2 |

**Area Hrs.**

| Intermediate Ceramics Studio I (3) | 6 |
| Intermediate Ceramics Studio II (3) | 6 |

**Area Hrs.**

| Intermediate Ceramics Studio III (3) | 3 |
| First course in intermediate 300-level series. Introduces students to various forming and construction methods related to the use of the potter's wheel. Introduces new forms and through critical analysis, students develop a personal statement with clay. Prerequisites: ART S 270. |

**Area Hrs.**

| Intermediate Ceramics Studio I (3) | 3 |
| Intermediate Ceramics Studio II (3) | 3 |
| Intermediate Ceramics Studio III (3) | 3 |
| Intermediate Ceramics Studio IV (3) | 3 |
| Intermediate Ceramics Studio V (3) | 3 |

**Area Hrs.**

| Advanced Ceramics Studio I (4) | 4 |
| Advanced Ceramics Studio II (4) | 4 |
| Advanced Ceramics Studio III (3) | 3 |
| Advanced Ceramics Studio IV (3) | 3 |
| Advanced Ceramics Studio V (3) | 3 |

**Area Hrs.**

| Kiln Methods (3) | 3 |
| Kiln Methods II (3) | 3 |

**Area Hrs.**

| Study of Ceramic Materials I (3) | 3 |
| Study of Ceramic Materials II (3) | 3 |
| Study of Ceramic Materials III (3) | 3 |

**Area Hrs.**

| Study of Ceramic Glazes I (3) | 3 |
| Study of Ceramic Glazes II (3) | 3 |

**Area Hrs.**

| Study of Ceramic Materials I (3) | 3 |
| Study of Ceramic Materials II (3) | 3 |
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 Students Only

ART S 870. Special Problems in Ceramics (1-5). Research in advanced problems in ceramics. Repeatable for credit.

ART S 875. Advanced Research of Ceramic Materials (3). Lectures and advanced research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Requires notebook and outside lab work.

ART S 876. Advanced Study of Ceramic Glazes (3). The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Requires notebook, advanced formulation records, and laboratory work. Prerequisite: ART S 875.

ART S 879-879. Terminal Project—Ceramics (1-5; 1-5).

BFA in Studio Art—Painting/Drawing

The Bachelor of Fine Arts in Studio Art with a concentration in painting/drawing offers intensive studio work organized within a pattern of courses designed to promote the development of concepts and their realization in vital material form. This approach requires a foundation in the fundamental aspects of painting media, as well as an understanding of the historical and social context in which painting is encountered.

Requirements: A minimum total of 129 semester hours is required for a painting/drawing major with 84 credits distributed as listed below.

Area Hrs.
Foundation Curriculum .................................................. 21
ART S 102, Introduction to Art and Design
ART S 136 & 137, Foundation Design I & II
ART S 145 & 146, Foundation Drawing I & II
ART S 189, Foundation 3-D Design
ART S 240, Foundation Life Drawing
ART History ................................................................. 9
ART H 124, Survey of Western Art: Modern
ART H 300+ .................................................................

Introductory Art ........................................................... 21
ART S 250, Introductory Oil Painting
ART S 251, Introductory Watercolor
Painting
ART S 260, Printmaking I
ART S 270, Basic Ceramics Studio or
ART S 272, Handbuilding with Clay
ART S 280, Sculpture
ART S 340, Life Drawing Studio
ART S 360, Intermediate Intaglio Print I or
ART S 361, Intermediate Lithography Print I

Art Electives ................................................................. 12
Courses which complement the
Introductory Art courses and the
Painting/Drawing Concentration
Painting/Drawing Concentration ..................................... 24
ART S 345, Intermediate Drawing
ART S 354, Intermediate Painting I
ART S 356, Intermediate Painting II
ART S 358, Intermediate Painting III
ART S 345, Advanced Drawing Studio
ART S 354, Advanced Painting I
ART S 356, Advanced Painting II

Note: 40+ upper-division hours are required for graduation.

Drawing Courses

Drawing is the integral discipline of the four major programs of the studio art area—painting, printmaking, sculpture, and ceramics—as well as the areas of graphic design and art education.

Upper-Division Courses

ART S 340. Life Drawing Studio (3). Lab fee. Emphasizes individual development, realistic observation, and interpretation. Repeatable for credit. Prerequisite: completion of foundation program.

ART S 345. Intermediate Drawing (3). Drawing projects, figurative or nonfigurative. Includes problems in style, suites of related works and history of drawing techniques, and materials. Prerequisite: completion of foundation program.

Courses for Graduate/Undergraduate Credit

ART S 545. Advanced Drawing Studio (1-3). Drawing with a variety of media. Uses graphic problems relative to individual technical and aesthetic development. Critics are given. Repeatable for credit. Prerequisites: ART S 340 and 345.

ART S 549. Independent Study in Drawing (1-3). A professional emphasis on technical or aesthetic research in the drawing area. Available only for the advanced drawing student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisites: 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, glazing, faux finishes, stenciling, and ornamental methods for their adaptation to interior, exterior, and furniture decoration and design. Classroom projects can become part of a professional job portfolio. Repeatable for credit.

ART S 354. Intermediate Painting I (3). Continued development of technical, formal, and conceptual skills studied in introductory painting courses. Preparation for ART S 356. Prerequisites: completion of foundation program, ART S 250, 251, 252, or departmental consent.

ART S 356. Intermediate Painting II (3). Builds upon concepts in ART S 354, while emphasizing individual development and a personal response to subject matter. Preparation for ART S 358. Prerequisite: ART S 354 or instructor's consent.

ART S 358. Intermediate Painting III (3). Continued emphasis on individual development and personal interpretation and response to subject matter while furthering formal understanding. Preparation for study in advanced painting courses. Repeatable for credit. Prerequisite: ART S 356 or instructor's consent.

Courses for Graduate/Undergraduate Credit

ART S 351. 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 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 experiential painting emphasizing the development of maturity, ideas, independent thinking, and personal expression. Mediums include oil, watercolor, and synthetic media. Repeatable for credit with the consent of the painting faculty.

ART S 855-859. Terminal Project—Painting (1-5; 1-5).

BFA in Studio Art—Printmaking

The Bachelor of Fine Arts in Studio Art with a concentration in printmaking offers a broad range of studio experiences in two primary printmaking disciplines, intaglio and lithography. Supplementing these areas are relief, screen printing, collagraph, and papernaking. The program provides a wide exposure to traditional and contemporary techniques.

Requirements: A minimum total of 125 semester hours is required for a printmaking major with 84 credits distributed as listed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>ART F 102, Introduction to Art and Design</td>
<td></td>
</tr>
<tr>
<td>ART F 136 &amp; 137, Foundation Design I &amp; II</td>
<td></td>
</tr>
<tr>
<td>ART F 145 &amp; 146, Foundation Drawing I &amp; II</td>
<td></td>
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<tr>
<td>ART F 189, Foundation 3-D Design</td>
<td></td>
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<tr>
<td>ART F 240, Foundation 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>
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<tr>
<td>ART H 300+</td>
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</tbody>
</table>

Introductory Art........................................ 21
ART S 230, Introductory Oil Painting or
ART S 251, Introductory Watercolor Painting
ART S 260, Printmaking I
ART S 270, Basic Ceramics Studio
or ART S 272, Handbuilding with Clay
ART S 280, Sculpture
ART S 340, Life Drawing Studio
ART S 340 or 345, Intermediate Drawing
ART S 354, Intermediate Painting I
Art Electives............................................ 12
Courses which complement the Introductory Art courses and the Printmaking Concentration
Printmaking Concentration................................ 24
ART S 360, Intermediate Intaglio Print I
ART S 361, Intermediate Lithography Print I
ART S 362, Intermediate Intaglio Print II
ART S 363, Intermediate Lithography Print II
ART S 365, Advanced Drawing Studio
ART S 560, Advanced Intaglio Print I
or ART S 561, Advanced Litho Print I

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 linocut or wood block techniques, emboissement, and a simplified unit on papernaking.

ART S 260. Printmaking I (3). An introduction to printmaking. Exploratory work in intaglio, collagraph, woodcut, or relief techniques, and a simplified unit on papernaking.

Upper-Division Courses


ART S 362. Intermediate Intaglio Print II (3). Third in series of five classes for printmaking major. Printmaking techniques and materials are the same as in ART S 360, but emphasizes more involvement with color printing. The format is generally larger and the mixing of intaglio techniques is encouraged. Prerequisites: ART F 145, ART S 260, 360.

ART S 363. Intermediate Lithography Print II (3). Third in series of five classes for printmaking major. Emphasizes color printing. Encourages developing a personal aesthetic direction. Also encourages matting and framing with emphasis in presentation for exhibition. Prerequisites: ART S 260 and 361.

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 Papernaking 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 papernaking 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 Intaglio Print I (4). Fourth in a series of five classes for the printmaking major. Students may specialize in any of the various intaglio relief, collagraph, paper-cutting techniques while emphasizing personal aesthetic development. Prerequisites: ART F 145; ART S 260, 361, and 362.

ART S 561. Advanced Litho Print I (4). Third in a series of four printmaking courses for the printmaking student wishing to specialize in lithography. Students may specialize in any of the various lithography techniques while developing a personal aesthetic direction. Prerequisites: ART F 145; ART S 260, 361, and 363.

ART S 562. Advanced Intaglio Print II (4). Fifth in a series of five classes for the printmaking major. Emphasizes personal emphasis on technical and aesthetic research. Prerequisites: ART F 145; ART S 260, 360, 362, and 560 or departmental consent.

ART S 563. Advanced Litho Print II (4). Fourth in a series of four printmaking courses for the printmaking student wishing to specialize in lithography. Emphasizes personal emphasis on technical and aesthetic research in stone lithography. Prerequisites: ART F 145; ART S 260, 361, 363, and 561 or departmental consent.

ART S 565. Independent Study in Printmaking (1-3). A professional emphasis on technical and aesthetic research in the printmaking area. Only for the advanced printmaking student with instructor’s consent. Statement of intent must be submitted for faculty approval 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 856 & 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).

BEA 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 fabrication, wood and stone carving, and bronze or aluminum casting take place continually, exposes the student to the diverse sculpture-making processes and how they relate to other artists’ concepts.

Requirements: A minimum total of 129 semester hours is required for a sculpture major with 84 credits distributed as listed below.

<table>
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</tr>
<tr>
<td>ART F102, Introduction to Art and Design</td>
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</tr>
<tr>
<td>ART F136 &amp; F137, Foundation Design 1 &amp; 2</td>
<td>18</td>
</tr>
<tr>
<td>ART F145 &amp; F146, Foundational Drawing 1 &amp; 2</td>
<td>18</td>
</tr>
<tr>
<td>ART F189, Foundation 3-D Design</td>
<td>12</td>
</tr>
<tr>
<td>ART F240, Foundation Life Drawing</td>
<td>12</td>
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<tr>
<td>Art History</td>
<td>6</td>
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<tr>
<td>ART H124, Survey of Western Art: Modern</td>
<td>6</td>
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<tr>
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<tr>
<td>Introductory Art</td>
<td>21</td>
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<tr>
<td>ART S250, Introductory Oil Painting</td>
<td>12</td>
</tr>
<tr>
<td>ART S251, Introductory Watercolor Painting</td>
<td>12</td>
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<tr>
<td>ART S260, Printmaking I</td>
<td>12</td>
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<tr>
<td>ART S280, Sculpture</td>
<td>12</td>
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<tr>
<td>ART S340, Life Drawing Studio*</td>
<td>12</td>
</tr>
<tr>
<td>ART S340 or S345, Intermediate Drawing</td>
<td>12</td>
</tr>
<tr>
<td>ART S362, Intermediate Intaglio Print II</td>
<td>12</td>
</tr>
<tr>
<td>ART S364, Printmaking III—Lithography</td>
<td>12</td>
</tr>
<tr>
<td>Art Electives</td>
<td>24</td>
</tr>
</tbody>
</table>

Sculpture Concentration (24 hours)

ART S380, Sculpture Studio (take 2 times) | 24 |
ART S381, Cast Sculpture Studio | 12 |
ART S345, Advanced Drawing Studio* | 12 |
ART S580, Advanced Sculpture Studio | 12 |
ART S300+, sculpture elective (take 2 times) | 12 |

Note: 40+ upper-division hours are required for graduation.

Lower-Division Course

ART S 280. Sculpture (1). Introduces sculptural techniques in welded steel, assemblage, kinetics, and optics. Prerequisites: ART F145 and 189.

Upper-Division Courses

ART S 380. Sculpture Studio (1-3). Emphasizes the main approaches to sculpture. Stresses the form, concept, and construction of sculpture. Includes carving techniques in wood, stone, and/or plastic; construction and assemblage techniques selected from wood, plastic, metal (welded, brazed, riveted, etc.), and/or combined materials. Repeatable once for credit. Prerequisites: completion of foundation program and ART S280.

ART S 381. Cast Sculpture Studio (3). Casting techniques for bronze and aluminum sculpture. Uses plaster investment, core set sand, foam vaporization, and vitrified shell molds to develop individual and unique approaches to cast sculpture. Prerequisites: completion of foundation program and ART S280.

Courses for Graduate/Undergraduate Credit

ART S 580. Advanced Sculpture Studio (1-3). Sculpture in any medium, emphasizing individual development and creativity. Repeatable for credit. Prerequisite: ART S380.

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 (1-3; 1-5).

Art Education (ART E)

The art education area offers the Bachelor of Art Education degree for students interested in an art education teaching career. The goal of the program is to develop a highly competent art teacher who is intellectually informed, skilled in studio performance, and able to communicate with and motivate students. All art education majors are required to specialize in studio art, design, or art history as an emphasis area. Students observe teaching techniques, teach in public schools, and attend seminars in education and art education topics.

Bachelor of Art Education

The Bachelor of Art Education has the same Foundation and art history requirements as the BFA in Studio Art. This degree serves the 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 146 semester hours is required for an art education major with 73 art credits and 31 education credits distributed as listed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Curriculum</td>
<td>21</td>
</tr>
<tr>
<td>ART F102, Introduction to Art and Design</td>
<td>18</td>
</tr>
<tr>
<td>ART F136 &amp; F137, Foundation Design 1 &amp; 2</td>
<td>18</td>
</tr>
<tr>
<td>ART F145 &amp; F146, Foundational Drawing 1 &amp; 2</td>
<td>18</td>
</tr>
<tr>
<td>ART F189, Foundation 3-D Design</td>
<td>12</td>
</tr>
<tr>
<td>ART F240, Foundation Life Drawing</td>
<td>12</td>
</tr>
<tr>
<td>ART H124, Survey of Western Art: Modern</td>
<td>12</td>
</tr>
<tr>
<td>ART E514, Aesthetic Inquiry</td>
<td>12</td>
</tr>
<tr>
<td>Art Electives</td>
<td>21</td>
</tr>
</tbody>
</table>

Sculpture Concentration (21 hours)

ART S380, Sculpture Studio (take 2 times) | 21 |
ART S381, Cast Sculpture Studio | 12 |
ART S345, Advanced Drawing Studio* | 12 |
ART S580, Advanced Sculpture Studio | 12 |
ART S300+, sculpture elective (take 2 times) | 12 |

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 2.000 in art courses at the time of application for student teaching; a grade of C or better in College Algebra; a grade of C or better in English Composition (ENGL 101 and 102 or 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 following a formal interview. 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 midterm of the fall semester prior to the student teaching year. A grade of C or better in student teaching is necessary to receive a recommendation for a teaching certificate.

Graduates of the program applying for teacher certification in Kansas are required to complete the Principles of Learning and Teaching (PLT) examination as established by the Kansas State Department of Education in order to qualify for their initial certificate.

Review of course content will be required for transfer of art education credits from other institutions.

Lower-Division Courses

ART E 115. Human Experience and the Arts (3). Tele-course. 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 art making, 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 261. Cooperative Education (1-8). Allows students to participate in the cooperative education program. Offered Cr/NC only.

Upper-Division Courses

ART E 302. Jewelry Design/Construction (3). Emphasizes metalworking processes (forging, forming, casting, sawing, cutting, fusing, soldering) with subordinate emphasis on soft jewelry and ceramic processes applicable to jewelry.

>ART E 303. Stimulating Creative Behavior (3). General education issues and perspectives course. Includes theories of creativity, strategies for problem-finding and problem-solving, identifying external and internal blockages to creativity, testing for creativity, the relationships of creativity, cognition, and visual thinking; creative challenges and stimuli, Empasizes methods to elicit creative behavior. Repeatable once for credit.

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 teach 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 the course is offered.

ART E 410. Art Education in the Middle School (3). A study of the philosophy, psychology, and artistic development of the middle school/junior high school student, emphasizing the content, objectives, methods, and evaluation of the middle school/junior high school art program. Students participate in a field experience in a middle school/junior high school. Students enroll in this course during the Fall semester preceding Spring semester student teaching. Prerequisites: ART E 311, 414.

ART E 413. Independent Study (1-4). 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 microcomputer software and hardware. Students apply the Macintosh computer to art curriculum and instruction. Prerequisite: ART E 310 or equivalent.

ART E 481. Cooperative Education (1-8). Allows students to participate in the cooperative education program. Offered Cr/NC only.

Courses for Graduate/Undergraduate Credit

ART E 514. Aesthetic Inquiry (3). Focuses on contemporary trends in aesthetics relative to the visual arts. Students write critical 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 517. Student Teaching Seminar in Art (1). Analyzes problems encountered in the art classroom during student teaching. Requires concurrent enrollment in 8 hours of student teaching courses. Prerequisites: ART E 516 and departmental approval for student teaching.

ART E 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 302 or instructor's consent.

ART E 710. Creative Behavior and Visual Thinking (3). Identification and application of theories for creative and critical thinking. Emphasizes strategies for problem-solving and visual thinking and procedures to implement these 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 theories and aesthetics of art to the K-12 classroom. Students participate in discussions and demonstrations related to 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 trends 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 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 Educa­
tion (1-4). Directed independent study in art education not
cnormally covered in other graduate course work. Repeatable
for credit. Prerequisite: instructor’s consent.

ART E 816-817. Thesis—Art Education (1-3; 1-3).

ART E 818-819. Terminal Project—Art Education (1-
3-1-3).

School of Music
finearts.wichita.edu/music
J. William Thomson, Chair

The School of Music, which includes program areas of
music education, musicology/composition, keyboard,
strings, voice, and winds/percussion, offers courses and
curricula designed to train and educate students who are
planning careers in music. In addition, the
school’s offerings allow students to gain an understand­
ing 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 construct­
ed in 1986 to house the first Marcusen organ in North
America.

Policies
Proficiency Examinations
Students eligible for University enrollment may enter
degree music programs. However, majors in music
must demonstrate their performance ability on a mini­
mum of one instrument or 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 profi­
cency 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 exami­
nation. Students who have not satisfied all piano profi­
cency 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 Sched­
ule 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 either (1)
a 30-minute private lesson (minimum) each week and a
one-hour master class each week or (2) a one-hour
lesson per week or other equivalent arrangements at
the option of the instructor. Students are required to prac­
tice a minimum of ten hours each week.

Five-credit hour enrollments are provided to per­
formance 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
across by approved music faculty. Students wishing
to drop an applied lesson registration must inform the in­
structor in person and secure his/her signature on the drop for
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 252; juniors and seniors, MUS A
112 (nonmajors), 431, 432, and 434; and graduate stu­
dents, 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 per­
forming medium.

*Performance majors or designated students only may enroll in 434 or
734.

Recitals
All music majors are required to enroll in four semes­
ters 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 BM, 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 per­
forming 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 pro­
jected senior recital program and the examining com­
nittee determines: (1) the suitability of the projected
program, (2) the capability of the student to perform
the program publicly, or (3) the advisability of per­
forming the senior recital before a faculty jury in lieu of
a public recital.

Further recital specifications are found under gradu­
ation requirements for Bachelor of Music in Theory Compo­
sition.

No music major may prepare or perform the senior
recital without the guidance of a School of Music fac­
culty member. In the event the required applied music
credit hours have been earned prior to the recital presen­
tation, music majors must continue to enroll (2 cred­
it 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 con­
centration.

The general graduation requirements of the Univer­
sity must be met as described in the Catalog under General Education Program. In addition, certain music
requirements must be met for the different degree
emphases in the School of Music.

BM in Theory-Composition

Area

Hrs.

Applied Music

Chief performing medium (piano, organ)......20
Other performing medium....................4
or Chief performing medium
(nonkeyboard)...........................8
Keyboard performing medium.............8
Other performing media.....................4

Theory and Composition

MUS C 127-129, 128-130, 227-229, 228-230,
259, 260, 523, 560, 561, 641, 660, 661, 671, 672

History and Literature of Music

MUS C 113, 334, 335, and 3 hours of
upper-division electives in music history
or literature

Conducting

MUS P 217 or 218 and 651 or 691

Ensembles

Electives (music or nonmusic courses)...

Recital attendance (four semesters of MUS P 050)

Senior Recital (MUS C 400)

*See degree checklists for specified ensembles.
* Ensembles are counted by semester.
Theory-composition majors are required to present for public performance a selection of their compositions representing large and small forms, totaling a minimum of 20 minutes. Students must submit completed scores representing a majority of the program to an examining committee the semester prior to that of the proposed recital; the examining committee shall determine the acceptability of the program. The composition or compositions must be submitted in a minimum of two copies done manually in ink or by laser printing using an approved music typesetting computer program. These copies must represent a high quality of manuscript technique or music typesetting. In addition, students may elect to present a second recital in their chief performing with the permission of their applied music instructor and achievement of junior proficiency in that instrument.

**BM in Performance—Instrumental Emphasis**

**Area** | **Hrs.**
--- | ---
Applied Music | 28
Chief performing medium | 24
Second performing medium | 4
Theory | 22
MUS C 127-129, 128-130, 227-229, 228-230, 523, 561 or 661 and 641, or 345
History and Literature of Music | 12
Must include MUS C 113, 334, and 335
Conducting | 4
MUS P 217 or 218 and 651 or 691
Chamber Music | 2
Ensembles | 14
Electives | 1
Pedagogy (MUS P 62) 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) | 2

---

*See degree checklists for specified ensembles.

5 Ensembles are counted by semester.

**BM in Performance—Keyboard Emphasis**

**Area** | **Hrs.**
--- | ---
All Programs | 28
Applied Music | 24
Chief performing medium (see specific major below) | 4
Second performing medium | 4
Theory | 22
MUS C 127-129, 128-130, 227-229, 228-230, 523, 561 or 661, 345 or 641
History and Literature of Music | 9
MUS C 113, 334, and 335
Conducting | 4
MUS P 217 or 218 and 651 or 691
Ensembles (see specific major below) | 2
Recital Attendance | 2

---

*See degree checklists for specified ensembles.

5 Ensembles are counted by semester.

**BM in Performance—Vocal Emphasis**

**Area** | **Hrs.**
--- | ---
All Programs | 26
Applied Music | 24
Voice | 2
Study in another instrument may be substituted if student meets piano proficiency requirement.
Theory | 18
MUS C 127-129, 128-130, 227-229, 228-230, and 523 or 661
History and Literature of Music | 9
MUS C 113, 334, and 335
Conducting | 2
MUS P 218
Voice Pedagogy and Repertoire | 9
MUS P 121, 122, 221, 222, 625, and MUS C 726
Ensembles | 10
Electives (in upper-division theory, conducting, or choral literature) | 10
Senior Recital (MUS P 400) | 1
Recital attendance (specified number of recitals per semester for four semesters, MUS P 050) | 2
Foreign languages (5 hours in each language or 10 hours in one of two languages) | 10
FREN 111-112, GER 111-112, ITAL 111-112

---

*See degree checklists for specified ensembles.

5 Ensembles are counted by semester.

**BM with Elective Studies in Business**

**Area** | **Hrs.**
--- | ---
All Programs | 20
Applied Music | 16
Chief performing medium | 16
Second performing medium (four semesters) | 4
Theory | 20
MUS C 127-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345

---

*See degree checklists for specified ensembles.

5 Ensembles are counted by semester.
The following program fulfills both the University requirements for graduation and the Kansas certification requirement and must be taken by all Bachelor of Music in Music Education candidates. In completing the BME program, the student must meet the general education program requirements of the University given in the Academic Information-Requirements for Graduation section of the Catalog.
### Professional Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>29</td>
</tr>
<tr>
<td>CESP 334</td>
<td>2</td>
</tr>
<tr>
<td>CESP 433</td>
<td>3</td>
</tr>
<tr>
<td>CI 271</td>
<td>2</td>
</tr>
<tr>
<td>MUS E 272</td>
<td>1</td>
</tr>
<tr>
<td>CI 311</td>
<td>1</td>
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<tr>
<td>CI 312</td>
<td>5</td>
</tr>
<tr>
<td>CI 427*</td>
<td>2</td>
</tr>
<tr>
<td>CI 430</td>
<td>3</td>
</tr>
<tr>
<td>CI 451*</td>
<td>4</td>
</tr>
<tr>
<td>CI 457*</td>
<td>4</td>
</tr>
</tbody>
</table>

*These courses are taken during the student teaching semester.

### Additional Courses Required for Instrumental Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>16</td>
</tr>
<tr>
<td>Instrumental majors</td>
<td></td>
</tr>
<tr>
<td>chief medium</td>
<td>14</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
<tr>
<td>Keyboard majors</td>
<td></td>
</tr>
<tr>
<td>chief medium</td>
<td>14</td>
</tr>
<tr>
<td>second instrument</td>
<td>2</td>
</tr>
<tr>
<td>Electric bass majors</td>
<td></td>
</tr>
<tr>
<td>electric bass</td>
<td>10</td>
</tr>
<tr>
<td>string bass</td>
<td>4</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
</tbody>
</table>

Students must be enrolled in applied music during the semester of their senior recital.

### Additional Courses Required for Vocal (Keyboard) Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>16</td>
</tr>
<tr>
<td>Vocal majors—voice</td>
<td>14</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
<tr>
<td>Keyboard and instrumental majors</td>
<td></td>
</tr>
<tr>
<td>chief medium</td>
<td>14</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
</tbody>
</table>

Students must be enrolled in applied music during the semester of their senior recital.

### Additional Courses Required for Special Music Education Emphasis (Vocal or Instrumental)

#### Music Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied music</td>
<td>16</td>
</tr>
<tr>
<td>Vocal majors—voice</td>
<td>14</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
<tr>
<td>Keyboard and instrumental majors</td>
<td></td>
</tr>
<tr>
<td>chief medium</td>
<td>14</td>
</tr>
<tr>
<td>piano</td>
<td>2</td>
</tr>
</tbody>
</table>

### Recital attendance

MUS E 171 and 172; two semesters of MUS P 050 plus MUS P 400, Senior Recital

### Additional Courses for piano pedagogy majors: M 5 P580 (2 hrs) and 790 (4 hrs)

#### Group I

- **Music Literature and History**
- **MUS C 113** and 6 hours in additional music, history, and literature courses such as MUS C 334-335, 346, 624, 726, 753-754. May not use courses counted in General Education requirement.

#### Group II

- **Music Theory**
- MUS C 127-129, 128-130, 227-229, 238, 241, 361, 641, 761

#### Group III

- **Conducting**
- MUS P 121 or 218

#### Group IV

- **Applied Music**
- Voice, piano, organ, guitar, or orchestral instrument

#### Group V

- **Ensembles**
- Select in consultation with advisor

#### Group VI

- **Electives from the areas of music literature, music theory, music applied, counterpoint, conducting, orchestration, and ensembles**

#### Group VII

- **Recital attendance**
- Four semesters, MUS P 050

### Music Minor

A minor in music is available to any student whose major field of study is outside the School of Music. A music minor consists of 20 hours as indicated: MUS C 113, 127, 128, 130, 131, and 9 additional hours selected from among the following: MUS C 160, 227, 228, 229, 230, 334, 335, 523, music applied (4-hour maximum), and music ensembles (4-hour maximum).

### Music Education (MUS E)

#### Lower-Division Courses

- **MUS E 171. Orientation to Music Education (1)** Look at the concepts of comprehensive musicianship and develop strategies for leading music activities in a variety of situations. 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 180. Music Live (3)** Introductory class for pre-service music majors. Students attend scheduled class plus the equivalent of 15 hours of additional live music performances select-
ed from the course syllabus listing of approved "outside of
class" concerts and recitals.

MUS E 204. Fundamentals of Instrumental Music for
Secondary Schools (3). Techniques and materials for
teaching instrumental music in junior and senior high schools.
Emphasizes instrumental organization and administration,
pedagogical practices, laboratory experiences, guiding stu-
dent behavior, evaluation, and professional responsibilities.
For students primarily interested in teaching instrumental
music in the secondary schools. Includes teaching techniques
for jazz ensemble. Grades 4-12. Prerequisite: music education
major or instructor's consent.

MUS E 235. Methods of Teaching Orchestral
Instruments (Violin and Viola) (1). Procedures and materials
for class and private teaching. Includes performance and funda-
mentals in first position and theory and reading knowledge of
positions two through five. Includes band and orchestra lab-
oratory. Grades 4-12.

MUS E 236. Methods of Teaching Orchestral
Instruments (Cello and String Bass) (1). Procedures and materi-
als for class and private teaching. Applies fundamental tech-
niques. Includes knowledge of more difficult positions and
special techniques. Includes band and orchestra laboratory.
Grades 4-12.

MUS E 237. Methods of Teaching Band and Orchestral
Instruments (Clarinet and Saxophone) (1). Prepares the
prospective instrumental music instructor to effectively teach
clarinet and saxophone in the public school setting. Includes
discussions of teaching techniques, identification of problems
peculiar to each instrument, care and minor repair, instruc-
tional materials, and 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, and 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. Includes application of snare drum fundamen-
tals and a study of basic techniques for all percussion instruments. Grades 4-12.

MUS E 240. Methods of Teaching Band and Orchestral
Instruments (Percussion) (1). Procedures and materials for
class and private instruction. Includes application of snare
drum fundamentals and a study of basic techniques for all
percussion instruments. Grades 4-12.

MUS E 241. String Rehearsal Methods (1). String rehea-
sal techniques and materials for grades 4 through 12. Required of
majors on choral/keyboard program and choral/keyboard
majors on special music education program.

MUS E 242. Wind and Percussion Rehearsal Methods
(1). Wind and percussion techniques and materials for grades 4
through 12. Required of majors on choral/keyboard pro-
gram and choral/keyboard majors on special music education
program.

MUS E 272. Introduction to Professional Education (1).
Gives prospective teachers the opportunity to consider seri-
ously their suitability for a career in education. Students begin
to develop skills in observing educational situations and set-
gings which help them develop a teacher perspective, seeing
schools as prospective workplaces and teachers as colleagues.
Prerequisites: C or better in English 1 and 2, Communication,
and College Algebra; sophomore standing, 2.75 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 mini-
mum of 6 hours of course work in addition to their Co-op
assignment; alternating, working full time one semester in a
field study and returning to full school enrollment the follow-
ing 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/NC only.

Upper-Division Courses

MUS E 303. Survey of Vocal Music for Elementary
Schools (3). An overview of the elements in the elementary
general music program. Includes study of objectives for
school classes and consideration of materials and methods.
Includes autoharp, recorder techniques, and music theatre for
public schools. For students primarily interested in teaching
music in the elementary schools. Grades K-8. Prerequisite: MUS E 323.

MUS E 304. Survey of Instrumental Elementary School
Music (3). A survey of materials and methods in the el-
mentary school instrumental program of instruction. For students
primarily interested in teaching instrumental music in the
elementary schools. Prerequisite: MUS E 204. Grades 4-8.

MUS E 309. Survey of Music for Special Education (3).
Consideration of methods and problems in preparation for
student teaching of music with special education students at
ear childhood elementary and secondary levels in public
schools. Includes study of materials (self-contained and main-
tstreamed) in regular and alternative schools and classes, iden-
tification, objectives, special techniques, and planning and implementation techniques. Also includes
observation, demonstration-participation experiences, and/or media presentations. Grades K-12. Prerequisites: MUS E 204 or 323 with instructor's consent.

MUS E 323. Fundamentals of Vocal Music for Secondary
Schools (3). The teaching of music in the secondary school,
consideration of objectives, and examination of materials. For
students primarily interested in teaching music in secondary
schools. Includes observation in public schools. Includes
classroom guitar. Grades 6-12. Prerequisites: MUS 218 and
music education major or instructor's consent.

MUS E 342. Survey of Choral Techniques and Literature
(2). A study of basic techniques of ensembles and examina-
tion of literature for large and small ensembles. Includes
choral conducting. Required for all music education majors. Grades 6-12.
Prerequisite: MUS 217 or 218.

MUS E 351. Music Fundamentals for the Classroom
Teacher (2-3). For students planning to teach in the ele-
mentary classroom. Includes basic fundamentals of music
emphasizing development of student's musical ability in
singing, playing the piano, and classroom instruments.

MUS E 403. Advanced Techniques of Vocal/General
School Music (1). Emphasizes special problems related to
preparation for student teaching. Consideration of the vocal
and general music programs at all levels. Prerequisites: MUS
E 303 and 323, also 309 for special music education majors.
Includes content area reading modules. To be taken during
student teaching semester. Grades K-12.

MUS E 404A. Advanced Techniques of Instrumental
School Music (1). Consideration of special problems related to
preparation for student teaching in instrumental music
programs at all levels. Prerequisites: MUS E 204 and 304; also
309 for special music education majors. Includes content area
reading modules. To be taken during student teaching semes-
ter. 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 impro-
visation, 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 program-
ning. Prerequisite: completion of MUS C 228 or instruc-
tor's consent.

MUS E 606. Music Methods for Early Childhood Educa-
tion (2-3). Methods and materials for teaching music in the
preschool and kindergarten classroom. Includes the develop-
ment of the child's musical growth through singing, listening,
rhythm, and creative activities; a survey of available materi-
als 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 spe-
cial education teacher. Includes identification of dysfunc-
tioning children and their problems and current theory and prac-
tices in special music education. Satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptional children. This provision applies to initial certification and recertification of music teachers only, grades K-12.

MUS E 686. Marching Band Techniques (2). A systematic approach to the marching band with regard to organization, show development, instrumentation, music adaptation, drill construction, and script development. Teaches both traditional drill 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 237 and 238 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 750. Music Education Workshop (1-4). Repeatable for credit.

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 Coop 781 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: satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Co/op only.

MUS E 785. Instrumental Music Organization and Administration (2). Problems of developing school instrumental music programs.

MUS E 790. Special Topics in Music (1-4). For individual or group instruction. Individual study enrollment requires departmental consent. Repeatable with departmental consent.

Courses for Graduate Students Only

MUS E 821. Administering Elementary Music (3). Investigates research and strategies in music education relating to communication, classroom management, current trends, and teaching and learning styles. Includes teacher assessments and evaluation issues.

MUS E 822. Advanced Techniques in Special Music Education (3). For special music education MME candidates only. Studies research, literature, and trends in special music education. Includes an evaluation of materials and techniques and special projects exploring the development of musical understanding in the dysfunctioning child. Course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptional children. This provision applies to initial certification and recertification of music teachers only. Prerequisite: MUS E 403 or 404.

MUS E 823. Special Music Education Practicum (3). For special music education MME candidates only. Supervised teaching in special education classrooms. A companion course to MUS E 822, gives the MME special education candidate experience in teaching in special education classrooms. Prerequisite: MUS E 822 or concurrent enrollment.

MUS E 831. Developing the Child's Musical Understanding (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 student's personal needs. Repeatable for credit. Prerequisite: instructor's consent.

MUS E 844. Terminal Conducting Project (2). Individually supervised project for those accepted for the conducting option on the instrumental or choral emphasis under the MME degree. Prerequisite: instructor and departmental consent.


MUS E 851. Psychology of Music (2). An overview of music behaviors from a psychological perspective. Relates recent literature concerning human psychosocial; melodic, rhythmic, and harmonic perception; and major learning theories to current trends in music education.

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 E 852.

MUS E 871. History and Philosophy of Music Education (2). A study of historical trends and contemporary philosophies relevant to music education. Prerequisite: MUS E 851.

MUS E 875. Thesis Research (1-2). Repeatable for credit.

MUS E 876. Thesis (2). Repeatable for credit.

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 434 (4). For performance, pedagogy, and accompanying 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 110. Strummin' and Drummin' (3). Introductory course for non-music majors. A laboratory exploration course beginning guitar and drums. Develops elementary fundamental skills of guitar technique and drum technique.

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 (3). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

MUS A 116P. Piano Class. Level 4 (1). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

MUS A 117J. Guitar Class (2). Beginners. Repeatable.

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. Includes information via lecture, demonstration, and listening to recordings related to stylistic differences in the popular idiom. Intended for non-music majors; not applicable to music degree requirements. Repeatable.

MUS A 119P. Piano Class (1). Piano majors. Prerequisite: class placement interview. Repeatable.


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. Includes information via lecture, demonstration, and listening to recordings related to stylistic differences in the popular idiom. Intended for non-music majors; not applicable to music degree requirements. Repeatable.

General Performance (MUS P)

Noncredit Courses

MUS P 050. Recital (1). Recital attendance and performance. Laboratory observation of performance media, literature, and recital techniques. Election is required for BA and BM majors according to the requirements of the degree 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 107-207. Piano Repertoire (1-1). Gives performing and listening experience to piano majors. Repeatable for credit.

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 235 or instructor's consent.


MUS P 210-211-212-213-214. Ensembles 1 (except 210B, 211A, 212F [A Cappella Choir], 213B, 213F [Concert Chorale], 2). (A) Orchestra; (B) Symphonic Wind Ensemble; (C) Gospel Ensemble; (F) A Cappella Choir; University Singers; Concert Chorale; (H) Banda Hispanica; (I) 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; (Y) 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 repertoire with orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

MUS P 211U. Musical Theatre Performance (1). Cross-listed as DANCE 350 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 repertoire with orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

MUS P 215. Voice for Musical Theatre (2). Studies vocal techniques necessary for performance in contemporary musical theatre productions, including belt and legitimate styles. Repeatable for credit. Prerequisite: musical theatre major.

MUS P 217. Instrumental Conducting (2). Fundamentals of baton technique, elementary score reading and musical leadership. Practical experience in conducting laboratory and classroom groups. Prerequisites: MUS C 128 and 130.

MUS P 218. Choral Conducting (2). Fundamentals of conducting, score reading, and rehearsal techniques. Practical experience conducting classroom groups. Prerequisites: MUS C 128 and 130.

MUS P 221. German Diction (1). For the vocal performer, including a comprehensive study of German consonant and vowel sounds.
MUS P 222. French Diction (1). For the vocal performer, including a comprehensive study of French consonant and vowel sounds.


MUS P 250-251. Applied Piano Concerto (2-2). Gives students concerto performance experience. Prerequisites: sophomore standing and admittance to the BM program.

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 6 hours of course work in addition to their Co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/N/Cr 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 330 and THEA 330. An interdisciplinary practicum class with opportunities for student performers to refine performance techniques in a variety of musical theatre genres, including operetta, book 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.

MUS P 340. Vocal Coaching (1). Covers diction and the appropriate dramatic, stylistic, and musical interpretation of songs and arias from opera and musical theater 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 411U. Musical Theatre Performance (1). Cross-listed as DANCE 220 and THEA 300U. See MUS P 211U.

MUS P 412K. Opera Theatre (2). See MUS P 212K.

MUS P 414K. Opera Theatre (4). Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertoire with orchestra accompaniment. Prerequisite: audition required. Repeatable for credit.

MUS P 413Y. Voice for Musical Theatre (2). Studies vocal techniques necessary for performance in contemporary musical theatre productions, including bell and legitimate styles. Repeatable for credit. Prerequisite: musical theatre major.


MUS P 450-451. Accompanying Recital (1-1). Required for BM piano majors, accompanying emphasis. Prerequisite: departmental consent.


Courses for Graduate/Undergraduate Credit

MUS P 530. Musical Theatre Workshop II (2). Cross-listed as THEA 530. An interdisciplinary practicum class with opportunities for student performers to refine performance techniques in a variety of musical theatre genres, including operetta, book 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.

MUS P 535. Senior Project (1). Cross-listed as THEA 535. An interdisciplinary course to showcase the talents of graduating seniors to professional producers, agents, and casting directors. Students produce and develop a variety of shows demonstrating their talent in singing, dancing, acting, directing, and choreography. For majors only. Prerequisite: instructor's consent.

MUS P 550. Piano Pedagogy (2). Primarily the art and science of teaching. Includes observations of master teachers in the University and community.


MUS P 620. String Pedagogy: Violin and Viola (2). Required for violin and viola performance majors. A study of tutorial techniques for violin and viola, including the teaching of mini-lessons for instructor and class critique. Prerequisite: violin or viola performance capability or instructor's consent.

MUS P 625. Voice Pedagogy (2). Acquaints the voice major with vocal techniques, concepts, and materials of private and class instruction.

MUS P 651. Advanced Conducting and Score Reading (2). Baton technique, score reading, and musicianship. Prerequisite: MUS P 217 or 218 or equivalent.

MUS P 660. Woodwind Pedagogy (2). A comprehensive study of woodwind instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a woodwind instrument or instructor's consent.

MUS P 681. Brass Pedagogy (2). A comprehensive study of brass instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a brass instrument or instructor's consent.

MUS P 682. Percussion Pedagogy (2). A comprehensive study of percussion instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on percussion instruments or instructor's consent.

MUS P 691. Advanced Choral Conducting (2). A comprehensive study of conducting and rehearsal techniques, analysis, and ear training and types of choral composition for the advanced student. Prerequisite: MUS P 217 or 218 or equivalent.


MUS P 710-711-712-713-714. Ensembles (1 except 710B, 711A, 712F [A Cappella Choir], 713B, 713F [Concert Chorale], 2). (A) Orchestra; (B) Symphonic Wind Ensemble; (D) Gospel Ensemble; (F) A Cappella Choir, University Singers, Concert Chorale; (H) Banda Hispanica; (I) Piano Accompaniment; (L) Madrigal Singers; Chamber Singers; (M) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (Q) Percussion Ensemble; (R) 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 711E. Opera Lab (1). See MUS P 211E.

MUS P 711K. Opera Theatre (1). See MUS P 211K.

MUS P 711U. Musical Theatre Performance (1). Cross-listed as DANCE 310 and THEA 510U. See MUS P 211U.

MUS P 712K. Opera Theatre (2). See MUS P 212K.

MUS P 714K. Opera Theatre (4). See MUS P 414K.

MUS P 715Y. Voice for Music Theater (2). Basic repertoire and singing techniques with weekly master class devoted to music theater techniques and concepts. Restricted to persons other than vocal majors. Repeatable.

MUS P 760. Group Piano Practicum (2). Supervised group piano teaching for graduate students. Prerequisites: MUS P 580 and 581.

MUS P 761. Studio Piano Practicum (2). Supervised studio teaching for graduate students. Prerequisites: MUS P 580 and 581.

MUS P 762. Opera Styles (2). A comprehensive study of the performance styles and practices in operatic singing, ranging from the seventeenth century to the present. Prerequisites: 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 individual or group instruction. Repeatable with departmental consent.

MUS P 790E. Opera/Musical Theatre Audition (1). Cross-listed as THEA 625. A practicum course which develops technical and audition repertoire skills needed 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 techniques in class piano or private piano (college curriculums); (2) class piano in early childhood; (3) class piano for leisure-age students; (4) class piano in public (or private) schools, extending the advanced preparation of piano pedagogy students as needed. Repeatable for credit. Prerequisite: MUS P 580.

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 will also 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.


MUS C 106. Fundamentals of Music (1). Intended for those who do not read music and/or who need additional help in the fundamentals of music. Includes the staff, clefs, keys, meter, tempo, notes, rests, and other basic knowledge.

MUS C 113. Introduction to Music Literature (3). An introduction to the masterpieces of music literature includes comparison of contrasting styles of both Western and non-Western music. For general students with some musical background to 160. Required for music majors.

MUS C 114. Music Literature Survey (2). A survey of representative works from the vocal and instrumental repertoire. Prerequisite: MUS C 113 or instructor’s consent.

MUS C 127. Theory I (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), basic orchestration, and simple harmonic background and contrapuntal relationships applied to literature from all periods of music. Studies one selected score being performed during the semester by a University ensemble. Prerequisite: concurrent enrollment in MUS C 129.

MUS C 127H. Theory I Honors (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), simple harmonic relationships, and fundamental voice-leading techniques. 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 127 and current enrollment in MUS C 129 or 130.

MUS C 128H. Theory II Honors (2). Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures. Prerequisites: MUS C 127 or 127H, concurrent enrollment in MUS C 129 or 130, and departmental consent.

MUS C 129. Aural Skills I (2). Recognition, singing, and dictation of melodies from all periods of music. Emphasizes interval training. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation gl-180: “the ability to teach reading skills appropriate to the level of the student and to the subject content.”

MUS C 130. Aural Skills II (2). Continuation of melodic, rhythmic perception. Includes recognition and dictation of diatonic harmonic structures. Instruction assisted by computer. Partially fulfills State Certification and Teacher Education Regulation gl-180: “the ability to teach reading skills appropriate to the level of the student and to the subject content.” Prerequisite: MUS C 129.

MUS C 160. The Heritage of Western Music (3). General education introductory course. Acquaints the nonmajor with the central tradition of Western music. Emphasizes the development of listening techniques by which the student may perceive and understand fundamental musical processes as they exist in the various styles within the Western heritage.

MUS C 161. Music through the Ages (3). General education further study course. Open to all students, particularly those involved in alternative schedules. Helps students develop the capacity for critical music listening and an appreciation for all musical styles. Telecourse.

MUS C 162. World Music (3). General education introductory course. A view of music as a global and cultural art form. For the general student to better understand the importance and significance of music in all world cultures.

MUS C 165. The Blues: Art and Culture (3). Cross-listed as ANTH 165. The blues style 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. 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. Prerequisites: 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-180: “the ability to teach reading skills appropriate to the level of the student and to the subject content.” Prerequisite: MUS C 227.

MUS C 228H. Theory IV Honors (2). See MUS C 228. Prerequisites: MUS C 227 or 227H and departmental consent.

MUS C 229. Aural Skills III (2). Recognition, singing, and dictation of contrapuntal textures with continued harmonic practice emphasizing elementary chromaticism. Instruction
assisted by computer. Partially fulfills State Certification and Teacher Education Regulation gl-1-80: "the ability to teach reading skills appropriate to the level of the student and to the subject content." Prerequisite: MUS C 130.

MUS C 230. Aural Skills IV (2). Summation and expansion of previous skills further emphasizing harmonic chromaticism and atonal content. 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). Melodic, harmonic, and 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&2). Individual study in fundamentals of musical composition emphasizing the development and expansion of music materials. May be taken as an elective. May be repeated as an elective by those not majoring in theory-composition. Prerequisites: MUS C 127 or equivalent and instructor's consent.

Upper-Division Courses

MUS C 310. Interrelated Arts (3). General education issues and perspectives course. Presents an aesthetic analysis of three fine arts. Emphasizes style and commonality among the fine arts (art, music, drama).

MUS C 315. Music of the 20th Century (2). An aesthetic approach to music of this century, its major composers, and stylistic and formal characteristics. Primarily for the nonmusic major who has musical interest and background.

MUS C 320. Movie Musicals (3). Covers the unique development of the musical within the media genre of film. Traces historical development, emphasizing technical progress, music, cinematography, and the genre as a reflection of American life.

MUS C 325. Periods of Music History (3). For nonmajors. Content changes from semester to semester. Focuses on topics within the Western Classical music tradition, such as periods, places, and styles. Prerequisite: MUS C 160.

MUS C 334. 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 113 and 228 or instructor's consent.

MUS C 335. History of Music II (3). A survey of the evolution of musical styles and practices in the Western world from ca. 1750 to the present. Includes lectures, reference readings, and the study of representative examples of music. Prerequisites: MUS C 113 and 228 or instructor's consent.

MUS C 345. Jazz Arranging (2). Arranging for small and large jazz ensembles emphasizing current big band styles. Prerequisites: MUS C 228 and 230 or instructor's consent.

MUS C 346. Styles of Jazz (3). General education further study course. A survey of all styles 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 493. American Popular Music (3). General education further study course. Focuses on music of the popular culture in this country from colonial times into the 20th century and representing a melding of social, political, artistic, and historical elements of many diverse cultures.

Courses for Graduate/Undergraduate Credit

MUS C 523. Form and Analysis (2). Extensive analysis of the forms and formal processes of musical literature. Prerequisite: MUS C 228.

MUS C 531. Introduction to Electronic Music (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). Counterpointal devices of the 18th century as found in the works of J.S. Bach. Prerequisite: MUS C 228.

MUS C 564. Collegium Musician (1). Study and performance of early music (generally written before 1700). Repeatable for credit.

MUS C 597-598. Organ literature and Practice (1-1). Focuses on music of the popular culture. May be repeated as an elective.

MUS C 599. Voice Literature (3). A comprehensive survey of music of the popular culture. May be repeated as an elective.

MUS C 645. Choral Arranging (2). Scoring for women's, men's, and mixed choirs. Includes performance and analysis of student's arrangements in class. Prerequisites: MUS C 228 and 230.

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 260 and instructor's consent.

MUS C 661. 16th Century Counterpoint (2). Analysis and application of the contrapuntal composition techniques of the 16th century. Prerequisite: MUS C 228.

MUS C 671. Chromatic Harmony (2). Advanced study of chromatic harmonic materials of all periods with special attention to the 19th century. Emphasizes analysis and creative writing. Prerequisite: MUS C 228.

MUS C 672. Contemporary Techniques (2). Advanced study of music from impressionism to the present emphasizing related literature and creative writing. Prerequisite: MUS C 228.

MUS C 685. String Literature and Materials (2). A survey and stylistic analysis of music for solo strings and chamber combinations, beginning with the early Baroque period.

MUS C 726. Voice Literature (3). A comprehensive survey of early Italian arias, French chansons, German lied, 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 (3-3). Survey of the historical eras of professional piano repertoire.

MUS C 790. Special Topics in Music (1-4). For individual or group instruction. Repeatable with departmental consent.

MUS C 791-792. Seminar in Music History (3-3). Develops areas of interest in music history as time permits. Makes no effort at a chronological survey. Includes ideas evolved from the 17th century to the present. Not limited to music majors.

MUS C 641. Orchestration (2). The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations with an approach to the problems of full orchestra and band scores. Prerequisite: MUS C 227.
most interest and considered by the instructor to be of the greatest professional benefit when interest warrants.

**Courses for Graduate Students Only**

**MUS C 830. Seminar in Music Theory (3).** An analytical study of the materials used in musical composition from antiquity to the present, employing analytical approaches such as Schenker, Hindemith, and serial techniques. Develops analytical perspective rather than compositional skills.

**MUS C 840A-C. Seminar in the Techniques of Composition (2).** Examines the nature of compositional techniques through selected works in different media: (A) large ensembles, (B) small ensembles, and (C) solo literature. Prerequisites: MUS C 671, 672, and 641, or departmental consent.

**MUS C 841-842. Special Project in Music (1-3; 1-3).** Individually supervised study or research emphasizing the professional needs of the student. Repeatable for credit. Prerequisite: instructor's consent.

**MUS C 852. Introduction to Bibliography and Research (3).** Techniques of research and development of bibliography in music and music education. Course must be elected the first available semester of enrollment in MM or MME programs.

**MUS C 860. Advanced Composition (2).** Original work in the large forms and a continuation and expansion of MUS C 659-660. Prerequisite: MUS C 660 or equivalent.

**MUS C 875. Thesis Research (2).**

**MUS C 876. Thesis (2).**

**MUS C 893. Music of Antiquity Through the Renaissance (3).**

**MUS C 894. Music of the Baroque Era (3).**

**MUS C 895. Music of the 18th Century (3).**

**MUS C 896. Music of the 19th Century (3).**

**MUS C 897. Music of the 20th Century (3).**

**School of Performing Arts**

finearts.wichita.edu/performing

Bela Karolyi, Chair

The School of Performing Arts includes the areas of dance and theatre. The school offers the Bachelor of Fine Arts in Performing Arts/Dance and Bachelor of Fine Arts in Performing Arts/Theatre.

All candidates for the BFA degree must complete THEA 253, Costuming for the Stage; and THEA 345, Stage Lighting.

**Dance (DANCE)**

Major emphasis is placed on modern dance technique with strong supportive classes in ballet and jazz. Major course offerings include study in modern, ballet, and jazz techniques; tap, choreography, dance history, dance kinesiology, repertoire, music for dance, lighting, and costume. Additional classes are offered in music theatre dance, mime, ballroom, country-western, and other special forms.

The Wichita State University Dance Ensemble (WSUDE), the resident faculty-student performance company, presents at least two fully produced concerts annually and acts to produce guest residencies with internationally recognized dance artists, lecture demonstrations for area schools, master classes, an annual undergraduate dance concert, informal showings, and senior choreography concerts. Membership in WSUDE is by audition only.

Any student who intends to pursue dance as a major should contact the director of dance early in their educational career for assignment to an academic advisor.

**Graduation Requirements**

Dance majors must complete two semesters of DANCE 501, Modern Dance IV; and one semester of DANCE 410, Ballet III, with a minimum grade of B. A minimum of 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 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 based on a case-by-case basis. While we encourage students to work professionally as part of their training, we do not feel this should be done at the regular expense of student involvement in dance program/WSUDE productions. Students accepted in WSUDE may register for DANCE 320, Dance Performance, each semester.

All majors present a senior choreography concert to include choreography and performances determined in consultation with your major advisor and the director of dance. At least half of the concert must be choreographed by the student. The total length of the concert should be between 25 and 30 minutes. A written documentation of the choreography (including major artistic influences, compositional constructs used and approaches to choreography/performance) is supported by a creative notation of the project. These materials are submitted to the major advisor for approval. Following approval by the major advisor, students are scheduled for an oral defense of their work before the dance major faculty.

The dance faculty work with each student to create the best "fit" between student goals and interests in choreography/performance and faculty appraisal of each student's needs for true artistic development. We seek to produce graduates who will be competitive with graduates of any other outstanding BFA training program in the country.

**Bachelor of Fine Arts**

The general graduation requirements of the University must be met as described in the Academic Information—Requirements for Graduation section of the Catalog. In addition, the following course requirements must be met.

**Course**

**Hrs.**

DANCE 201, Modern Dance Technique I .................................................. 1
DANCE 301, 401, 501, Modern Dance II, III, IV (Placement and advancement by audition and/or faculty consent only) .................................. 24
DANCE 210, 310, 410, Ballet I, II, III (Placement and advancement by audition and/or faculty consent only) .................................. 18
DANCE 120, 220, Jazz I, II ........................................................................ 4
DANCE 105, 205, 305, Choreography I, II, III .................................. 9
DANCE 225, Survey of Dance History ........................................................ 3
DANCE 130B, Tap I .................................................................................... 2
DANCE 315, Music for Dance ........................................................................ 3
DANCE 320, Dance Performance ................................................................. 3
DANCE 415, Dance Kinesiology ................................................................. 3
THEA 253, Costuming for the Stage ............................................................ 4
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.

THEA 143, The Art of the Theatre ................................................................... 24
THEA 243, Acting I; 244, Stagecraft; 254, Stage Makeup; 623, Development of the Theatre I; or 624, Development of the Theatre II
MUS C 160, The Heritage of Western Music; 315, Music of the 20th Century; or 346, Styles of Jazz
ART H 122, Survey of Western Art: Renaissance and Baroque; 124, Survey of Western Art: Modern; 525, 20th Century Art before 1945; 526, Art since 1945; or Art F 136, Foundation Design I
DANCE 130J, Advanced Tap; 227 Mime/Physical Theatre I; 230, Musical Theatre Dance I; 350, Musical Theatre Dance II; 355, 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 120. Jazz (1-2). Introduces jazz technique, emphasizing work in body isolation, rhythmic patterns and directions, basic steps, and history and development of jazz dance in America. Repeatable for credit.

DANCE 130. Varieties of Dance (1-2). No previous experience in dance required. A different form of dance may be offered each semester. Repeatable for credit.

DANCE 130B. Tap II (2). Introduces the principles of tap dancing including rhythm, clarity of sound, synchronization, and weight shift.

DANCE 130O. 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 variation of 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 stage 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. Prerequisite: DANCE 105. Corequisite: appropriate-level modern dance or ballet technique class.

DANCE 210. Ballet I (2-3). Introduces basic technique, positions, basic steps, proper body alignment, classroom structure, and 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 225. 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. Students experience gesture, isolation, flexibility, strength, emotional expression, genuine acting, and fundamental mime theatre skills to see the range and possibilities in communicating non-verbally. Enhances both acting and dancing skills.

DANCE 230. Musical Theatre Dance I (2). Introduction of various musical theatre dance styles from different historical periods including social dance styles from 1900 through 1980s. Includes both the auditions and how to prepare and market the dancer for the stage. Repeatable for credit. Prerequisites: DANCE 120 and/or instructor's consent.

Upper-Division Courses

DANCE 301. Modern Dance II (2-3). Continuation of DANCE 201 emphasizing movement phrases. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 310. Ballet II (2-3). Continuation of DANCE 210. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 315. Music for Dance (3). General education further study course. Study of tempo, meter, and pitch of music as applied to movement. Exploration of appropriate music repertoire for dance. Study of musical form and style periods and applications to performance and choreography.

DANCE 320. Dance Performance I. Cross-listed as MUS P 211U, 411U, 711U: THEA 180E, 306E, 506E. Wichita State University Dance Ensemble (WSUDE), Senior and/or Choreography concerts, musical theatre, or outside performances approved by dance faculty. Prerequisite: audition. May be repeated for credit.

DANCE 330. Musical Theatre Dance II (2). Continuation of DANCE 230 and further refinement of musical theatre dance styles. Emphasizes knowledge of past and present renowned Broadway choreographers. Integrates original choreography into course work as well as performance methods. Repeatable for credit. Prerequisite: DANCE 230 and/or instructor's consent.

DANCE 335. Jazz Dance III (2). Continuation of DANCE 220 at a higher level of technical skill. Includes advanced kinetic memory, flexibility, isolation, sophisticated syncopation, and nuance. Prerequisites: DANCE 120, 220, and/or instructor's consent.

DANCE 401. Modern Dance III (3). Continuation of DANCE 310. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 410. Ballet III (3). Continuation of DANCE 320. Upper-intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANCE 415. Dance Kinesiology (3). Introduces principles of kinesiology for dance. Includes anatomy, physiology, and beginning concepts in the body therapies and movement analysis. Stresses structural and neuromuscular analysis of the human body as it responds to the demands of dance.

Courses for Graduate/Undergraduate Credit

DANCE 501. Modern Dance IV (3). Advanced level. Continuation of DANCE 410. 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 dancer utilizing elements studied in Choreography I and II and exploring different choreographic approaches. Further exploration may include environmental dance, and collaborative choreographies and multimedia approaches. Prerequisites: DANCE 201 and concurrent enrollment in appropriate-level modern dance or ballet technique class.


DANCE 545. Methods of Teaching Dance (3). Develops teaching skills for elementary schools, high schools, recreation centers, private and professional schools, and universities through lesson planning and in-class teaching practice. Prerequisite: DANCE 401 or 410.

DANCE 605. Choreography for the Musical Theatre (3). Introduces the process of choreography for the musical theatre from casting the chorus in a musical to staging a solo to choreographing an ensemble of 30 dancers/singers. Includes elements of interpretation, score, and script, and other projects to develop the craft of choreogra-
The BFA Musical Theatre (THEA) offers a broad academic program, balanced by an 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 musical theatre program is a collaborative one in which students participate in musicals presented as part of the Theatre Series and the Opera and Musical Theatre Series, as well as in other performances in theatre, dance, and music.

Graduation Requirements
All theatre majors must participate in some area of the production of all University theatre plays, after consultation with faculty and staff. Students may choose one of four options: a BFA in performing arts/theatre performance, a BFA in performing arts/design and technical theatre, a BA in theatre, and a BFA in music theatre. In addition to the general education requirements, candidates for the BFA in performing arts must meet the following requirements.

Theatre Performance Track
A minimum of 80 hours, including THEA 143, 180, 211, 220, 230, 231, 232, 243, 244, 245, 254, 272, 345, 359, 380, 450, 455, 562, 563, 643, 651, 728; with 3 hours chosen from the following: THEA 218, DANCE 201, DANCE 210, and 6 hours chosen from the following: THEA 516, 517, 590, 675, or 725.

Technical Theatre and Design Track
A minimum of 80 hours, including ART F 145, THEA 145, 180, 243, 244, 253, 254, 272, 344, 345, 359, 380, 450, 541, 544, 546, 623, 624, 647, 649, 653, 657, 728; with 3 hours chosen from the following: THEA 375 or 675; and with 5 hours chosen from theatre electives.

Musical Theatre
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: THEA 165, 243, 254, 320, 342, 453, 651; any two of the following: THEA 244, 253, 345; and one of the following: THEA 222, 272, 375, 610. Dance courses include: DANCE 120, 130B, 201, 210, 220, 301, 310, 330, 331; and at least 4 hours from the following: DANCE 130J, 225, 335, 605. Music requirements include: MUS A 113I, 114I, 232I, 322I; MUS P: 212F, 213F, 340, 415I; and MUS C: 129, 130. Interdisciplinary courses include: THEA 180E, 330, 380E, 530, 555, 630. In addition, musical theatre majors will be expected to complete the 42 general education credits including THEA 260 as their introduction to Fine Arts course and THEA 623 as a Fine Arts Further Study course. Total credit needed for graduation is 124.

Bachelor of Arts in Theatre
A minimum of 42 hours in theatre, including the following required classes: THEA 221, 243, 254, 339, 623, 624, 728, and 1 credit each of 180 and 380; 8 hours of THEA 244, 253, and 345; and 12 hours of electives chosen from the remaining courses in the theatre curriculum, of which must be upper-division.

Theatre Minor
A minor in theatre consists of the following required classes: THEA 243, 244, 272, 359, 253, or 345 and 3 hours from the following: THEA 450, 623, or 624.

Communication/Theatre
For the Master of Art in Communication/Theatre, see Communication.

Lower-Division Courses

> THEA 143. The Art of the Theatre (3). General education introductory course. An introduction to the theatre as an art form emphasizing critical appreciation from the viewpoint of the audience.

> THEA 165. Stage Combat (1). Teaches the techniques of safe unarmed combat on the stage, including the safe execution of falls, rolls, punches, kicks, and the knob.

> THEA 180. Theatre Practicum (1). Practical training in the organization and presentation of plays in the University Theatre program. May be organized in the following areas: design and construction of scenery, costumes, or properties; the design and execution of stage lighting or make-up; the organization and practice of theatre management; and performance. May be repeated for credit.

> THEA 180E. Musical Theatre Performance (1). Cross-listed as Dance 320 and MUS P 211U. An interdisciplinary practicum class for students cast in a musical theatre production. Admission is by audition. Gain rehearsal and performance experience in a Mainstage production with orchestra. Rehearsals are in the evenings for 6-10 weeks. Repeatable for credit.

> THEA 200. Experience the Performing Arts (3). General education introductory course. Engages the student with vital experiences as audience members in the performing arts. Through live performance, talk-backs with artists, and critical evaluations, students gain valuable first-hand knowledge of the various genres of performance. In addition to WSU’s theatre, dance, and musical theatre productions, students gain historic perspectives during discussions and lectures from artists working in the field.

> THEA 218. Stage Movement (3). Deals with basic warm-ups, strengthening and stamina exercises, and corrective maintenance exercises to aid in the development of an expressive body for the actor.

> THEA 221. Oral Interpretation (3). General education further study course. Cross-listed as COMM 221. The development of the mental, vocal, and analytical techniques essential to the oral interpretation of literature.

> THEA 222. Improving Voice and Diction (3). Cross-listed as COMM 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Performance oriented, however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.

> THEA 241. Improvisation and Theatre Games (3). General education further study course. For the beginning student in theatre. Through exercises, analyses, and readings, the course contributes to the training of the student actor’s imagination, his/her sense of stage presence, and ability to explore basic components of playtexts.

> THEA 243. Acting I (3). General education further study course. Emphasizes the internal techniques of acting, characterization, and the actor’s analysis of the play and the role.


> THEA 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). 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). Introduces 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 to enhance performance skills. Deals with dramatic structure in the musical, different musical styles, and performance practices and how to apply this awareness into characterization.

THEA 330. Musical Theatre Workshop I (2). Cross-listed as DANCE 350, and MUS P 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 repertoire culminating in a workshop performance. Admission is by audition.

THEA 342. Advanced Acting (3). Continued development of methods established in THEA 350 with additional emphasis on contemporary vocal and movement techniques. Prerequisite: THEA 243 and sophomore standing.

THEA 344. Scene Design (3). Fundamentals of scene design. Emphasizes strong work in perspective rendering, drafting techniques and scale, and playscript and spatial analysis.

THEA 345. Stage Lighting (4). Lab. 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; I. 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 243, 244, 272 or departmental consent.

THEA 375. Directed Projects in Theatre (2-4). Independent research or practical and creative projects in the various areas of theatre including performance, design, technical theatre, management, and dramatic literature. Repeatable for credit to a maximum of 4 hours. Prerequisite: departmental consent.

THEA 380. Theatre Practicum (1). Practical training in the organization and presentation of plays in the University Theatre program. May be organized in the following areas: design and construction of scenery, costumes, 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 380E. Musical Theatre Performance (1). Cross-listed as DANCE 380 and MUS P 411U. See THEA 180E.

THEA 385. Theatre as a Mirror of Today's America (3). General education issues and perspectives course. Explores how contemporary drama and art reflects the issues and perspective of different cultures and groups within America. Among African Americans, Asian Americans, Hispanic Americans, feminists, gays, and lesbians. Examines how today's theatre portrays these groups, how it views their lives in this country and how it reflects their differences, fears, 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 students to develop a portfolio in one or two 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 Project (1). For the graduating student in the performance track of the BFA in Performing Arts/ Theatre program. Requires a performance of material in recital circumstances. Prerequisite: senior standing.

THEA 480. Theatre Internship (2-15). Advanced theatre production work as arranged by students in direction, acting, scenery and lighting, costume design and construction, stage management with a professional theatre company. Prerequisite: junior or senior standing or departmental consent. Graduate students must take THEA 780. Maximum of 15 credits of internship activity applicable toward graduation.

Courses for Graduate/Undergraduate Credit

THEA 500. 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 ENGL 517 and 518. The writing of scripts for performance. Emphasizes both verbal and visual aspects of playwriting. If possible, the scripts are given in class readings by actors. Prerequisite: instructor's consent.

THEA 530. Musical Theatre Workshop II (2). Cross-listed as MUS P 530. An interdisciplinary practicum class with opportunities for student performers to refine techniques in a variety of musical theatre genres, including operetta, book 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; I. 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 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. Helps students develop and produce a variety of student shows demonstrating their talents in directing, acting, directing, and choreography. For majors only. Prerequisite: Instructor's consent.

THEA 559. Directing II (3). R; I. arr. Staging and rehearsal techniques 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 gives students a much richer preparation for their field of study. Topics include new technology, new materials, contemporary explorations in performance, and in-depth study of production methods.

THEA 590E. Musical Theatre Performance (1). Cross-listed as DANCE 320 and MUS P 411U. See THEA 180E.

THEA 610. Directing the Musical (3). An interdisciplinary course utilizing interdepartmental expertise (theatre, dance, music) to teach the student how to produce a musical. Prerequisite: instructor's consent.

THEA 622. Academic Theatre Practicum (2). The investigation and exploration of the theatrical act in the classroom situation within the University community. Reinforces research, writing, directing, and performing skills. Enrolled students, functioning as a company, produce and perform for various disciplines on campus. Repeatable twice for credit.
>THEA 623. Development of the Theatre I (3). General education further study course. The history of theatrical activity as a social institution and an art form from its beginnings to the 17th century. Includes representative plays, methods of staging, and theatrical architecture of various periods.

>THEA 624. Development of the Theatre II (3). General education further study course. History of theatrical activity as a social institution and an art form from the 17th century to the present. Includes representative plays, methods of staging, and theatrical architecture of various periods.

THEA 630. Opera/Musical Theatre Audition (1). Cross-listed as MUS P 700E. 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.

THEA 643. Styles in Acting (3). Training in, and development of, the special techniques required for period or stylized plays with special emphasis on Greek, Shakespearean, and Restoration styles. Prerequisites: THEA 243, 342, and junior standing.

THEA 647. Scene Design II (3). Continuation of THEA 344 with more advanced work in designing settings for the stage and including studies in scenicographic design and exercises in model building. Student designs settings for a production having a single set, a production requiring a simultaneous setting, and a production using multiple settings. Requires no laboratory work in theatre production. Prerequisites: THEA 244 and 344.

THEA 649. Stage Lighting II and Theatre Sound (3). Continues the study and application of the techniques and techniques 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 the presentation of fully realized characters and actions in those 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). 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 655. History of Costume (3). Requires no laboratory work in theatre production. 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 250.

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 623, 624 or departmental consent.

THEA 728. Playscript Analysis (3). Develops students’ abilities to analyze playscripts from the point of view of those who face the task of staging them. Focuses on studying and testing practical methods of analysis developed by outstanding theatre directors, teachers, and critics. Collective analysis and individual projects are part of the course work. Prerequisite: THEA 623 or 624.

THEA 780. Theatre Internship (3-15). Advanced theatre production work as arranged by students in directing, acting, scenery, and lighting; costume design and construction; or theatre management with a professional theatre company. Work is evaluated by graduate faculty. Prerequisite: junior standing or departmental consent. Total of internship activity applicable toward graduation is 15 credits.

Courses for Graduate Students Only

THEA 820. Investigation and Conference (2-3). Cross-listed as COMM 820. Directed research and experimentation for graduate students in some phase of (a) public address, (b) theatre history and production, (c) radio-television, or (d) the teaching of speech. Repeatable for credit up to a total of 6 hours.

THEA 823. History of Dramatic Criticism (3). A study and analysis of major critical theories from Aristotle to the present.

THEA 824. Development of Modern Theatre Styles (3). An examination of the major movements in the modern theatre since 1870. Emphasizes both literary and physical elements of styles.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R 2L means 4 hours of lecture and 2 hours of lab.
The College of Health Professions was established in 1970. Programs of study are offered in dental hygiene, health services organization and policy, medical technology, nursing, physical therapy, physician assistant, and public health. The primary emphasis of the college's health professions programs is the preparation of entry-level health professionals. Additionally, the college provides such services as emergency medical training, 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 existing health care facilities within Wichita and surrounding areas.

Programs in the college are accredited through the following agencies: the Commission on Dental Accreditation of the American Dental Association, the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, National League for Nursing, Kansas State Board of Nursing, Council on Education for Public Health, Kansas Board of Emergency Medical Services, the Commission on Accreditation of Allied Health Education Programs, the National Accrediting Agency for Clinical Laboratory Sciences, and Accreditation Review Commission on Education for the Physician Assistant.

Licensing

Many state and national licensing and governing organizations will not grant a license, certification, registration, or other similar document to practice one's chosen profession if one has been convicted of a felony, and in some cases a misdemeanor. Prospective applicants are encouraged to consult with one's chosen professional governing or licensing organization for more detailed information before applying.

Essential Functions/Technical Standards

Essential functions/technical standards define the attributes that are considered necessary for students to possess in order to complete their education and training, and subsequently enter clinical practice. These essential functions/technical standards are determined to be prerequisites for entrance to, continuation in, and graduation from a student's chosen discipline in the WSU College of Health Professions.

Students must possess aptitude, ability, and skills in five areas: observation; communication; sensory and motor coordination and function; conceptualization, integration, and quantification; and behavioral and social skills, ability, and aptitude. The essential functions/technical standards described by a student's chosen discipline are critically important to the student and must be autonomously performed by the student. It should be understood that these essential functions/technical standards for minimum competence in a student's discipline. Contact specific programs for detailed essential functions/technical standards. Reasonable accommodation of disability will be provided after the student notifies the department of the disability and the disability has been documented by appropriate professionals.

Degrees Offered

Undergraduate

Of the programs offered at the undergraduate level, five lead to bachelor's degrees—dental hygiene, health services organization and policy, medical technology, nursing, and physician assistant. In addition, the Associate of Science is awarded in dental hygiene. Students in the Emergency Medical Training (EMT) program receive a certificate of completion. The Associate of Applied Science for Mobile Intensive Care Technicians (MICI) or paramedics is also offered.

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.

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 WSU Graduate Bulletin.

Policies

Undergraduate Admission

Students who have declared a major in one of the programs in health professions will be admitted directly to the College of Health Professions upon admission to WSU.

Admission to the college does not guarantee acceptance into any of the undergraduate professional programs. To be admitted to a professional program, students must be accepted into Wichita State University and the College of Health Professions, apply for admission to a particular program, and be accepted by the admissions committee of that program. See the individual programs for application procedures.

Progression

To progress in courses offered in the clinical programs, students must earn an S, Cr, or C or better in program courses required for the major and any other courses so designated by the programs. In courses which combine theory and clinical practice, students must receive an S, Cr, or C or better in both segments of the course or in order to pass the course. Students who fail to meet these requirements may be dismissed from the program. If the student's overall grade point average remains at 2.000 or above, the student may petition the Committee on Admission and Progression in his/her program to remain in the program. Students should check the individual program sections of the Undergraduate Catalog for additional requirements.

Probation and Dismissal

Students are placed on probation for the next term in which they enroll if their overall WSU grade point average falls below 2.000. Students remain on probation even though they earn a 2.000 grade point average in the term during which they are on probation if their 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 5 hours in the Summer Session, excluding 1 hour of physical education. Exception to this limitation may be made on the recommendation of a student's advisor with the approval of the dean of the college.

Students on probation are subject to academic dismissal from the college if their grade point average for the semester during which they are on probation falls below 2.000. 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 section in the Catalog.)

Exception to these requirements may be granted to nonmajors by the chairperson/director of the program offering the course.

Students should check with their program advisors regarding eligibility and prerequisite requirements for this type of examination. Transcripts will identify the courses and credits received by students taking equivalency/competency examinations. Fees are assessed, in advance, for the administration of the examinations.

Cooperative Education
The College of Health Professions is one of the participating colleges in the University's Cooperative Education program. This program is designed to provide off-campus paid employment experiences that integrate, complement, and enhance the student's regular academic program while providing academic credit. Students are placed for field study experiences in a variety of health settings, including hospitals and community agencies. Individualized field studies are formulated in consultation with the student and the employer and are approved by the program faculty advisor and the cooperative education coordinator for the college. Participation in the program requires enrollment for credit in specific cooperative education courses designated by the various academic programs in the college; these undergraduate courses may have prerequisites or other specific requirements for enrollment. To enroll in the program or for more information, students should contact the cooperative education office or a College of Health Professions advisor.

Clinical Affiliation
The college, because of its location in Wichita, has affiliation agreements with various excellent health facilities which assist in the clinical education of students. The clinical affiliates include a wide variety of hospitals, long-term care facilities, public schools, private practitioners, and community agencies.

Liability Insurance Requirements, Health Insurance, and Health Standards
Most students are required to purchase professional liability insurance (the specific level is determined by the professional program) as well as personal health insurance at the beginning of the professional phase of a College of Health Professions program. Additionally, other health standards are required prior to entry into the clinical agencies. Students should communicate with individual programs about specific requirements.

Financial Assistance
Scholarships and student loan funds are available for students in health professions. Information on these and other scholarships and loans is available from the WSU Office of Financial Aid and the program from which the student is seeking a degree or certificate.

Special Certificate Programs
The College of Health Professions offers a certificate program in basic emergency care training. A graduate certificate in public health is also offered.

Degree Requirements and Course Listings

School of Health Sciences
The School of Health Sciences offers programs leading to the Bachelor of Science in Dental Hygiene, the Bachelor of Science in Health Services 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. The school also offers a certificate in basic Emergency Medical Training (EMT) and the Associate of Applied Science for Mobile Intensive Care Technicians (MIC) or paramedics.

The School of Health Sciences offers the Master of Public Health and Master of Physical Therapy degrees. For more information about the master's degree programs, refer to the WSU Graduate Bulletin.

Specific requirements for each degree are described under the appropriate listing below.

Health Professions-General (HP)

Lower-Division Courses

HP 101. An Introduction to the University (3). Assists students in acquiring the academic and life skills essential to become a successful college student. Provides information, resources, and support to promote opportunities for success. Introduces and utilizes resources within the University and the community. Recommended for all degree-bound students entering WSU for the first time.

HP 150. Workshop in Health Professions (1-10). Intensive study of special topics related to health professions practice, education, and research.

HP 151. Career Networking Experience (1). Offers students the opportunity to participate in a mentoring relationship with a WSU health professions alum. Students experience what it's like working in a career they are considering, interact with professionals in their chosen career, and become part of the professional culture of the work place. Seminars taught by WSU faculty/staff provide in-depth information regarding stress management, corporate communication, job search skills, and networking. Graded Cr/NC. Prerequisites: instructor's consent, at least 12 credit hours completed, and 2.0 GPA.

HP 201. Exploring the Health Professions (2). Introduces the health care field with an overview of today's health care system. Explores the attributes needed to be a health professional, the coping mechanisms needed, what it means to be a student in the professional programs, and health care challenges from both a patient's and provider's point of view. Introduces various health professions and allows students to explore a field of their choosing. Corequisites: HP 151.

HP 203. Medical Terminology (2). Provides the foundation of medical terminology for individuals who need a familiarity of the medical language. Ideal for preprofessional students preparing for one of the health professions or students currently enrolled in a health professions program. Also valuable for individuals such as medical records technicians, medical transcriptionists, medical secretaries, medical insurance personnel, administrators in health care, and pharmaceutical representatives.

Upper-Division Courses

HP 303. Medical Terminology (3). Provides the foundation of medical terminology and its application in the health care environment. Ideal for pre-professional students preparing for one of the health professions or a student currently in a health professions program. Emphasizes accurate interpretation and analysis of patient, hospital, and other medical records. Students cannot receive credit for both HP 203 and HP 303.
Courses for Graduate/Undergraduate Credit

**HS 631. Normal and Clinical Nutrition.** (4). Studies human nutritional needs in normal development and the life cycles. Covers composition, classification, and function of foods and nutrients, food handling and public health safety and laws, and nutrition in special situations. Includes a study of principles of nutritional support and diet as therapy. Addresses the dietary concerns of a variety of clinical disorders, including gastrointestinal disorders, diabetes mellitus, cancer, burns, liver disease, obesity and weight loss, eating disorders, HIV infections, kidney and cardiovascular disease, parenteral and enteral nutrition, and surgical conditions. Studies nutritional assessment, data interpretation, care planning, record keeping, and client communications. Prerequisites: general chemistry, anatomy, and physiology.

**HS 700. Gross Anatomy.** (6). An opportunity for intensive study of the anatomy of the human body emphasizing integration of anatomical information with human functional abilities. Prerequisites: four semesters of biological sciences or program consent.

**HS 710. Applied Clinical Pharmacology.** (3). Discusses clinical applications of selected drug classes commonly prescribed in the primary care setting as well as the follow-up management of common chronic diseases. Discusses pharmacological management as to pharmacokinetics, dosages, mechanisms of action (at molecular and systemic levels), side effects, drug interactions, contraindications, therapeutic use, and expected outcomes. Emphasizes the practical application of this knowledge in various patient populations of all ages as well as rational drug selection and monitoring. Methodology includes lecture presentations, group discussions, case studies, assessment of recent literature, homework assignments, quizzes, and exams. Prerequisite: PHS 301, admission to graduate health professional program or PA professional program, or instructor's consent.

**HS 711. Pharmacological Management of Acute and Chronic Diseases.** (3). Discusses the clinical application of specific categories of drugs used in the treatment of several common acute and chronic diseases. Presents pharmacokinetics, mechanisms of action, dosages, side effects, and monitoring parameters of medications as they are used in these diseases and in various patient populations. Facilitates clinical application of this knowledge through case studies, class discussions, and reviews of the latest medical literature. Prerequisites: admission to graduate nursing program and department consent or completion of PHS 710 and admission to PA professional program.

**HS 720. Neuroscience.** (3) LB. 2L. Integration of neuroanatomy and neurophysiology of the central and peripheral nervous systems with human functional abilities. Prerequisite: PHS 700 or program consent.

**Dental Hygiene (DH) **

**Associate of Science**

The associate degree program in dental hygiene provides students with knowledge of the social, dental, and clinical sciences and competencies needed by the dental hygienist in contributing to the attainment of optimum oral health for all people. Upon completion of the five-semester program (including one summer), students are eligible to take the national, regional, and state examinations for licensure as dental hygienists. Wichita State's program is accredited by the American Dental Association's Commission on Dental Accreditation.

**Professional Curriculum**

**Admission.** In addition to fulfilling all requirements for admission to the University, students wishing to enroll in the dental hygiene program must apply for, and obtain approval of, the Admissions Committee of the Dental Hygiene Department. Acceptance into the College of Health Professions does not guarantee admission into the dental hygiene program. Persons interested in the dental hygiene program should direct their inquiries to the Chairperson, Dental Hygiene Department, Wichita State University, Wichita, Kansas 67260-0144.

To qualify for admission to the dental hygiene program, applicants must be high school graduates or have passed the General Education Development test. Students must meet the following admission criteria. They must:

1. Have taken or be enrolled in BIOL 223, Human Anatomy and Physiology; CHEM 103, General Chemistry; ENGL 101, College English I; PSY 111, General Psychology; BIOL 220, Introduction to Microbiology; and HS 331, Principles of Dietetics and Nutrition.
2. Maintain a minimum grade point average of 2.50 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 Code</th>
<th>Course Title</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>BIOL 223</td>
<td>Human Anatomy and Physiology</td>
<td>5</td>
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<tr>
<td>CHEM 103</td>
<td>General Chemistry</td>
<td>5</td>
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<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
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<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
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<tr>
<td>BIOL 220</td>
<td>Introduction to Microbiology</td>
<td>4</td>
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<tr>
<td>HS 331</td>
<td>Principles of Dietetics and Nutrition</td>
<td>3</td>
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<td>Plus the following:</td>
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<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
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<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>DH 101</td>
<td>Premedical Dental Hygiene</td>
<td>3</td>
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<tr>
<td>DH 104</td>
<td>Clinical Radiology</td>
<td>3</td>
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<tr>
<td>DH 201</td>
<td>Dental Hygiene Concepts</td>
<td>3</td>
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<tr>
<td>DH 202</td>
<td>Clinical Dental Hygiene I</td>
<td>3</td>
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</tbody>
</table>
COLLEGE OF HEALTH PROFESSIONS/DENTAL HYGIENE 125

DH 206, General and Oral Pathology ..........3
DH 290, Oral Anatomy ..................1
DH 295, Oral Histology and Embryology .....2
DH 301, Dental Materials ..................2
DH 302, Clinical Dental Hygiene II ............2
DH 303, Dental Hygiene Concepts II ..........2
DH 304, Dental Hygiene Concepts III .........2
DH 307, Ethics and Jurisprudence ...........2
DH 310, Community Dental Hygiene .........3
DH 314, Introduction to Periodontics ... ..3
DH 316, Pain Management ..............2
DH 323, Clinical Dental Hygiene III ..........3
DH 324, Clinical Dental Hygiene IV ..........4
DH 409, Introduction to Research for the Health Professions ..............1
HS 301, Clinical Pharmacology ..............3
HS 315, Head and Neck Anatomy ..........2

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
Additional Basic Skills requirements:
ENGL 102, College English II .............3
Math 111, College Algebra ...............3
Electives from the following categories:
Introductory Fine Art (1) ..............3
Introductory Humanities (2) ..........6
Further Study or Issues and Perspectives in Fine Arts or Humanities (1) ........3
Further Study or Issues and Perspectives in Social or Behavioral Science (1) .......3
Introductory Natural Science and Math (1) ....3-5
Further Study or Issues and Perspectives in Natural Science and Math (1) .......3-5

Professional Curriculum
Core:
DH 420, Educational Methodology in Dental Hygiene ..................3
DH 492, Community Dental Health Management ..3
DH 468, Field Internship ..................3
PHS 320, Overview of Health Services Delivery ..........3
CESP 704, Introduction to Educational Statistics (or equivalent) ..........3

Electives (6 hours):
DH 462, Community Dental Health Management ..3
DH 470, Issues in Dental Hygiene ...........3
DH 481, Cooperative Education ..............3
PHS 343, Program Planning/Development in Health Service Organizations ..........3
HS 400, Introduction to Pathophysiology ..........3

Lower-Division Courses
DH 101, Preclinical Dental Hygiene (5), 3R; 7L Fall semester only. Presents the basic philosophy of dentistry and dental hygiene. 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 104, Clinical Radiology (4). 3R; 3L. Presents the theory and practice of exposing, processing, and mounting X-ray films. Uses laboratory periods to gain proficiency in X-ray techniques. Stresses care of the equipment. 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: program 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. Discusses 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: program consent.

DH 295, Oral Histology and Embryology (2). Studies the developmental and microscopic anatomy of the oral cavity including hard and soft tissues. Prerequisite: program consent.

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 the laws governing the practice of dentistry and dental hygiene: careers 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 (3). Spring semester only. Covers the supporting structures of the teeth and an overview of both the biological and clinical aspects of periodontology. Enables dental hygiene students to recognize and differentiate periodontal health from disease, formulate appropriate treatment plans, select appropriate adjunctive therapies, and recognize the role of the dental hygienist as a periodontal co-therapist in initial periodontal therapy and maintenance. Also includes periodontal surgery, occlusal evaluation, antibiotics, and antimicrobial agents, periodontal dressing, and suture removal. Emphasizes the evaluation of a periodontal case resulting in the development of a periodontal treatment plan. Prerequisite: program consent.

DH 316. Pain Management (2). 1R; 2L. Fall semester only. Enhances the dental hygiene student's knowledge of the mechanisms of pain, the control of dental pain through the administration of topical anesthetics, infiltration, and block anesthesia; and use of nitrous oxide. Emphasizes a thorough understanding of the pharmacology of dental drugs and their interaction with the client's current conditions and medications. Prerequisite: HS 301.

DH 323. Clinical Dental Hygiene III (3). 12L. Fall semester only. 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 to enrich their knowledge and skill above that offered in the dental hygiene core curriculum. Emphasizes identification of clinical skill level, development of remediation schedule, and self-evaluation skills. Student negotiates with dental hygiene program as to the hours of lecture and clinical practice needed to reach student's goals. Graded Cr/NC. Prerequisite: must be a graduate of an accredited dental hygiene program.

DH 350. Pain Management (2). Updates the practicing dental hygienist in the didactic and clinical administration of infiltration and block anesthesia and the use of nitrous oxide. Emphasizes the mechanisms of pain, a thorough understanding of the pharmacology of dental drugs and their interactions with the client's current conditions and medications, and clinical experience in the administration of infiltration and block anesthesia. Prerequisites: must be licensed dental hygienist and graduate of an accredited dental hygiene program.

DH 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 affecting 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 patient specific protocols. Expands student's ability in assessment, diagnostic, and treatment planning skills. Prerequisite: DH 314 or equivalent.

DH 430. Curriculum Development in Dental Hygiene Education (3). A continuation of DH 420. Focuses on the development of an educational curriculum for a dental hygiene program. Additional opportunities are available for instruction in the clinical/laboratory setting. Prerequisite: program consent.

DH 452. Community Dental Health Management (3). Focuses on the oral health care delivery system and the role of the dental hygienist in managing oral health care. Emphasizes community and dental public health settings and population groups underserved by the current private practice setting. Prerequisite: DH 310 or equivalent and FHS 320.

DH 455. Personnel Management in Dental Hygiene (3). A continuing analysis of personnel management and completion of a personnel simulation, including job analysis, recruitment, interviewing, testing, job evaluation, wage determination, training, employer evaluation, and career development. Prerequisite: program consent.

DH 462. Special Projects in Dental Hygiene (1-3). Individual study of selected topics, didactic and/or clinical, to enhance the student's knowledge base and competencies in clinical or community dental hygiene practice.

DH 465. Research in Dental Hygiene (3). A practical approach to the application and acquisition of basic research techniques as related to community dental public health or clinical dental hygiene. Includes the student and identification of research problems, review of related literature, development of research hypotheses, and research methodology. Prerequisite: DH 462.

DH 468. Field Internship (3). The research proposal or community dental health project developed in DH 465 is implemented. Student collects data concerning a special problem in community dental health or clinical dental hygiene, undertakes data analysis, and draws conclusions relative to the stated hypothesis. Prerequisite: DH 465.

DH 470. Issues in Dental Hygiene (3). Analyzes various professional issues in clinical or community dental hygiene focusing on issues ranging from concerns within the local practice setting to national policy issues. Examines theories and applications uniquely suited to the dental health care delivery system.

DH 481. Cooperative Education (3). An independent study course for the registered (licensed) dental hygienist to obtain college credit for their work experience when accompanied by an academic advisor determined by the student in consultation with a faculty advisor. Prerequisite: Associate of Science in Dental Hygiene or equivalent; enrolled in Bachelor of Science in Dental Hygiene program.

Medical Technology (MED T)

The medical technology'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 premed professional curriculum in the basic sciences, social sciences, humanities, and communication. The University-based program includes structured lecture and laboratory experiences in the University's student clinical laboratory as well as in the program's affiliated laboratories: Wesley Medical Center, Via Christi-St. Francis Campus, Via Christi-St. Joseph Campus, the Wichita Clinic, and the Veterans Administration Medical Center, Wichita; Hutchinson Hospital Corporation, Hutchinson; Central Kansas Medical Center, Great Bend; Asbury-Salina Regional Medical Center, Salina; and St. Catherine Hospital, Garden City; Colmery-O'Neil Veterans Hospital and St. Francis Medical Center, Topeka. Upon successful completion of the program, students are granted the Bachelor of Science in medical technology and are eligible to sit for the national certification examinations.

Preprofessional Curriculum

Course                          Hrs.
Basic Skills                     12
ENGL 101 and 102, College English I and II ........... 6
COMM 111, Public Speaking............. 3
MATH 111, College Algebra............. 3
COLLEGE OF HEALTH PROFESSIONS/MEDICAL TECHNOLOGY

Fine Arts and Humanities
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 an Issues and Perspectives course in Fine Arts or Humanities ..................................3

Social and Behavioral Sciences
PSY 111, General Psychology ..................................3
One Introductory course from a different Social and Behavioral Sciences discipline .... 3
A Further Study course from same discipline as Introductory course or an Issues and Perspectives course in Social and Behavioral Sciences ..................................3

Natural Sciences and Mathematics
BIOL 210, General Biology I ..................................4
BIOL 211, General Biology II ......................... 4
BIOL 223, Introduction to Anatomy and Physiology ......................... 5
BIOL 330, General Microbiology ..................................5
CHEM 111, General Chemistry ......................... 3
CHEM 112, General and Inorganic Chemistry ......................... 5
Course coverage in organic chemistry (CHEM 531, 5 hours, or CHEM 533 and 534, 5 hours) ..................................5
CHEM 661, Introduction to Biochemistry, or HS 400, Introduction to Pathophysiology .......................... 3
MED T 405, Medical Immunology ..................................3

*May substitute CHEM 514 and 523, General and Analytical Chemistry (10 hours), if prerequisites are met. Check with advisor.

Admission to Professional Curriculum
Applications should be submitted to the medical technology program by May 1 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 preprofessional requirements
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
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 ..................4
MED T 479, Applied Immunohematology ..................................3
MED T 486, Clinical Laboratory Instrumentation ..................3
MED T 489, Clinical Techniques ..................................2
MED T 490 and 491, Clinical Microbiology I and lab ..................4
MED T 494, Clinical Microbiology II and lab ..................4
MED T 496 and 497, Clinical Microbiology I and lab ..................4
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 who have met other admissions 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, rubeola titer, and hepatitis immunization prior to their clinical assignments in the affiliate laboratories.

Lower-Division Courses
MED T 160. Introduction to the Clinical Laboratory Sciences (2). A study of clinical laboratory disciplines, including hematology, immunohematology, chemistry, microbiology, cytology, and histology, through an examination of laboratory testing in each discipline considering 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 as a consumer.

MED T 281. Cooperative Education (1-3). Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and the cooperative education 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 Physician Assistant students in professional program.

Upper-Division Courses
MED T 400. Clinical Laboratory Management/Education (1). A study of the principles and methodologies of laboratory management and supervision and teaching techniques applicable to the clinical laboratory sciences. Prerequisite: program consent.

MED T 405. Medical Immunology (3). An introduction to the study of immunological concepts as they apply to the study prevention, and causation of the disease process. Prerequisite: BIOL 223.

MED T 406. Foundations of Laboratory Practices (2). An introduction to clinical laboratory skills and instrumentation. Includes laboratory safety specimen collection and processing, medical terminology and use of care of the microscope. Prerequisite: program consent.

MED T 411. Special Topics (1-6). Supervised intensive study of special topics and problems related to health professions. Repeatable to a maximum of 6 hours. Prerequisite: Program director's consent.

MED T 411A. Special Topics in Clinical Chemistry (1). Review of current quality control procedures, biological variables, 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 I (1). Reviews gram stain and media reactions, the new classification of organisms, rapid identification methods, and issues of antimicrobial resistance. Prerequisite: BSMT or equivalent and MT/CLS certification.

MED T 411E. Special Topics in Microbiology II (1). Reviews virology, mycology, parasitology, and morphologi-
MED T 411F. Special Topics in Urinalysis/Hemostasis (1). Urinalysis seminar 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 approach. Emphasizes the laboratory tests used in diagnosing various coagulopathies. Prerequisites: BSMT or equivalent and MT/CLS certification.

MED T 411. Special Topics in Consumer Understanding of Laboratory Values (1).

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 551 and BIOL 225.

MED T 451. Clinical Chemistry I Laboratory (1). 3L. Application of the theory of the procedures and techniques used for colorimetric, spectrophotometric, and ultraviolet analysis of serum plasma and other body fluids for clinically significant substances.

MED T 452. Analysis of Body Fluids (3). 2R; 3L. Includes the study of renal physiology, routine urinalysis, and renal function tests. Also encompasses the principles and techniques involved in the analysis of cerebrospinal fluid, feces, gastric fluid, synovial fluid, amniotic fluid, ascitic fluid, duodenal fluid, salivary fluids, and seminal fluid.

MED T 456. Clinical Chemistry II (3). Includes advanced instrumentation principles and techniques, acid-base balance, advanced enzymology, endocrinology, and toxicology. Emphasizes relationships existing between substances of the body and procedural development and evaluation. Prerequisites: MED T 450, 451, or program approval.

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/NC 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 225 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 theory and technical skills of hematology in a clinical laboratory. Prerequisites: MED T 467, and program consent.

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 465 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, antigen and antibody identification, and compatibility testing. Prerequisite: MED T 470 or equivalent or Instructor's consent.

MED T 476. Immunohematology II Laboratory (1). 3L. A laboratory course in techniques relevant to resolution of medical-legal cases, antibody identification, and problems encountered in blood typing, compatibility testing, hemotherapy, hemolytic disease of the newborn, Rh immune globulin, and hemolytic anemia. Prerequisite: MED T 470 or instructor's consent.

MED T 477. Immunohematology II Laboratory (1). 3L. A laboratory course in techniques relevant to resolution of medical-legal cases, antibody identification, and problems encountered in blood typing, compatibility testing, 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 theory and technical skill of immunohematology in a clinical laboratory with exposure to bone marrow, 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/NC 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, fluorimetry, chemiluminescence, electron-spectrometry, densitometry, and mass spectrometry. Also covers automation in clinical chemistry, microbiology, hematology, immunology, and immunohematology. Prerequisites: MED T 406, 450, 451, or instructor's consent.

MED T 489. Applied Clinical Techniques (2). Application of theory and techniques of clinical immunology, serology, body fluids, and specimen collection in the clinical laboratory. Offered Cr/NC only. Prerequisites: MED T 406, 452, 480, 483, and program consent.

MED T 490. Clinical Microbiology I (3). Basic theory covering (a) procedures for specimen processing in the clinical laboratory; (b) normal flora; (c) morphological, cultural, and serologic characteristics of common pathogenic bacteria; and (d) basic theory in antimicrobial susceptibility testing techniques. Prerequisite: BIOL 330, Corequisite: MED T 491.

MED T 491. Clinical Microbiology I Laboratory (1). 4L. Basic procedures for the set-up and examination of clinical specimens. Identification and identification procedures for the more common pathogenic organisms. Use and interpretation of common antimicrobial susceptibility testing procedures. Runs concurrently with MED T 490. Prerequisites: BIOL 330, previous or concurrent enrollment in MED T 490, and program consent.

MED T 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.

MED T 496. Clinical Microbiology II (3). Advanced theory, procedures, and rationale for the isolation and identification of the nonfermenters, the anaerobic, and unusual aerobic organisms. Discusses disease processes and identification of the acid-fast bacteria. Introduces advanced antimicrobial susceptibility testing techniques. Prerequisites: MED T 490, 491, 497, or concurrent enrollment.

MED T 497. Clinical Microbiology II Laboratory (1). 4L. Advanced laboratory techniques in the isolation and identification of nonfermenters, the anaerobic, and unusual aerobic organisms. Techniques for cultures and identification of acid-fast bacteria. Advanced antimicrobial susceptibility testing techniques.
Students are responsible for assigned topics, listing current biology in a commercial laboratory and operating hospital laboratory. Offered in the fall semester. Prerequisites: MED T 496 and 497.

**Course for Graduate Students Only**

**MED T 800. Seminar in Laboratory Sciences (1-3)** Discusses recent issues and advances in the field of clinical laboratory science, including the areas of microbiology, chemistry, hematology, immunology, and immunohematology. Students are responsible for assigned topics, using current journal articles as a resource material. Prerequisite: department consent.

**Physical Therapy (PT)**

Because physical therapy is an entry point into the health care system for many individuals, the physical therapy program at Wichita State University develops practitioners who can meet this responsibility and provide leadership inside and outside the profession. The Master of Physical Therapy degree allows the student to achieve a foundation in liberal arts and sciences as well as gain an education in the profession of physical therapy. Graduates have the skills and knowledge base necessary to assist them in influencing the quality of physical therapy care, the profession of physical therapy, and health care in the local community and beyond.

**Master of Physical Therapy**

The program prepares individuals to enter beginning practice as a physical therapist. 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 and as rehabilitative care. The program requires full-time study for a period of 26 consecutive months. Students enter the program in the summer semester only.

**Admission Requirements**

Admission to the program requires that the student:

1. Have a bachelor's degree from an accredited four-year institution acceptable to the Graduate School.
2. Have a cumulative grade point average of 3.000 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—8-10 semester hours with laboratory
   - College Chemistry—two semesters with laboratory
   - College Physics—two semesters with laboratory
   - English Composition—two semesters
   - Exercise Physiology—one semester
   - Math, college trigonometry or equivalent
   - Speech—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
   - Medical Terminology—one semester hour
4. Show evidence of 20 hours of observation or work in one or more physical therapy settings and of computer literacy.

To be reviewed for admission, applicants should do the following:

1. Seek an application packet from the Department of Physical Therapy.
2. Submit the designated Application for Admission and supporting transcripts to the Graduate School.
3. Submit the designated Physical Therapy Application, along with two references by the published deadlines.

Complete applications are reviewed when received by the department in a timely manner. Applications received at any other time are returned to the sender unreviewed. Applicants are notified of their admission status by the Graduate School. Once an applicant has been admitted, he or she is asked to submit a $100 nonrefundable tuition deposit to reserve a space for the summer admission. Once the student enrolls, this money is counted toward payment of tuition.

Students are advised to contact the department for any changes in the program course requirements or in prerequisite requirements. Information is also available on the department's Web site: www.wichita.edu/pt

**Degree Requirements**

The student must maintain a 3.000 grade point average and a C or better in each of the following courses:

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<tr>
<th>Course Details</th>
<th>Spring I</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>PT 715, Professional Issues and Ethics</td>
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<td>3</td>
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<tr>
<td>PT 707, Clinical Medicine I (general medical conditions)</td>
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<td>PT 707, Introduction to Patient Management Skills</td>
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<td>Electives, not required</td>
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<td>PT 701, Research Methods and Statistics</td>
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<td>HS 700, Gross Human Anatomy</td>
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<td>PT 710, Foundations for Evaluation and Treatment of Musculoskeletal Conditions</td>
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<td>PT 711, Clinical Biomechanics</td>
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<tr>
<td>PT 726, Clinical Medicine II (orthopedic conditions)</td>
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<td>PT 735, Physical Agents in Physical Therapy</td>
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<td><strong>Summer II</strong></td>
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<tr>
<td>PT 800, Clinical Education I (two 3-week clinical rotations)</td>
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<td>PT 842, Directed Research II</td>
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<tr>
<td>PT 816, Administration I (health care delivery system/general management principles)</td>
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<td>PT 809, Orthopedic Assessment and Intervention I</td>
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<td>PT 832, Neurological Assessment and Intervention</td>
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<td>PT 865, LifeSpan Assessment, Intervention, and Prevention</td>
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<td>PT 824, Educational Methods in Physical Therapy</td>
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<td>PT 802, Cardiopulmonary Assessment and Intervention</td>
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<td>PT 850, Clinical Education II</td>
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<td><strong>Summer III</strong></td>
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<td>PT 860, Clinical Education III (one 6-week rotation)</td>
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<td>PT 870, Clinical Education IV (one 6-week rotation)</td>
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</table>

**Special Requirements**

Students are required to purchase uniforms and other clinical apparel, professional liability insur-
ance, 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. Programs must be formulated in consultation with and approved by faculty sponsors and cooperative education coordinators. Students follow one of two patterns: parallel, enrolling concurrently in a minimum of 6 hours of course work, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in other courses. Prerequisite: successful completion of freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

**Upper-Division Course**

PT 481. Co-op Education (1-3). See PT 281.

**Courses for Graduate/Undergraduate Credit**

PT 701. Research Methods and Statistics (2). Discussion and application of statistics, critiquing scientific literature, and the development of a research proposal and major literature review. Prerequisite: departmental consent.

PT 705. Clinical Medicine I (2). Presents the causes, diagnoses, effects, treatment, and prognoses for general medical conditions seen by physical therapists. Coordinated by department faculty and organized around the medical model. Prerequisite: departmental consent.

PT 707. Introduction to Patient Management Skills (2). Introduces the student to basic patient care and medical terminology. Through clinical observation sessions, students become familiar with various types of physical therapy settings. Prerequisite: departmental consent.

PT 709. Therapeutic Exercise (3). Introduces the scientific principles of therapeutic exercise foundations and techniques for physical therapists. Follows the standards of physical therapist practice. Laboratory sessions include skill development for sale, effective use of basic therapeutic exercise equipment. Prerequisite: departmental consent.

PT 710. Foundations for Evaluation and Treatment of Musculoskeletal Conditions (3). Introduces the basic scientific foundation and clinical rationales used during evaluation and treatment of musculoskeletal conditions. In-depth studies of the art of palpating surface anatomy, performance of manual muscle testing (MMT), and goniometric measurements. Emphasizes review of clinical and scientific literature pertaining to evaluation and treatment of musculoskeletal conditions. Prerequisite: departmental consent.

PT 711. Clinical Biomechanics (3). Presents a kinesiological foundation of all joints so students have the ability to differentiate causes of musculoskeletal problems. Prerequisite: departmental consent.

PT 715. Professional Issues and Ethics (3). Introduces the profession of physical therapy. Addresses the profession, settings for delivery of services, professional ethics, organization of the profession, levels of personnel, and other issues directly related to the practice of the profession. Introduces specific issues and challenges the profession is addressing as the larger system for health and medical services changes. Prerequisite: departmental consent.

PT 726. Clinical Medicine II (2). 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. Neurological Approaches to Patient Care (2). Gives basic skills for assisting movement in patients with neurological impairments. Prerequisite: departmental consent.

PT 735. Physical Agents in Physical Therapy (4). Presents utilization of physical modalities related to sound, light, electricity, water, paraffin, traction, and massage to achieve physiological and mechanical results. Incorporates evaluation and treatment methods for the above modalities along with analysis of relevant scientific literature. Prerequisite: departmental consent.

PT 745. Clinical Medicine III (2). Presents the causes, diagnoses, effects, treatment, and 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 physical conditions, including industrial medicine intervention, lower extremity amputation management, and upper extremity orthotic devices. Also includes the management of intensive care patients in the hospital and at home. Prerequisite: departmental consent.

PT 790. Selected Topics in Physical Therapy (1-4). Intensive study of current issues, technology, research, and application of selected topic. Repeatable up to 6 credits. Prerequisite: departmental consent.

PT 799. Experimental Courses (1-4). One-time course offerings. Prerequisite: departmental consent.

**Courses for Graduate Students Only**

PT 800. Clinical Education I (3). Introduction to physical therapy care in varied settings requiring communication and interpersonal relations skills; application of basic physical therapy procedures; beginning professional socialization; beginning development of a generalist in physical therapy. Prerequisite: departmental consent.

PT 802. Cardiopulmonary Assessment and Intervention (2). Continuation of PT 745. Adds concepts and material to allow students to assess and treat patients with cardiopulmonary conditions. Prerequisite: departmental consent.

PT 809. Orthopedic Assessment and Intervention I (3). Introduces the basic scientific foundation and clinical rationale used during evaluation, assessment, and treatment of musculoskeletal conditions. Builds on first year PT courses. In-depth study of different injuries and lesions, specific evaluation techniques, and treatments of those injuries and pathologies. Deals mainly with the upper quarter and includes the entire upper extremity, cervical, and thoracic spine. Emphasizes organizing and synthesizing information from PT curriculum to allow integration and problem-solving skills to enable students to become competent practicing physical therapists. Prerequisite: departmental consent.

PT 811. Orthopedic Assessment and Intervention II (3). Continuation of PT 809. Deals mainly with the lower quarter and includes the entire lower extremity, lumbar spine, sacroiliac joint, and pelvis. Emphasizes organizing and synthesizing information from PT curriculum to allow integration and problem-solving skills to enable students to become competent practicing physical therapists. Prerequisite: departmental consent.

PT 816. Physical Therapy Administration I (2). Studies management systems including assessment, planning, organization, staffing, leadership, and motivation, control, and evaluation methods. Includes environmental assessment and strategic planning, organizational design, human resource management, fiscal considerations, and leadership and management styles. Prerequisite: departmental consent.

PT 818. Physical Therapy Administration II (2). Studies payment systems, legal aspects of physical therapy, risk management, assurance of quality physical therapy care. Includes peer review, audit, documentation, legal and ethical aspects, fiscal consideration, and community resources. Prerequisite: departmental consent.

PT 824. Educational Methods in Physical Therapy (1). Discusses teaching and learning theories as they apply to physical therapy education of patients, students, health professionals, and the community. Includes methods of developing and evaluating content, instructional strategies, and learning outcomes. Prerequisite: departmental consent.

PT 832. Neurological Assessment and Intervention (3) (2R, 3L). Continuation of PT 745. Adds concepts and materi-
al to allow students to assess and treat patients with neurologica

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 focus developed in collaboration with a departmental faculty member. Allows students to pursue an area of special interest. Prerequisite: departmental consent.

PT 841. Directed Research I (2). First in a series of three courses following PT 701 in which students work with an assigned advisor to plan either a research project or a research paper. Prerequisite: PT 701.

PT 842. Directed Research II (2). Second in series of three courses following PT 701 in which students work with an assigned advisor to collect data and complete statistical analyses (as appropriate) for either a research project or a research paper. Prerequisites: PT 701, 841.

PT 843. Directed Research III (2). Third in series of three courses following PT 701. Students complete either a research project or a research paper. Prerequisites: PT 701, 842, 841.

PT 850. Clinical Education II (6). First in a series of three six-week courses offering continued development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching, and some opportunities for clinical research. Prerequisite: program 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 through 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 6 hours. Prerequisites: enrollment in graduate studies and consent of thesis advisor.

In the series of three clinical courses, students experience four different settings including general and rehabilitation practices and a selected area of specialization not limited to pediatrics, geriatrics, and orthopedics. The order of the settings is flexible. There is an increase in the level of expectation of performance with each clinical course which is guided by the evaluation process.

Physician Assistant (PA)

Physician assistants (PAs) are professional members of the health care team who, working with physicians, provide diagnostic and therapeutic patient care in virtually all medical specialties and settings.

PAs take medical histories, perform physical examinations, and order laboratory tests. After diagnosing a problem, the PA develops and implements a treatment plan. When appropriate, the PA 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 receive the Bachelor of Science—Physician Assistant degree. Graduates of the program are eligible to take the examination given by the National Commission on Certification of Physician Assistants. Passage of this examination is required by most states (including Kansas) for physician assistant practice. The WSU Physician Assistant Program is fully accredited by the Accreditation Review Commission on Education for the Physician Assistant.

Preprofessional Curriculum

The physician assistant program maintains the philosophy that persons with varied backgrounds can be successful physician assistant students. Prior health care experience is not required, but is preferred. Interested parties should contact the physician assistant program for detailed application information, including time frame for applying, references, and selection criteria. Admission to the program is highly competitive. Requirements must be completed with in complete and accurate detail. The physician assistant program curriculum builds on a foundation of liberal arts and sciences.

Course work taken longer than 10 years ago will be subject to program review. Students may be required to repeat certain prerequisite courses.

1. Applicants with any academic degree should consult a member of the program's faculty to determine if the preprofessional requirements for admission to the program and for the Bachelor of Science degree have been met.
2. For any person holding a bachelor's degree the following are required:
   a. The GEC requirements
   b. BIOL 210 (4 hours), BIOL 220 (4 hours), BIOL 223 (5 hours)
   c. CHEM 111 (5 hours), CHEM 112 (5 hours)
   d. MATH 311, College Algebra or equivalent (3 hours)
3. All others complete the following:
   a. BIOL 210 (4 hours), BIOL 220 (4 hours), BIOL 223 (5 hours)
   b. CHEM 111 (5 hours), CHEM 112 (5 hours)
   c. MATH 311, College Algebra or equivalent (3 hours)

Additional academic requirements:
1. An overall college grade point average of 3.000/4.000
2. A grade point average of 3.000/4.000 for prerequisite course work
3. A grade of C or better in all courses

Fine Arts and Humanities

A Further Study course from two Humanities disciplines
A Further Study course from one discipline and a Perspectives course in Fine Arts or Humanities

Social and Behavioral Sciences

A Further Study course from two different Social and Behavioral Sciences disciplines
A Further Study course from one discipline and a Perspectives course in Social and Behavioral Sciences

Natural Sciences and Mathematics

Introductory courses
CHEM 111, General Chemistry
BIOL 210, General Biology
Further Study course
CHEM 112, General and Inorganic Chemistry

Additional requirements
BIOL 220, Introduction to Microbiology
BIOL 223, Human Anatomy and Physiology
MATH 111, College Algebra

General Information for Admission to Professional Curriculum

Students entering the physician assistant professional course of study are required to purchase malpractice insurance in an amount set by the State of Kansas. Students are also required to purchase all the diagnostic equipment needed for use during the two-year course of study as well as the required articles of dress.

Applications for the physician assistant program are submitted online to a centralized application service. Contact the program for specific details. Applicants should be aware that admission to the University is not admission to the physician assistant program.
Selection for admission to the physician assistant professional curriculum 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—Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA 388, Clinical Anatomy I</td>
<td>3</td>
</tr>
<tr>
<td>PA 390, Clinical Physiology</td>
<td>3</td>
</tr>
<tr>
<td>PA 300, Medical History and Physical Examination</td>
<td>4</td>
</tr>
<tr>
<td>PA 302, Patient Counseling</td>
<td>2</td>
</tr>
<tr>
<td>PA 315, PA Professional Issues</td>
<td>1</td>
</tr>
<tr>
<td>PA 320, Assessment and Management of the EENT Systems</td>
<td>3</td>
</tr>
<tr>
<td>PA 325, Preventive Medicine and Community Health</td>
<td>2</td>
</tr>
<tr>
<td>HS 711, Applied Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>MED T 310, Clinical Laboratory Services</td>
<td>1</td>
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<td>22</td>
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### Spring

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PA 389, Clinical Anatomy II</td>
<td>2</td>
</tr>
<tr>
<td>HS 711, Pharmacologic Management of Acute and Chronic Diseases</td>
<td>3</td>
</tr>
<tr>
<td>PA 316, Assessment and Management of the Integument</td>
<td>1</td>
</tr>
<tr>
<td>PA 317, Assessment and Management of the Endocrine System</td>
<td>1</td>
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<tr>
<td>PA 323, Assessment and Management of the Cardiopulmonary Systems</td>
<td>4</td>
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<tr>
<td>PA 330, Assessment and Management of Gastrointestinal System</td>
<td>3</td>
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<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>
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### Summer

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PA 337, Assessment and Management of the Neuro-Musculo-Skeletal Systems</td>
<td>3</td>
</tr>
<tr>
<td>PA 375, Clinical Skills I</td>
<td>3</td>
</tr>
<tr>
<td>PA 430, Clinical Conference I</td>
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<tr>
<td>Total</td>
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### Fall

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<tbody>
<tr>
<td>PA 410, Clinical Rotation I</td>
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</tr>
<tr>
<td>PA 412, Clinical Rotation II</td>
<td>3</td>
</tr>
<tr>
<td>PA 414, Clinical Rotation III</td>
<td>3</td>
</tr>
<tr>
<td>PA 418, Clinical Rotation IV</td>
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### Spring

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<th>Course</th>
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<tbody>
<tr>
<td>PA 419, Clinical Rotation V</td>
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</tr>
<tr>
<td>PA 422, Clinical Rotation VI</td>
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<tr>
<td>PA 425, Clinical Rotation VII</td>
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<tr>
<td>PA 432, Clinical Conference II</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
</tr>
</tbody>
</table>

**Graduation Requirements**

Students who meet the course requirements specified in the physician assistant curriculum receive a Bachelor of Science degree with a physician assistant major.

### Other Requirements

Students must purchase laboratory jackets, identification 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 titers, and health insurance prior to enrollment.

### 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 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of 6 hours of course work in addition to their Co-op assignment, or alternating working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

### Upper-Division Courses

**PA 300. Medical History and Physical Examination (4). 3R; 2L**

Provides the theoretical and practical knowledge that can be utilized to obtain an appropriate medical history and/or conduct a proper physical examination (complete/perient). Also focuses on the identification of normal and abnormal physical findings. Practice of methods and techniques learned take place in a faculty-proctored laboratory setting. Prerequisite: admission to PA professional program.

**PA 302. Patient Counseling (2).**

Considers the theories and techniques of patient counseling; emphasizes effective communication, basic counseling techniques, and basic strategies for therapeutic intervention. Deals with the philosophies of counseling for a wide range of cognitive and behavioral problems common to the primary care setting. Prerequisite: admission to PA professional program.

**PA 315. PA Professional Issues (1).**

Introduces the junior PA student 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 eye, ear, nose, throat, and eye audiometry and ophthalmic manifestations of systemic diseases. Prerequisite: admission to PA professional program.

**PA 323. Assessment and Management of the Cardiopulmonary Systems (4).**

Deals with the cardiopulmonary systems. Includes the assessment and management of acute and chronic cardiopulmonary diseases, peripheral vascular disease, and emergencies. Appropriate evaluation of roentgenology studies, EKGs, laboratory studies; includes pulmonary functions and blood gases as applicable to the primary care setting. Prerequisite: admission to PA professional program.

**PA 325. Preventive Medicine and Community Health (2).**

Addresses topics in preventive medicine and community health including risk factors for the major causes of
death and disability, behavioral techniques used in making health behavior change, health risk appraisal instruments, health screening, and disease and accident prevention. Introduces community agencies with roles in disease prevention, health education, and health promotion. Prerequisite: admission to PA professional program.


PA 328. Introduction to Alternative and Complementary Medicine (3). Provides a fundamental and basic knowledge of medical therapies that are alternatives to or complementary of traditional western medicine. Covers naturopathy, traditional Chinese medicine, homeopathy, botanical medicine, massage therapy, chiropractic, etc. Examines research evidence for effectiveness and how these therapeutic approaches may blend with and complement the more traditional clinical approach. Combines didactic presentations with a mix of demonstrations by alternative health care providers, visits by patients, case studies, and small group presentations.

PA 330. Assessment and Management of the Gastrointestinal System (3). A theory, laboratory, and clinical course; deals with the gastro-intestinal (GI) system. Includes assessment of diseases of organs in the GI tract, special problems of the newborn, relationships of the autonomic nervous system to GI symptomatology, histology of the GI tract, GI manifestations of psychiatric disturbances, and demonstration of special diagnostic instruments. Prerequisite: admission to PA professional program.

PA 333. Assessment and Management of Obstetrics and Gynecology (3). Deals with obstetrics and gynecology. Includes the menstrual cycle, pregnancy, gynecologic diseases, techniques of normal delivery, obstetrical emergencies, family planning, and infertility. Prerequisite: admission to PA professional program.

PA 335. Assessment and Management of the Renal and Genito-Urinary Systems (3). Deals with the kidneys, ureters, bladder, and prostate. Includes electrolyte and fluid balances, hypertension, tumors of the genito-urinary (GU) system, infectious diseases, trauma, calculi, and special diagnostic procedures. Examines common 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 337. Assessment and Management of the Neuro-Musculo-Skeletal Systems (3). Emphasizes the recognition, evaluation and management of neuro-musculo-skeletal diseases and injuries in primary care, emergency, and inpatient settings. Prerequisite: admission to PA professional program.

PA 357. Clinical Skills I (3). 1R; 4L. Graded S/U. A combined theory, laboratory, and clinical experience; students apply knowledge to the care of patients. Includes the physical examination emphasizing applied anatomy and physiology basic to understanding the examination with examples of normalcy and abnormalities; medical terminology, evaluation of patients; patient rapport and professional conduct. Employs lecture, simulation, and clinical application. Prerequisite: admission to PA professional program.

PA 388. Clinical Anatomy (3). Fall semester. Furthers the understanding of the health professional in a comprehensive and/or specific area of human anatomy. Emphasizes human anatomy of the head, upper extremity, lower extremity, head, and neck. Prerequisites: BIOL 225 or equivalent and enrollment in the PA professional program or instructor's consent.

PA 389. Clinical Anatomy (2). Spring semester. A continuation of PA 388 emphasizing human anatomy of the thorax, gastrointestinal, and genital-urinary systems. Prerequisites: PA 388 and enrollment in the PA professional program, or instructor's consent.

PA 390. Clinical Physiology (3). Furthers the 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. Departs select the number of credit hours needed for their program and offer them under this course number with a designated subsection. Prerequisites: instructor's consent and enrollment in one of the professional programs.

PA 410. Clinical Rotation I (3). A six-week clinical experience; students participate in the care of patients in a variety of medical settings and specialties. Emphasizes orientation to medical practice-setting and obtaining and recording a complete and/or problem-oriented medical history. Students obtain and record complete and/or problem-oriented physical examination data, become familiar with common diagnostic procedures and are involved in the selection of therapeutic 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 422. Clinical Rotation VI (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. Focuses on issues affecting the graduate physician assistant, which include legislative issues, professional associations and responsibilities, practice limitations, and malpractice issues. 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 which would be encountered by the graduate physician assistant. Graded S/U.

PA 481. Cooperative Education Field Study (1-6). See PA 281.

Course for Graduate/Undergraduate Credit

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 develops leadership capacity for a healthy society through both its undergraduate and graduate degree programs. At the undergraduate level, the department
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 assessing 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 electives. Suggested HSOP electives include, but are not limited to: PHS 433, 458, 490, 641, and 686; and MATH 631.

The HSOP 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 also obtain a minor in business through WSU's Barton School of Business.

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 2.00 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, 402 Ahlberg Hall.

Progression

Students in the health services organization and policy major are required to maintain a cumulative grade point average of 2.00 in course work required in the major, including those courses chosen for elective credit toward the major, with no individual course grade lower than 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 may 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 specialization area of interest. Advisors 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, HSOP 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.

Required Core Courses

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<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS 320, Overview of Health Services Delivery</td>
<td>3</td>
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<tr>
<td>PHS 325, Dynamics of Community Health</td>
<td>3</td>
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<tr>
<td>PHS 328, Health Care Organization</td>
<td>3</td>
</tr>
<tr>
<td>PHS 333, Organizational Behavior and Leadership in Health Service Organizations</td>
<td>3</td>
</tr>
<tr>
<td>PHS 343, Program Planning/Development in Health Services</td>
<td>3</td>
</tr>
<tr>
<td>PHS 442, Financing Health Care Services</td>
<td>3</td>
</tr>
<tr>
<td>PHS 454, Health Politics</td>
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</tbody>
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Approved Electives

<table>
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<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHS 460, HSOP Practicum</td>
<td>3</td>
</tr>
<tr>
<td>PHS 461, Special Project</td>
<td>3</td>
</tr>
</tbody>
</table>

Total hours required for HSOP major | 33 |

Graduate Credit for Seniors (Senior Rule)

Seniors who are in the HSOP program and who intend to pursue either the graduate certificate in public health or the Master of Public Health (MPH)
degree may take work for graduate credit under the Senior Rule if they (1) have an overall grade point average of 3.00 or above in their major field and in upper-division courses and (2) are within 10 hours of completing the Bachelor of Science degree in HSP. Policies and procedures for exercising this option may be found in the General Information section of this Catalog.

Lower-Division Course

PHS 130. Workshop in Health Sciences (1-10).

Upper-Division Courses

PHS 305: Sole to Soul: Health Promotion in Action (3).

Provides contemporary information regarding public and personal health challenges, including issues of violence, new threats from emerging infectious diseases, insights into chronic diseases, and concerns over global health and the degradation of the environment. Helps students become "change agents" for health—in both personal health behaviors and the larger realm of policy changes to help the global population. A key feature is Impact Health Activity, which provides students the opportunity to actively engage in personal and community health programs and projects to promote positive individual and community health improvements. Course emphasizes understanding the role of interpersonal communication; cultural values; and psychosocial, socioeconomic, and political factors in promoting or hindering optimal health for individuals, communities, and the environment.

PHS 308. Leadership in Self and Society (3).

General education issues and perspectives course. Examines factors influencing the effectiveness of individuals leading change, including values, conflicts, and power. Studies the human side of organizational change focusing on understanding how and why people react to change and identifying opportunities for enhancing the effective implementation of change. Students reflect on their own leadership development and work in teams to recommend strategies for change in a project, community setting, or organization.

PHS 310. Understanding the U.S. Health Care System (3).

General education issues and perspectives course. The U.S. health care system has been described as a non-system. The social systems of any country are shaped by the prevailing social values in the country. The three major components of the U.S. health care system—public health, acute care, and continuing care—have evolved separately due to prevailing social values and the related political decisions unique to this country. Course provides an overview of the social, economical, and political environment and their role in shaping the form, function, and finance of each of the three major sectors, emphasizing the problems inherent in such a fragmented system.

PHS 320. Overview of Health Services Delivery (3).

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 health experience with patterns of 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 106 or equivalent.

PHS 328. Health Care Organization (3).

Covers issues of management, organization, and operations of health care delivery 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 or co-requisites: PHS 320 and 325.

PHS 333. Organizational Behavior and Leadership in Health Service Organizations (3).

Introduces the concepts of leadership in health care organizations focusing on the differing leadership 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, intraorganizational communications, interpersonal and group relationships, motivation, and implementation of organizational change. Prerequisite or co-requisite: 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 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 358. Health Care Team Concepts (3).

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 analysis for planning 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 revenues, budgeting, and cost allocation methods. Uses examples for various types of health service organizations. Prerequisites: PHS 325 or concurrent enrollment and PHS 328.

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 construct 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 481. Cooperative Education Field Study (1-8).

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 6 hours. Prerequisite: program consent.

Courses for Graduate/Undergraduate Credit

PHS 575. Special Topics or Selected Topics (1-4).

Lecture/discussion; focuses on a discrete area content relevant to the health disciplines. In-depth study of particular topic or concept, including didactic and current research findings
P HS 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.

P HS 641. Cultural Competency in Health Care (3). Examines the characteristics and health-related needs of population groups with higher-than-average risk of disease, disability, or premature deaths, including the frail elderly, racial and ethnic minorities, homeless people, refugees and immigrants, people with AIDS, alcohol and substance abusers, teen mothers, low-birthweight infants, victims of family or other violence, the chronically or mentally ill, and persons with mental retardation and developmental disabilities. Uses a social epidemiology approach to explore relationships between public policy and private behavior. Looks at societal factors influencing the kinds of care available to vulnerable populations as well as how cultural differences among such groups affect lifestyle choices, attitudes toward health, help-seeking behavior, and service utilization. Reflecting targets stipulated by the Centers for Disease Control (CDC) in their Healthy People 2010 initiative, course identifies ways to reduce the disparities between those with high vulnerabilities and the rest of the population. Taking an applied approach, each student is engaged in significant problem-solving efforts. Accesses the community and its issues through the Health Options for Planview (HOP) program, the community-based laboratory for WSU’s Department of Public Health Sciences.

P HS 667. 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.

P HS 632. 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 the student to 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 328 or departmental consent.

P HS 686. 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.

P HS 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

P HS 804. Principles of Statistics in the Health Sciences (4). An introductory graduate-level course concerning the concepts of statistical reasoning, statistical principles, and their role in the scientific basis for clinical research, and public health research, and practice. The lab reinforces concepts learned in lecture and emphasizes the application of statistical methodology to public health practice and public health research.

P HS 808. Principles of Epidemiology (3). An introductory graduate-level course concerning epidemiologic principles and how these form the scientific basis for public health.

P HS 809. Management of Public Health Data (3). Covers basic computing skills necessary for any advanced epidemiologic or administrative quantitative methods. Includes basic concepts of variable and dataset creation, building, maintenance, and basic descriptive (not interpretive) 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.

P HS 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.

P HS 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. Critiques topics with regard to public health goals, the interests of consumers and providers, and ethics.

P HS 814. Social and Behavioral Aspects of Public Health (3). Examines the characteristics beliefs and behaviors of individuals and groups involved in the process of health care. Draws on concepts and principles of the social, behavioral, and clinical sciences, especially dynamics that define the interactions of providers and consumers of health care. Explores why people react to perceived symptoms: the way they do, the reasons providers respond as they do to patients in different social attributes, the factors which predispose individual reactions to illness and its correlates, and the effects on health of societal agreements and expectations.

P HS 816. Environmental Health (3). A survey course in environmental health. Provides an understanding of the fundamental theories and methods for the control of disease. Includes environmental law, disease systems, water supplies, plumbing, waste water treatment, food sanitation, vector control, recreation sanitation, solid waste disposal, housing sanitation, and air pollution.

P HS 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 judgment. 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.

P HS 822. Advanced Research Methods (3). Advanced topics in health services research: advanced descriptive analysis, advanced multivariate analysis, modeling, causal interpretations, issues in evaluation, proposal writing, special issues in research in health care settings, and problems encountered on research projects. Prerequisite: PHS 818.

P HS 823. Social Epidemiology (3). Examines the patterns and explanations for diversity in mortality and morbidity in populations, focusing on social factors including social class, race, ethnicity, culture, stress, and social relationships, both formal and informal. Explores current thinking about the explanations for mortality and morbidity patterns.

P HS 825. Health Care Marketing (3). Cross-listed as MKT 890C. 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.

P HS 826. Politics in Health Care (3). Course frames health and health care in the U.S. as political issues that affect the public well being. Students learn the basic principles of policy making for health-related issues, including problem emergence, agenda setting, historical precedents, windows of opportunity, politics of naming, funding strategies, and political power structures.
Covers issues of evaluation in health settings, including needs assessment, setting objectives, selection, implementation, and evaluation of programs and interventions. Prerequisite: PHS 818.

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 831. The Essentials of Health Insurance and Managed Care (3).
A graduate level introduction to the fundamental principles of health insurance and the relationship of those principles to our evolving system of health care financing. Through lecture and discussion, students become familiar with the conceptual and statistical principles of risk, and the role of insurance in handling risk, rate setting, and benefits as they apply to health insurance plans, the organization and financing mechanisms associated with today’s varied health insurance plans, health insurance and managed care, and the relationship of insurance concepts to Medicare.

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 (DRC-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 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 Windows, 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 Credit/No Credit only.

PHS 841. Leadership and Change Agency in Public Health (3).
Explores the essential leadership competencies and characteristics necessary to effectively promote innovation and facilitate adaptation in today’s complex and rapidly evolving health care system. Combines classic theory and cutting edge concepts to ground students in the principles which underpin the current emphasis on leaders as change agents. Explores and applies strategies for effective change in the thinking and behavior of people, the design and vision of organizations, and the health and well being of communities. Emphasizes the generalizability of leadership principles across the various sectors of public health.

PHS 842. Public Health Applications to the World Wide Web (2).
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 6 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. EMT graduates are prepared for state certification exams while in the program. Students who would like to enroll in this course must fulfill all requirements for admission to Wichita State University.

EMT 110 encompasses classroom instruction, 16 hours of hospital ER observation, and 24 hours of EMS ride-along time. Successful completion of the course meets the educational prerequisite for taking the state and/or national registry examinations for emergency medical technicians. Portions of EMT are online or asynchronous learning.

Lower-Division Course
EMT 110. Basic Emergency Medical Care Training (10).
SR; 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 spend 16 hours in hospital observation and 24 hours in ambulance 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 Ahlberg Hall. The basic program consists of 52 credit hours in 18 months. Completion of MICT prerequisites and the MICT program qualify the student for the Associate of Applied Science, Mobile Intensive Care Technician. Successful completion of this program does not guarantee certification but does allow one to challenge the certification examination given by the State of Kansas. In addition, stu-
students who have completed the MICT training and taken the required general education courses to receive the AAS degree may apply to the bachelor’s degree program in health sciences.

Lower-Division Courses

MICT 205. Introduction to Advanced Pre-Hospital Care (4). An overview of the role of pre-hospital personnel, medical ethics, 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, pediatrics emergencies, obstetrics 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.

Upper-Division Courses

MICT 320. Clinical Internship (6). Receive in-hospital training with physicians, nurses, and technicians in their area of expertise including ER, OR, IV Team, LDR, ICU, or other areas where skills learned can be applied to pre-hospital care. Prerequisites: instructor and department approval.

MICT 322. Clinical Correlation (1). Review and discussion of experience gained during the clinical/field internship and the application of this information to the pre-hospital setting. Prerequisites: instructor and department approval.

MICT 324. Field Internship (11). Pre-hospital training with local emergency medical services which are supervised by certified MICTs. 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 WSU Graduate Bulletin.

Bachelor of Science in Nursing
The Bachelor of Science in Nursing program is designed to prepare students for the practice of professional nursing. The graduate is prepared for beginning positions in nursing in any health care delivery system, for further study at the master and doctoral levels, and for advancement to nursing positions of increasing responsibility and leadership.

Students are admitted to the School of Nursing at the junior year after completing 58 hours of course work. Persons interested in the Bachelor of Science in Nursing may direct inquiries to Nursing Counselor, School of Nursing, Wichita State University, Wichita, Kansas 67260-0041.

Preprofessional Curriculum
Students applying for admission to the School of Nursing must have completed the following courses. Students should consider taking 16 hours per semester or attending Summer Session.

<table>
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<tr>
<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>MATH 111, 112 or 211</td>
<td>3</td>
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<tr>
<td>ENGL 101, College English I</td>
<td>3</td>
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<tr>
<td>ENGL 102, College English II</td>
<td>3</td>
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<tr>
<td>COMM 111, Public Speaking</td>
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<tr>
<td>Humanities and Fine Arts</td>
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<td>Fine Arts Appreciation</td>
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<tr>
<td>PHIL 100, The Meaning of Philosophy</td>
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<tr>
<td>Course in humanities other than philosophy</td>
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<tr>
<td>Social and Behavioral Sciences</td>
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<tr>
<td>PSY 111, General Psychology</td>
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<tr>
<td>PSY 334, Developmental Psychology</td>
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<tr>
<td>SOC 111, Introduction to Sociology</td>
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<tr>
<td>Natural Sciences and Mathematics</td>
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<tr>
<td>BIOL 220, Introduction to Microbiology (applies as an Introductory General Education course for the BSN degree only)</td>
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<tr>
<td>CHEM 103/111, General Chemistry</td>
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<tr>
<td>Other Prerequisites</td>
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<tr>
<td>BIOL 223, Human Anatomy and Physiology</td>
<td>5</td>
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<tr>
<td>NURS 285, Introduction to Nursing Practice</td>
<td>2</td>
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<tr>
<td>HS 331, Principles of Diet and Nutrition</td>
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<tr>
<td>HS 400, Introduction to Pathophysiology</td>
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<tr>
<td>CS 105, Introduction to Computers and Their Applications or NURS 531, Nursing and Computer Technology</td>
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Admission to School of Nursing
Students should request an application form from the School of Nursing prior to enrolling in their last semester of prerequisite courses. Application forms for fall semester admission are required by February 1; for spring semester admission, by September 1. To qualify as a candidate for admission to the School of Nursing, students must:
1. Be enrolled in, or admitted to, Wichita State University;
2. Have completed, or have plans to complete, the prerequisite requirements;
3. Have an overall grade point average of at least 2.50 in all courses completed and no grade lower than a C in any of the specified required courses;
4. Submit an application including expected semester of enrollment;
5. Complete a standardized entrance test with a minimum percentage score.

Professional Curriculum
The following courses in the School of Nursing are required for the Bachelor of Science in Nursing. A total of 124 hours of University credit is required for graduation.

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
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<td>CHEM 103/111, General Chemistry</td>
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<td>Other Prerequisites</td>
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<td>BIOL 223, Human Anatomy and Physiology</td>
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<td>CS 105, Introduction to Computers and Their Applications or NURS 531, Nursing and Computer Technology</td>
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2. Have completed, or have plans to complete, the prerequisite requirements;
3. Have an overall grade point average of at least 2.50 in all courses completed and no grade lower than a C in any of the specified required courses;
4. Submit an application including expected semester of enrollment;
5. Complete a standardized entrance test with a minimum percentage score.

Professional Curriculum
The following courses in the School of Nursing are required for the Bachelor of Science in Nursing. A total of 124 hours of University credit is required for graduation.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Adult and Pediatric Medical Emergencies</td>
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<tr>
<td>MATH 111, 112 or 211</td>
<td>3</td>
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<tr>
<td>ENGL 101, College English I</td>
<td>3</td>
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<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>
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<tr>
<td>Fine Arts Appreciation</td>
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<tr>
<td>PHIL 100, The Meaning of Philosophy</td>
<td></td>
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<tr>
<td>Course in humanities other than philosophy</td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td></td>
</tr>
<tr>
<td>PSY 111, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 334, Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 111, Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences and Mathematics</td>
<td></td>
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<tr>
<td>BIOL 220, Introduction to Microbiology (applies as an Introductory General Education course for the BSN degree only)</td>
<td>4</td>
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<tr>
<td>CHEM 103/111, General Chemistry</td>
<td>5</td>
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<tr>
<td>Other Prerequisites</td>
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<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>HS 331, Principles of Diet and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HS 400, Introduction to Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>CS 105, Introduction to Computers and Their Applications or NURS 531, Nursing and Computer Technology</td>
<td>3</td>
</tr>
</tbody>
</table>
LPN education program, have an active LPN license in Kansas, and have the equivalent of 1,000 hours of clinical practice as an LPN within the last year. Students seeking admission to this program should contact the School of Nursing.

**RN to BSN Progression Plan**

The RN to BSN plan offers advanced placement to registered nurses seeking a Bachelor of Science in Nursing degree. Twenty-five hours of retroactive credit or credit by exam in nursing courses can be applied to the degree. The RN to BSN curriculum follows the Kansas Nursing Articulation Plan.

Registered nurses must:

1. Submit verification of current license to practice as a registered nurse in Kansas.
2. Submit official transcripts of all 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>
<th>Notes</th>
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<tbody>
<tr>
<td><strong>Basic Skills</strong></td>
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<tr>
<td>MATH 111, 112 or 211</td>
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<td></td>
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<tr>
<td>ENGL 101, College English</td>
<td>3</td>
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<tr>
<td>ENGL 102, College English II</td>
<td>3</td>
<td></td>
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<tr>
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<tr>
<td>PSY 394, Developmental Psychology</td>
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<td></td>
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</tr>
<tr>
<td>CHEM 103/111, General Chemistry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>Other Prerequisites</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 223, Human Anatomy and Physiology</td>
<td>5</td>
<td></td>
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<tr>
<td>Statistics with approval</td>
<td>3</td>
<td></td>
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<tr>
<td>General electives</td>
<td>13</td>
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<tr>
<td>Total</td>
<td>60</td>
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</tr>
</tbody>
</table>

**Upper-Division Requirements**

| Philosophy/Ethics | 3 | |
| Electives | 6 | |
| Total | 9 | |

*Three hours of general or upper-division electives must be an issue and perspectives course to meet General Education requirements.

**Professional Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
<th>Notes</th>
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<tbody>
<tr>
<td>H5 301, Clinical Pharmacology</td>
<td>3</td>
<td></td>
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<tr>
<td>NURS 325, Research</td>
<td>2</td>
<td></td>
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<tr>
<td>NURS 334, RN Bridge Course</td>
<td>4</td>
<td></td>
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<tr>
<td>NURS 345, Primary Prevention</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>NURS 461, Care Manager/RN</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>NURS 475, Clinical Capstone-RN</td>
<td>2</td>
<td></td>
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<tr>
<td>NURS 531, Nursing and Computer Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Career enhancement electives</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

**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, and lab experiences may be required throughout the program. CPR certification is required. Information related to these requirements is available from the School of Nursing.

**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. Prerequisite: NURS 265. Corequisites: Semester 1 classes.

**NURS 310. Primary Health Care (4).** 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. Prerequisite: NURS 285. Corequisites: Semester 1 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. Corequisites: Semester 1 classes.

**NURS 334, RN Bridge Course (4).** Enhances the knowledge base of the RN-BSN student in leadership and management theory and application, issues 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. Prerequisite: NURS 265. Corequisites: Semester 1 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).** 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 1 courses. Corequisites: Semester 2 courses.

**NURS 370. Health Alterations II (5).** Emphasizes health alterations and chronic conditions of adults. Studies interventions which enhance the quality of life for adults with illness and chronic health alterations. Prerequisites: Semester 1 courses. Corequisites: Semester 2 courses.


**NURS 402. Care Manager II (2).** Explores leadership and managing as essential components of professional nursing practice. Examines the implications of ethical, legal, and economic issues as they impact nursing practice. Prerequisites: Semester 1 courses. Corequisites: Semester 2 courses.

**NURS 404. Survival Skills for Health Care Professionals (2).** Focuses on specific skills and issues related to pro-
NURS 410. Tertiary Care (5). 15P. Clinical course emphasizes patient care management of young adults 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 1 and 2 courses. Corequisites: Semester 3 courses.


NURS 425-427. Special Projects in Nursing. (1-6). Elective. Individual study of selected topics, didactic and/or clinical designed to enhance the student's knowledge base and competencies in nursing practice. Repeatable. Prerequisite: school consent.


NURS 434. Perioperative Clinical Management: Work-study (5). 2T; 9P. Elective. Lecture/clinical course examines the nursing needs of individuals in small groups that have various health problems requiring surgery. Focuses on the expansion of the nursing student's power to perform deliberate actions for the benefit and well-being of others in all phases of the surgical process (before, during, and after). Emphasizes the nursing student's acquisition of clinical management skills in all phases of the surgical process. Prerequisites: NURS 310, 320, 345, 360, 370, 380, or completion of 30 hours of a professional nursing program.

NURS 450. Care Manager III (3). 2.5T; 5.5P. Explores the role of the professional nurse in a population-based setting. Major component is completion of an intervention plan based on a community assessment. Integral components are public health nursing care 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 3 courses. Corequisites: Semester 4 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 academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Students may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of 6 hours of course work in addition to their Co-op assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeatable 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 3 courses and NURS 450 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 enhance 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 (3). Elective. Strategies for helping clients and families cope with broad aspects of loss, from temporary transient 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 microcomputers. Prerequisite: admission to the nursing program or instructor's consent. Previous knowledge of computers or computer technology is not required.

NURS 543. Women and Health Care (3). Cross-listed as WOM S 543. Examines the historical development of the women's health movement, focuses on recent 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 nonnursing majors.

NURS 556. Perspectives on Self-Help Groups (3). Cross-listed as PSY 566 and SCWK 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). 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, differentiation, 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 703. Scientific Inquiry I (3). Emphasizes the role of theory in scientific inquiry in nursing. Traces the evolution of nursing theory and explores projections for the future. Addresses relationships among theory, research, and practice. Analyzes selected models/frameworks relevant for nursing. Prerequisite: admission to graduate nursing program.

NURS 704. Health Maintenance of the School-Age Child (3). Examines and applies major 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 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 physical, 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 a role; and current trends and future directions. Focuses on issues ranging from concerns within the local practice setting to national policy issues related to advanced nursing practice. Prerequisite: admission to graduate nursing program.

NURS 718. Advanced Technologies (2). Focuses on application of clinical skills and interpretation of technologies utilized in a variety of clinical settings. Nurse practitioners practice these skills in laboratory and/or clinical settings. Prerequisite: admission to one of the NP options and departmental consent. Enrollment is limited.

NURS 720. Human Lactation (2-3). For the student preparing for a lactation consultant. Provides an in-depth focus on the anatomical and physiological basis of lactation and breastfeeding. Explores factors that impact maintenance of health during lactation and clinical decisions for disease prevention. Addresses preparation for lactation consultant certification. Students work on case studies, develop a paper for publication, and take a final examination via the Internet. Open to nonnursing majors. Prerequisite admission to graduate program.

NURS 725. Common Dermatological Conditions in Primary Care (1-3). Interactive online course guides students through an instructional program with a profile of common dermatological conditions encountered in primary care. Information is presented in brief case scenarios; students identify the condition. Resource links are available for in-depth study of each condition. For clinical use, patient education links are provided. Cases give the didactic information needed to make clinical decisions. Prerequisite: senior role or admission to the Graduate School or instructor's consent.

NURS 727. Low Back Pain (1-3). Interactive online course guides students through an instructional program based on the low back pain guidelines from the Agency for Health Care Policy and Research. Case study format stimulates critical thinking. Linked information gives information needed to make clinical decisions. Prerequisite: senior role or admission to the Graduate School or instructor's consent.

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 750. Workshops in Nursing (1-4). An opportunity for intensive study of special topics related to nursing practice, education, or research. Open to nonnursing majors.

NURS 757. Clinical Teaching Strategies (3). Explores alternative teaching strategies for the clinical educator to accommodate the changing health care scene. Discusses clinical teaching methods. A clinical rotation plan with accompanying clinical evaluation tool is constructed after the student, subject, and setting are delineated. Investigates roles of the educator in teaching clinically.

NURS 775. Health Care Information Systems (3). Examines information systems as they relate to health care. Analyzes information systems in clinical management, administration, education, and research. Emphasizes issues surrounding information systems and hands-on experience with selected health care information management exercises.

NURS 776. Health Care Information Systems Practicum (3). Provides an individualized opportunity to apply the concepts/theories of Information systems to a health care setting. Includes analyzing existing Information programs, identifying applications for automation, and undertaking small-scale development efforts. Prerequisite or 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 generalized processes and major system dysfunctions. Prerequisite: admission to NNP track or department consent.

NURS 81. 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, neuromodulation, neuropathology 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 option or departmental consent.

NURS 791. Special Studies in Nursing (1-6). Students engage in extensive study of particular content and skills directly or indirectly related to nursing practice. Repeatable. Open to graduate or undergraduate students. Prerequisite: departmental consent.

NURS 793. Advanced Pathophysiology (3). Explores in-depth scientific knowledge base relevant to selected pathophysiologic states confronting 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 nurse's role in prescribing and monitoring pharmacologic therapies in the ambulatory setting. Discusses factors such as age appropriate content related to pharmacokinetics, dosages, expected outcomes, and side effects of the drugs. Addresses first line versus second line drugs, alternate drugs, drug interactions, adjusting drug dosages, patient education, and compliance issues related to drug therapy. Explores the nurse's role and responsibility related to data collection, problem identification, and consultation with the physician. Application is made through age appropriate case studies. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 796. Nursing Practicum in Special Setting (1-6). Opportunity for directed practice in various settings including clinical specialties, nursing administration, nursing education, and consultation. Prerequisite: departmental consent.

NURS 799. Directed Readings in Nursing (1-2). Student engages in critical search of the literature in areas related to the profession and practice of nursing. Prerequisites: departmental consent.

Courses for Graduate Students Only

NURS 803. Primary Care I: Management of Common Health Problems through the Life Span (3). Focuses on common health problems seen in individuals and families throughout the life span. Stresses applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage common problems in urban and rural patients, interventions to restore individual and family levels of pre-illness health, and positive behaviors. Prerequisites: all core courses, NURS 718, 786, and admission to the FNP option. Prerequisites or corequisites: NURS 715, 793, and 795. Corequisites: NURS 804.

NURS 804. Primary Care II: Practicum (4). Concentrated clinical practicum in a primary care setting that addresses individuals and families throughout the life span within the context of the community. Theory and research used in clinical settings. Emphasizes health promotion, maintenance, and prevention interventions. Prerequisite: admission to the FNP option and NURS 805. Corequisites: NURS 803.

NURS 805. Health Promotion through the Life Span (3). Focuses on the wellness of individuals and families through the life span seeking to maintain health and prevent illness. Interventions reflect a preventative framework enhanced by theory and research that provide an understanding of health and lifestyle behaviors. Prerequisites: NURS 703 and 705 (715 can be concurrent).

NURS 808. Advanced Role Practicum (3-6). Prepares the student for advanced nursing practice. An intensive practicum experience; the student works with an advanced practice registered 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 795 or HS 711, pathophysiology (NURS 781, 783, or 793) and at least 6 hours of a clinical concentration.

NURS 809. Primary Care II: Management of Complex Health Problems through the Life Span (3). Focuses on complex problems seen in individuals and families through the life span. Stresses applications of current research and theory-based interventions appropriate for management by advanced registered nurse practitioners. Emphasizes strategies and protocols to manage complex patient problems in urban and rural patients interventions to restore individual and family levels of pre-illness health, including secondary and tertiary prevention. Prerequisites: NURS 803, 804, and admission to the FNP option. Corequisites: 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 cases. Prerequisite: admission to the FNP option. Corequisites: NURS 809.

NURS 811. Foundations of Nursing and Health Care Systems Administration (3). Assists the student in acquiring theoretical knowledge of organizations. Considers current issues and research in nursing and health care systems and its impact on nursing practice. Prerequisites: NURS 703 and 705. Prerequisite or corequisite: NURS 715.

NURS 812. Nursing and Health Care Systems Administration Practicum (1-4). Practicum in a health care setting; student, under professional guidance, becomes directly involved in existing leadership, administrative, and management systems. A seminar accompanies the field experience. Types of experience may include roles in nursing education or service, mid-level nursing administration, staff development, or community health. Repeatable with instructor's consent up to a maximum of 6 hours. Prerequisite or corequisite: 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 evidence-based practices as the course framework. Emphasizes the effects of critical conditions on the growth and development of the neonate, including subsequent chronic health problems and the short and long-term consequences to the child's family. Discusses disorders of the central nervous, pulmonary, and cardiovascular systems. Demonstrates and applies the use of specific interventions and diagnostic procedures in laboratory/clinical settings during 40 hours of required clinical activities. Prerequisites: core courses. NURS 713, 777, and 789.

NURS 816. Foundations of Psychiatric Mental Health Nursing (3). Evaluates major theories, clinical concepts, and current research in psychiatric/mental health in rela-
tion to formulating a conceptual model for nursing practice. Prerequisites: NURS 701, 702, 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 clients/patients. A seminar accompanies the practicum. Prerequisite or corequisite: NURS 819.

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 other type project developed in conjunction with the student's faculty advisor. Prerequisites: admission to graduate nursing program, departmental consent, and 12 hours of graduate course work, including NURS 703 and 705. Repeatable up to 6 credit hours.

NURS 825. Independent Study (1-6). Provides opportunity for the student to develop, in collaboration with a school faculty member, objectives and protocols for independent work related to the practice of nursing. Prerequisite: admission to graduate nursing program and departmental consent.

NURS 827. Resource Management in Nursing (3). Focuses on the assessment and management of resources necessary to operate nursing and health care systems including informational systems needed to manage resources; budget process management; personnel management from recruitment through termination, including staffing and scheduling; and management of relationships with patients, physicians, and diverse departments with different philosophies and views. 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). 9P. An intensive clinical experience; student focuses on the process of systematic developmental, psychosocial, and health assessment of individuals within a family system. Experiences based on the 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 include health maintenance or illness care of acutely or chronically ill adults. Prerequisites: all core courses, NURS 781 and 816, and HS 711. Prerequisite or corequisite: NURS 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 the student's clinical interests. Prerequisites: all core courses and NURS 803. Prerequisite or corequisite: NURS 853.

NURS 838. 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, management, and interventions related to acute and chronic health problems. Prerequisites: all core courses, NURS 781 and 803, and HS 711.


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 Registed 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 701, 702, 703, 705, 718, 786, 829, and admission to the NP option. Prerequisites or corequisites: NURS 715, 793, and 805.

NURS 848. Pediatric Primary Care I Practicum: Clinical Management of Common Health Issues (3). Concentrated clinical practicum 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. Prerequisite: admission to the NP 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 acute, chronic, urgent, and/or common health problems. Preceptorship is in a clinical agency appropriate to the student's clinical interests. Prerequisites: departmental consent and admission to one of the NP options.

NURS 851. Clinical Management (3). Management of clinical data and analysis of professional issues including business skills necessary for advanced nursing practice. Students use existing data to determine health care outcomes and to evaluate delivery of care. Extensive use of technology and support. Prerequisites: all core courses. Prerequisite or corequisite: enrollment in a course within the student's clinical or administrative option. Computer literacy is expected.

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 HS 711. 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. Prerequisites: 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 management of the adult with complex health problems. Interventions focus 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). Focuses on health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs. Emphasizes comprehensive assessment, diagnosis, and management of health, developmental, and chronic health problems within 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 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 and interventions to restore children's and family levels of pre-existing health, including secondary and tertiary prevention. Prerequisites: NURS 847 and 848.

NURS 856. Pediatric Primary Care III Practicum: School Health Practicum (3). A clinical course to prepare the student for advanced practice as a Pediatric/School Nurse Practitioner. Focuses on health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs, and the assessment and management of health and developmental problems within a family and developmental framework. Considers children with developmental and learning disabilities and children with select complex and chronic health problems. Emphasizes the collaborative and interdisciplinary nature of a child's care in a school setting. Addresses the unique needs of children in underserved communities. Prerequisite or corequisite: NURS 851.

NURS 857. Advanced Health Care for School Nurse Practitioners (3). A multidisciplinary course builds upon the dimensions of assessment and health care for children and adolescents in a family and community framework and provides a foundation for advanced practice in school health from the perspectives of educators and health care providers. Focuses on major contemporary issues that affect the health and education of children and adolescents in the school community. Considers theories, models, and concepts from education, public health, and nursing as they relate to schools. Focuses on the link between health and education. Examines political, sociological, economic, and environmental factors, as well as major causes of morbidity and mortality. Special emphasis on cultural diversity and vulnerable and underserved populations-at-risk and strategies that enhance learning and health promotion. Prerequisites: previous courses in the FNP specialization or departmental consent.

NURS 860. Pediatric Primary Care III Practicum: School Health Practicum (3). A clinical course to prepare the student for advanced practice as a Pediatric/School Nurse Practitioner. Focuses on health promotion, health maintenance, and risk reduction for children and adolescents with special health care needs, and the assessment and management of health and developmental problems within a family and developmental framework. Considers children with developmental and learning disabilities and children with select complex and chronic health problems. Emphasizes the collaborative and interdisciplinary nature of a child's care in a school setting. Addresses the unique needs of children in underserved communities. Prerequisite or corequisite: NURS 859.

NURS 861. Neonatal Nursing II (4). Second of two courses that integrate the physiologic, pharmacologic, and assessment skills and principles in determining appropriate care of the ill neonate. Uses current research and evidence-based practices as course framework. Emphasizes the effects of critical conditions on the growth and development of the neonate, including subsequent chronic health problems as well as the short- and long-term consequences to the child's family. Discusses disorders of the gastrointestinal, renal, endocrine, hematologic, musculoskeletal, ophthalmologic, dermatologic, and immune systems. The use of specific interventions and diagnostic procedures are demonstrated and applied in laboratory/clinical settings during 40 hours of required clinical activities. Prerequisites: core courses, NURS 713, 777, and 789.

NURS 862. Neonatal Nurse Practitioner Preceptorship I (6). First of two preceptorship experiences which can be taken concurrently or in consecutive semesters; there will be a minimum of 300 clinical hours. Provides opportunities to apply knowledge and skills from advanced nursing role, theory, research, and neonatal clinical courses to the advanced therapeutic management of high risk neonates. Emphasizes therapeutic measures within a conceptual framework or model and applies findings from research relevant to comprehensive care of neonates. The student is the neonate and family. Prerequisites: NURS 815 and 861.

NURS 863. Nursing and Health Care Systems Administration: Capstone Seminar (3). Assists the student to integrate knowledge from nursing and administration courses to develop the individual's own management/administration practice. Utilizes a seminar approach with case studies, student presentations, and presentations by executives and other experts from the community. Prerequisites: NURS 703, 705, 715, 775, 811, 812 (3 hours), 827; PHS 834 or 442 and MKT 812 or PHS 638. Corequisites: NURS 812 and 851.

NURS 864. Neonatal Nurse Practitioner Preceptorship II (6). Second of two preceptorship experiences which can be taken concurrently or in consecutive semesters; there will be a minimum of 300 clinical hours. Provides opportunities to build upon knowledge and skills gained during NURS 862 regarding the advanced therapeutic management of high risk neonates. Emphasizes therapeutic measures within a conceptual framework or model and applying findings from research relevant to comprehensive care of neonates. The student is the neonate and family. Prerequisites: NURS 815 and 861. Prerequisite or corequisite: NURS 862.

The following abbreviations are used in the course descriptions: T stands for theory and L for laboratory. For example, 47:2L mean 4 hours of theory and 2 hours of lab. P stands for practicum/clinical hours. 40P means 40 hours of practical per week.
The *Associate of Applied Science* degree in electrical engineering technology is offered jointly with the Wichita Area Technical College. However, the program is suspended and will not be offered after May 2003. Sixty-two credit hours are required including 10 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 2.00 for this degree.

**Bachelor of Arts** degrees are offered in anthropology, biological sciences, chemistry, communication, communicative disorders and sciences, computer science, economics, English, ethnic studies, geology, history, mathematics, modern and classical languages and literatures (French, Latin, and Spanish), philosophy, physics, political science, psychology, social work, sociology, and women’s studies.

The **Bachelor of Science** is available in biological sciences, chemistry, computer science, criminal justice, geology, mathematics, and physics.

The **Bachelor of General Studies** requires breadth in distribution of coursework and allows for the development of areas of concentration which may be theoretically or occupationally related. This degree is available through every college department.

**Graduate** programs are offered through the Graduate School in many liberal arts and sciences areas. The Master of Arts (MA) may be earned in anthropology, communication (interdisciplinary), criminal justice, English, gerontology, history, psychology, social work, sociology, and Spanish. The Master of Science (MS) may be obtained in biological sciences, chemistry, computer science, environmental science, 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 Arts in Liberal Studies** (MALS) 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 the following categories:

1. **Degree-bound.** These students have not yet decided on a major area of study when they enter WSU;
2. **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**

1. Students are placed on probation whenever their cumulative WSU grade point average falls below 2.00.
2. Probation is removed when the overall WSU grade point average reaches the required 2.00 level.
3. Students continue on probation when they earn a 2.00 or better semester average but their overall WSU grade point average remains below 2.00.
4. Students on probation will not be academically dismissed unless they have attempted at least 12 hours after being placed on probation, failed to earn at least a 2.00 semester average, and if their WSU overall grade point average remains below 2.00.
5. At that point, probationary students will be dismissed.
6. When dismissed, students may re-enroll only with the permission of the University’s Committee on Admissions and Exceptions.

Students who have been dismissed for academic reasons may seek readmission to the University by filing a petition—writing—with the college’s Admissions and Exceptions Committee. Fairmount College requires petitioners to meet with an academic advisor 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 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) advisors help degree-bound exploratory students remain flexible while pursuing general education requirements so that they may transfer to any college within WSU once a major is declared. Students develop educational planning skills, remove academic deficiencies, develop effective college-level study skills and habits, choose an academic major, develop personalized academic and career/life plans, and complete part of the general education requirements. Each degree-bound student is assigned an academic advisor. When a student declares a major field of study, an immediate transfer occurs to the college that sponsors that program, and an advisor from the selected discipline is assigned. Exploratory students should declare a major or a degree preference within the first 48 hours of enrollment.

Nondegree-Bound Students

LAS Advising Center (LASAC) 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, skills updating, or professional certification. The nondegree-bound category includes college and high school guest students and high school concurrent enrollment students. 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 LASAC 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 ensure 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 senior form provides guidance to the student in meeting graduation requirements.

Students planning to receive the Bachelor of General Studies degree will declare their intention at least 30 hours before the degree is granted. A plan of study including the area of concentration should be initiated as soon as possible—but no later than 30 hours before the degree is granted—with the departmental advisor. The plan of study must be approved by the Academic Advising Center. This plan will be submitted along with other graduation application 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 for graduation and degree cards may be obtained from the LAS Advising Center.

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 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 developed the faculty member authorized to teach that course to document learning from that life experience, and when the student has assessed 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 a 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 Registrar. Students will be advised of fees upon entering the program. The faculty member shall see 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 (LAS) participates in the Cooperative Education program which funds paid internships for undergraduate and graduate students who wish to combine their classroom studies with academically related employment. In LAS, a maximum of 12 hours of cooperative education credit may be applied toward baccalaureate degree requirements.

Further information is available in the Cooperative Education office, 223 Grace William Hall, or the academic information section of the Catalog.

Certificate Programs

Certificate programs in Fairmount College of Liberal Arts and Sciences are available to members of the community, to students who have already earned degrees, and to students pursuing degrees in Fairmount College or other degree-granting colleges. A certificate is awarded acknowledging a student's completion of a disciplinary or interdisciplinary focus consisting of courses which provide thematic coherence in a unique area of applied or theoretical work. Specific requirements for the following certificate programs may be reviewed in the departmental sections that follow:

- Applied Communication (graduate and undergraduate)—Elliott School of Communication
- Computer Competency: Information Technology—Computer Science
Corrections Cross-Cultural Communication; Forensic Criminology; Law Enforcement—School of Community Affairs
Film Studies—English
Great Plains Studies (graduate and undergraduate)—Interdisciplinary Liberal Arts and Sciences
Public Finance (graduate)—Hugo Wall School of Urban and Public Affairs
Substance Abuse Counselor Certification—Psychology
Women's Studies—Women's Studies

Academic Honesty and Code of Conduct
The faculty of 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 Fairmount 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, College Algebra, or MATH 131, Contemporary Math or higher-level math class

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 needed for the degree.

The Schedule of Courses produced each semester before enrollment outlines specific courses approved in each of the following categories:

1. Fine Arts and Humanities*. Candidates for the BA, BS, and BGS degrees must take 12 hours of courses with the following distribution: 1) one introductory course from a fine arts discipline listed below; 2) one introductory course from two different humanities disciplines listed below; plus 3) a further study course from the same discipline as one of the introductory courses or an Issues and Perspectives course in fine arts or humanities. BA and BGS candidates may take an additional 3 hours to complete the total of 27 required in humanities/fine arts and social sciences. This extra course may be from the major department.

   Fine Arts: art history, dance (history), musicology, composition, theater, other approved discipline for an Issues and Perspectives class.

   Humanities: communication (non-basic skills), English (non-basic skills), history, linguistics, modern and classical languages and literature, philosophy, religion, women’s studies, other approved discipline for an Issues and Perspectives class.

2. 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.

3. American Political System. All BA, BS, and BGS candidates must demonstrate proficiency in the field of the American political system and institutions by passing either HIST 131 or 132 (humanities) or POL 121 (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.

4. Social and Behavioral Sciences*. Candidates for the BA and BGS degrees must take 12 to 15 hours in three different departments with the following distribution: 1) one introductory course from two different social and behavioral science disciplines listed below; plus 2) a further study course from the same discipline as one of the introductory courses or an Issues and Perspectives course in the social and behavioral sciences; 3) one or two additional courses may come from the student’s major or from any other elective courses within social science departments within the college.

   Candidates for the BS degree must take a minimum of three courses (9 hours) following the first two distributions above. Courses within the student’s major may not apply to this University general education requirement.

5. Social and Behavioral Sciences. Candidates for the BA and BGS degrees who have completed at least two years of high school laboratory science classes (exclusive of general and physical science) must take a minimum of 9 hours of courses with the following distribution: 1) one introductory course from two different natural science disciplines listed below (one of which must be a biological science and the other a physical science); plus 2) a further study course from the same discipline as one of the introductory courses or an Issues and Perspectives course in natural sciences. One or the above courses must include a laboratory experience.

   Other Natural Sciences and Mathematics for elective use: ANTH 101 and 106 (counts as biology); GHS 121 and 122 (counts as physical science).

   V. Students must complete at least one and not more than two Issues and Perspectives courses to fulfill University general education program requirements. In addition, courses within the student’s major discipline do not count toward University general education program requirements.

6. Foreign Languages. Candidates for any BA degree and for the BS degree in criminal justice must demonstrate proficiency at a level equivalent to 5 hours beyond the 112 course in one foreign language or equivalent to the completion of the 112 course in two foreign languages. This proficiency may be demonstrated in either of the following ways:

   1. Proficiency documented by successful completion of 111 and 112, plus 5 additional hours in one foreign language, or 111 and 112 in two foreign languages

   2. Other foreign language experience, or high school foreign language study at the rate of one high school unit for each college semester, may apply toward the required proficiency.

   3. Students who have completed three or more years of one language in high school may fulfill the foreign language requirement by successfully completing a 3-hour intermediate-level class in the same language.

   4. Students with English as their second language have met the college’s foreign language requirement for a baccalaureate degree.

   Language 210 classes, although approved to count towards humanities requirements in the University general education program, will not fulfill a humanities course requirement for Fairmount College of Liberal Arts and Sciences students. Any language course from the 220 or above level will count as general education humanities credit if it appears on the approved list of classes published in this 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 majors:

1. A 2.000 grade point average is required in the major.
2. No more than 6 hours from the major may be used to satisfy college distribution requirements.
3. Courses with a “G” suffix may not be used as hours in the major or in the primary department of a BGS area of concentration unless approved by the department.
4. Of the 40 hours of upper-division credit required for each degree, a minimum of 12 upper-division hours are required in the major or area of concentration.
5. No more than 45 hours in the major may be used for graduation with a BA degree, and no more than 50 hours in the major may be used for graduation with a BS degree.
6. The same hours cannot be used to satisfy requirements for two or more majors or minors or combination thereof.

IX. Combined Major. A BA degree with a combined major, consisting of 24 hours from one field of study and 12 hours from an allied field of study, may be designed with the assistance of the primary department’s academic advisor. A minimum of 12 upper-division hours must be included in the combined major.

X. 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 9 hours in each of two allied departments (36 hours total); at least 12 of these hours must be 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 all fields of study in which a major may be earned as well as in geography, German, gerontology, and linguistics. The number of hours required for a minor is set by each department. A 2.000 minimum grade point average is required in the minor. Minors from other colleges are acceptable and must meet minimum requirements of those colleges.

XII. BGS: Area of Concentration. The Bachelor of General Studies degree allows students to design their own programs of study crossing departmental or even college lines. The BGS degree allows the student to become a generalist and may allow preprofessional or nontraditional career students greater flexibility in planning for their unique future.

With the assistance of the BGS advisor in the department of primary interest, each student pursuing a BGS degree will develop a plan of study which outlines an area of concentration incorporating a minimum of 33 hours. No fewer than 15 and no more than 21 of these hours will be taken in a “local” or primary department. The remaining 12 to 18 hours must be divided between at least two other departments. Concentrations may cross departmental or college lines in that they may be thematically or occupationally related, but the first two departments of the area of concentration must be LAS.

No general studies courses (courses with a “G” suffix) will count toward the “primary” portion of the concentration but will be allowed in the additional portions. A minimum of 12 upper-division hours must be included in the concentration.

BGS students are given an opportunity to summarize their academic and intellectual goals in an assessment essay.

Distribution requirements limit course work to no more than 30 hours from one department, to no more than 60 hours in one division, and to no more than 30 out-of-college hours.

XIII. Nonliberal Arts and Sciences Courses. Students may count only 24 hours of nonliberal arts and sciences courses toward either the BA or BS degree. Thirty hours of nonliberal arts and sciences courses may count toward the BGS degree. 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 office approval. Although such a major cuts across departmental lines and is determined by the field of specific interest, the combination of courses must be acceptable to the college. Normally 36 hours are required for the field major, with 18 hours in the major department and at least 9 in each of the two allied departments. Twelve of the 36 hours must be upper-division, and the first two departments must be LAS. Students may work with an academic advisor in developing an appropriate field major or may use one of the predesignated field majors indicated below. Students must meet BA graduation requirements for all field majors except biochemistry and chemistry/business which lead to the BS degree.

Biochemistry. Biochemistry is a rapidly growing science in which many important advances have been made in the last two decades. It requires both an understanding of biological processes and a knowledge of sophisticated techniques of chemistry and physics. The field major in biochemistry is designed to prepare students for employment or further study in this area.

Students choosing this field major should seek the advice of an advisor in the Department of Biological Sciences or the Department of Chemistry as early as possible. Both the biological sciences and chemistry sections of the Catalog provide complete descriptions of this major.

Chemistry/Business. See the chemistry section of the Catalog for complete description.

Classical Studies. Classical studies is an interdisciplinary program designed to give students a sense of continuity and to interpret the values, ideas, and ideals of antiquity as shown in its history, art, mythology, literature, political institutions, and religions. The major also serves as a sound preparation for areas in which sensitivity to language and ideas is an important tool—classes, linguistics, ancient history, art history, archaeology, comparative literature, law, religion, and Near Eastern studies.

The major consists of 36 hours which must be selected from a list of approved courses, except that courses of independent study in one of the departments of the field major may count toward the major if the subject matter is at least half classical. For further information and a list of approved courses, contact the Department of Modern and Classical Languages and Literatures.

International Studies. The program for the international studies field major is flexible and is designed to meet the need for specialists in foreign areas, international government or international economics, government, business, and international organizations. Students are prepared for careers in international organizations in the U.S. government and in business firms with international activities.

Two options are available: Option A is in area studies; Option B is a combination of area studies and international business. No minor is required for either option. Students interested in these options should contact the international studies advisor in the history department.

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 Fairmont College of Liberal Arts and Scien-
degree program while preparing to meet State Board of Education requirements for secondary education licensure. Programs for secondary education are outlined in the College of Education section of the Catalog. Liberal arts and sciences majors form the base for many certified teaching fields, while the College of Education provides all professional education coursework required for licensure. For further details and information, contact a major department advisor in Fairmount College of Liberal Arts and Sciences or a teaching field advisor in the College of Education.

Anthropology (ANTHR)
Anthropology offers perspectives on issues of the origins, history, and diversity of the dynamics of culture and behavior, people, and places, personal and community identity, origins, and the biological history of mankind in all of its manifestations in all times. Anthropology is holistic and explores psychological, biological, social, and cultural—including technological, economic, religious, political, and artistic aspects of human action.

Anthropologists examine the vast diversity of human cultures, striving to understand and appreciate the myriad ways of life that constitute alternative solutions to the universal problems of human existence. By combining the perspectives of science and the humanities, archaeologist, socio-cultural, linguistic, and biological anthropologists take an interdisciplinary evolutionary and humanistic approach to the study of human beings and human societies.

The department offers a broad range of courses for majors, minors, and general education requirements. The curriculum spans socio-cultural, archaeological, and biological emphases, but also includes complementary courses in medical, linguistic, and museum studies in anthropology. The course work provides students with opportunities to learn about, appreciate, and understand the values and perspectives of people from cultural traditions other than their own and also addresses their ability to interact cross-culturally.

The program offers a Bachelor of Arts (BA) degree major, an interdisciplinary field major, and a minor in anthropology. A BA in anthropology prepares students for a variety of professional careers in and outside anthropology. The minor effectively complements a diverse number of majors within Fairmount College of Liberal Arts and Sciences and across colleges. Elective and general education courses in anthropology seek to broaden the student's college experience by offering them an opportunity to appreciate the strength of human cultural and biological history and diversity through socio-cultural, bio-cultural, and cultural-historical perspectives to understanding the human action in the framework of its past and present circumstance.

Major. A major in anthropology consists of at least 30 semester hours, 9 semester hours of which must include ANTHR 101, Biological Anthropology; ANTHR 102, Cultural Anthropology; and ANTHR 103, Introduction to Archaeology. Students must also take an additional three courses (9 semester hours) including one upper-level biological anthropology course (chosen from ANTHR 356, 555, 557, 597R, and 609, one upper-level cultural anthropology course (chosen from ANTHR 303, 307, 312, 318, 327, 344, 361, 389, 506, 511, 515, 516, 522, 526, 528, 540, and 542), and one upper-level archaeology course (chosen from ANTHR 305, 313, 335, 508, 538, 611, 612, and 613). All majors must take a course in method and theory (ANTHR 647). An additional 9 semester hours of electives can be distributed across catalog listings for anthropology to match the student's interest in a particular sub-discipline(s).

A maximum of 6 semester hours of certain course work in related departments can be counted toward an anthropology major if they meet discipline-specific requirements and if approved by a committee of the anthropology department faculty.

Minor. A minor in anthropology consists of 15 semester hours in anthropology (including at least 6 hours of upper-division work) chosen in consultation with the student's anthropology advisor. Students minoring in anthropology are encouraged to take ANTHR 101, 102, and 103.

Field Major. A field major in anthropology allows undergraduate students to combine studies from three separate departments. The anthropology field major consists of 18 credit hours in anthropology, including ANTHR 101, 102, and 103, and at least 9 semester hours of upper-division course work. To complete the field major, students must take 9 semester hours of related course work in two departments other than anthropology. All anthropology and non-anthropology courses must be chosen in consultation with the student's anthropology advisor.

Lower-Division Courses

>ANTHR 100. Anthropology of American Culture (3). General education introductory course. Introduces the concept of culture and its role in shaping and patterning human behavior. Students learn to apply tools and methods of anthropology in studying the culture of the United States.

>ANTHR 101. Biological Anthropology (3). General education introductory course. Provides an introduction to the understanding of biological evolution and behavioral development of humans. Introduces the history and basic concepts of biological evolutionary thought; genetics and cell biology; human origins; ecology, and culture, along with the types of data and modes of analysis currently used in biological anthropology. Formulates explanations of physical and cultural developments of human and nonhuman primates in the last 70 million years. Explores patterns of human variation in biological and behavioral traits among present-day populations and discusses current issues (e.g., the social and biological meaning of variations).

>ANTHR 102. Cultural Anthropology (3). General education introductory course. The meaning of culture, its significance for human beings, and its diverse forms among peoples of the world, past and present.

>ANTHR 103. Introduction to Archaeology (3). General education introductory course. Introduces the philosophy, theory,
tools, and techniques of the practicing archaeologist. Illustrates the role or archaeology in understanding cultural change through time, and explains how archaeological methods draw on natural science and humanities to demonstrate how we learn about past cultures from the material they left behind.

ANTHR 106. Biological Anthropology Laboratory (1). Students collect and analyze data while learning to apply current techniques to the study of human and/or non-human primate skeletal, dental, and biological specimens. Prerequisite: ANTHR 101.

ANTHR 107. Cultural Anthropology Laboratory (1). Students participate in organizing, collecting, and analyzing data derived from cultural anthropological investigations. Prerequisite or corequisite: ANTHR 101.

ANTHR 150. Workshop in Anthropology (1-3). Provides specialized instruction using a variable format in an anthropologically relevant subject. Repeatable for credit.

ANTHR 165. The Blues: Art and Culture (3). Cross-listed as MUSC 165. The blues is a uniquely American musical form that has made an immense contribution to world popular culture. The history of the blues is also the history of Black America from the late 19th century to the present day. Focuses on major blues artists, both rural and urban, to trace the history and development of the blues as a folk art form that expresses both the joy and the despair of the people who created it.

ANTHR 200. Intercultural Relations (3). General education further study course. Examines anthropological perspectives on the contact of individuals and societies which have different cultural histories. Examples are drawn widely from varied contemporary contexts: family life, international business, health and health care, the movement of populations, education in formal and informal contexts, and cultural strategies for survival in the global village.

Upper-Division Courses

ANTHR 303. World Cultures (3). General education further study course. Comparative case studies of the cultures of existing societies of varying types, including nonindustrial peoples, Third World nations, and modern industrialized countries.

ANTHR 305. World Archaeology (3). General education further study course. Introduces the basic concepts, methods, techniques, and modes of analysis of scientific archaeology. These are applied to a series of problems of increasing difficulty: the emergence of human culture, the development of domesticated plants and animals, and the evolution of cities and complex societies.

ANTHR 307. Peoples of Africa (3). General education further study course. Describes and analyzes the culture areas of Africa south of the Sahara Desert from ethnographic and ethnographic sources.

ANTHR 312. Asia Pacific Cultures (3). General education further study course. Studies the cultures and nations in eastern Asia bordering the Pacific Ocean, focusing on historical background, cultural beliefs and practices, and the distinctive patterns of each.

ANTHR 313. Archaeology of East Asia (3). General education further study course. A broad survey of archaeology throughout eastern Asia from the early hominid fossils at Peking and Java to the development of Chinese and Southeast Asian civilizations. Emphasizes China (through the Han Dynasty), southeast Asia, and Australia/New Guinea. Includes recent archaeological finds of the Peoples Republic of China.

ANTHR 318. Psychological Anthropology (3). General education further study course. The relationship of individual psychology (personality, emotion, cognition), both normal and abnormal, to group membership and cultural context.

ANTHR 327. Magic, Witchcraft, and Religion (3). General education further study course. Cross-listed as REL 327. An examination of various concepts concerning the realm of the supernatural as held by various peoples around the world. Relates such religious beliefs and the resultant practices to the larger patterns of cultural beliefs and behaviors.

ANTHR 335. Archaeology of North America (3). General education further study course. A survey of the prehistoric cultures of North America north of Mexico from the earliest peopling of the continent to the time of European colonization.

ANTHR 344. Ecological Anthropology (3). General education further study course. Investigating the relationships of people both to their physical and sociocultural environments, including the effects of these relationships on economic activities, social organizations, and beliefs and behaviors emphasizing the evolutionary development of survival strategies.

ANTHR 347. History of Anthropology (3). An overview of the history of anthropology from the enlightenment through the middle of the 20th century. Emphasizes seminal events, theory, and contributions that shape the modern discipline of anthropology. Prerequisite: ANTHR 100, 101 or 102 or 104.

ANTHR 350. Workshop in Anthropology (3). Focuses on anthropological topics. Repeatable for credit.

ANTHR 351. Linguistics and Foreign Languages (3). Cross-listed as MCLL 351 and LING 351. Introduces general linguistic principles as they apply specifically to the study, acquisition, and analysis of foreign languages offered as major concentrations at WSU (French, German, Latin, and Spanish). Introduces acoustic phonetics (narrow transcriptions of foreign languages) and principles of phonology; morphology and principles of morphology; and syntax and semantics. Prerequisite: LING 151.

ANTHR 356. Human Variability and Adaptation (3). General education further study course. A critical examination of the biological aspects of contemporary human variation, stressing human adaptations. Prerequisite: ANTHR 101 or BIOL 210 or equivalent.

ANTHR 361. Law, Politics, and Society (3). General education further study course. Studies legal and political systems in non-Western societies. Includes the origin of the state, pre-colonial law and politics, the impact of colonialism, and problems in state building.

ANTHR 398. 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.

ANTHR 397. Topics in Anthropology (3). Studies current issues in anthropology. Content varies with interests of instructor. Consult current Schedule of Courses for topics.

ANTHR 398. Travel Seminar (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Utilizes the archaeological, biological, linguistic, and sociocultural perspectives to better understand overseas cultures. Prerequisite: departmental consent.

ANTHR 481. Cooperative Education in Anthropology (1-4). See ANTHR 281.

ANTHR 498. Readings in Anthropology (2-3). Repeatable up to 6 hours. Special problems in anthropology. Prerequisite: 12 hours of anthropology.

Courses for Graduate/Undergraduate Credit

ANTHR 502. Introduction to Archaeological Laboratory Techniques (1-3). Maximum of 3 hours. An introduction to the laboratory processing of archaeological materials. Direct experience in all phases of preparing excavated materials for analysis, including cleaning, restoring, preserving, numbering, and cataloging of ceramic and lithic artifacts and other remains. Prerequisite: ANTHR 305.

ANTHR 506. Peoples of the Pacific (3). General education further study course. A survey of the races, languages, and cultures of nonindustrial peoples of Polynesia, Micronesia, and Indonesia.

ANTHR 508. Ancient Civilizations of the Americas (3). General education further study course. A cultural survey of the Aztec, Maya, and Inca. Prerequisite: instructor's consent.

ANTHR 511. The Indians of North America (3). General education further study course. A survey of tribal societies and native confederations north of Mexico from the prehistoric to the historic period. Prerequisite ANTHR 102.

ANTHR 514. Anthropology of Aging (3). General education further study course. Cross-listed as GERON 514. An anthropological analysis of the latter stages of the life cycle with historical and cross-cultural perspectives.
ANTHR 515. China (3). General education further study course. An introduction to the people of China and aspects of their culture: economy, government, society, religion, and the arts. Historical attention on the many adjustments the Chinese made during the 20th century following political revolutions, industrialization, and expanding trade relations.

ANTHR 516. Japan: People and Culture (3). General education further study course. An introduction to the culture of Japan including its history and prehistory, aspects of traditional culture and 20th century Japan, its economy, politics and social organization.

ANTHR 519. Applying Anthropology (3). General education further study course. The application of anthropological knowledge in the solution of social problems in industry, public health, and public administration. Prerequisite: ANTHR 102.

ANTHR 522. Art and Culture (3). General education further study course. A survey of the visual and performing arts of non-Western peoples with special attention to their relationships in the cultural setting. Prerequisite: ANTHR 102.

ANTHR 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: 6 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: 3 hours of nursing or 3 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 305.

ANTHR 540. The Indians of the United States: Conquest and Survival (3). An anthropological inquiry into four centuries of cultural contact, conflict, resistance, and reenactment. Prerequisite: ANTHR 102 or instructor's consent.

ANTHR 542. Women in Other Cultures (3). General education further study course. Cross-listed as WOM 542. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological, and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies.

ANTHR 555. Paleoanthropology and Human Paleontology (3). A detailed examination of human evolutionary history as evidenced by fossil remains and a survey of various interpretative explanations of the fossil record. Prerequisite: ANTHR 101 or BIOL 203 or equivalent.

ANTHR 557. Human Osteology (3). Deals with human skeletal and dental materials with applications to both physical anthropology and archaeology. Lecture and extensive laboratory sessions; includes bone and tooth identifications, measurement and analysis, and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: ANTHR 101 or equivalent.

ANTHR 597. Topics in Anthropology (3). Detailed study of topics in anthropology. Content varies with interest of instructor. Consult Schedule of Courses for current topic.

ANTHR 600. Forensic Anthropology (3). Cross-listed as CJ 600. Comprehends the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition, and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification, and identification emphasizing anthropological interpretation. Prerequisite: ANTHR 101 or equivalent.

ANTHR 602. Archaeological Laboratory Analysis (1-3). Students analyze archaeological materials, including ceramic, lithic, faunal, and vegetal remains according to accepted methods. Students learn to apply standard methods of identification and modes of interpretation to the materials to produce an acceptable archaeological report. Prerequisites: ANTHR 302 and instructor's consent.

ANTHR 606. Museum Methods (3). An introduction to museum techniques relating to the acquisition of collections and related procedures, such as accessioning, cataloging, documentation, presentation, and storage. Emphasizes current trends in museological philosophy concerning purpose, function, and relevance of museums, as well as career opportunities. Prerequisite: instructor's consent.

ANTHR 607. Museum Exhibition (3). Contemporary philosophy of exhibition design and the application of recent concepts to the planning and installation of an exhibit. Prerequisite: ANTHR 606 or instructor's consent.

ANTHR 609. Biological Anthropology Laboratory Analysis (1-3). Analyzes biological anthropology materials including human and nonhuman skeletal material of both forensic contemporary or prehistoric origin according to standardized methods for recording and collecting data in biological anthropology. Learn methods of identification, analysis, and interpretation and prepare a standard technical report. Prerequisites: Anthropology 101, 106, 356, or 557.

ANTHR 611. Southwestern Archaeology (3). General education further study course. A comprehensive survey of the prehistoric, historic, and living cultures of the American Southwest particularly emphasizing the cultural continuities and changes covering 11,000 years. Prerequisite: one introductory course in anthropology or departmental consent.

ANTHR 612. Indians of the Great Plains (3). An investigation of the cultural dynamics of the Great Plains area from the prehistoric period to the present. Prerequisites: 6 hours of anthropology and departmental consent.

ANTHR 613. Archaeology of the Great Plains (3). General education further study course. The archaeology of the Great Plains area from earliest evidence to the historic period. Prerequisite: one introductory course in anthropology or departmental consent.

ANTHR 647. Theories of Culture (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: 6 hours of anthropology.

ANTHR 651. Language and Culture (3). Cross-listed as LING 651 and MCLL 651. An introduction to the major themes in the interactions of language and society and language and culture, including ethnography of communication, linguistic relativity, and determinism; types of language contact; the linguistic repertoire; and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite: 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

ANTHR 667. English Syntax (3). Cross-listed as ENGL 667 and LING 667. Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisites: ENGL 313 or LING 377 or ANTHR 577 or instructor's consent.

ANTHR 690. Field Methods in Anthropology (3-6). A maximum of 6 hours can be counted as anthropology hours toward either degree. Instructs the student in archaeological and ethnological field methods through actual participation in a field research program. The project depends upon the specific Summer Session and varies from year to year. Prerequisite: instructor's consent.

ANTHR 736. Advanced Studies in Archaeology and Ethnohistory (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). Expects an in-depth coverage of selected topics in cultural anthropology, including social structure, economic and political organization, religion, personality, arts, and knowledge systems, and current research methods. Prerequisites: graduate standing and 6 hours of anthropology.

ANTHR 750. Workshop (1-4). Short-term courses focusing on anthropological problems. Prerequisite: instructor's consent.

ANTHR 756. Advanced Studies in Biological Anthropology (3). In-depth coverage of selected topics in biological anthropology, including the history of evolutionary thought, human variation, growth and development, population dynamics, paleoanthropology, and primatology. Focuses on current issues, method, and theory in biological anthropology. Prerequisites: graduate standing and 6 hours of anthropology (must include ANTHR 101 or instructor's consent).
ANTHR 781. Cooperative Education (1-4). Provides practical experience that complements the student's academic program. Requires consultation with and approval by an appropriate faculty sponsor. Offered Gr/Nr only. Prerequisite: graduate status.

ANTHR 798. Introduction to Research (3). Bibliography, methodology, and the philosophy of research. Repeatable for a total of 6 hours of credit. Prerequisites: 6 hours of American studies course work or equivalent and instructor's consent.

Courses for Graduate Students Only

ANTHR 801. Seminar in Archaeology (3). Comprehensive analysis of archaeological data emphasizing theoretical problems of interpretation and reconstruction. Repeatable up to 6 hours. Prerequisite: ANTHR 501 or departmental consent.

ANTHR 802. Methods in Anthropology (2-3). Develops abilities in the conception and investigation of anthropological problems and interview and observation techniques, as well as more specialized methods such as photography, mapping, and tape recording. Repeatable up to 6 hours. Prerequisite: departmental consent.

ANTHR 820. Seminar in Biological Anthropology (3). Analysis and discussion of ancient fossil, prehistoric, historic, and recent/modern biological variation in an anthropological perspective. Can include advanced studies of human variation and skeletal biology, demography and population genetics in anthropology, advanced studies in paleoanthropology and issues in the debate over micro and macro levels of evolution, and quantitative applications to the study of human variation in anthropological contexts. Repeatable up to 6 hours. Prerequisite: departmental consent.

ANTHR 837. Seminar in Cultural Anthropology (3). Intensive study of advanced theoretical questions in cultural anthropology. Repeatable up to 6 hours. Prerequisite: 5 hours of anthropology.

ANTHR 847. Colloquium in Anthropology (1-2). SU/grade only. Repeatable for a maximum of 3 hours. Seminar-style experience in recent research in all of the subfields of anthropology. Allows those students preparing their first papers for presentation at professional conferences to present them before a critical but friendly audience. Students presenting colloquium papers receive 2 credits. Prerequisite: graduate standing in anthropology.

ANTHR 848. Recent Developments in Anthropology (3). A review of the latest discoveries and interpretations in the science of human beings. Repeatable up to 6 hours. Prerequisite: 5 hours of anthropology.

ANTHR 870. Independent Reading (2-3). Repeatable up to 6 hours. Prerequisite: departmental consent.

ANTHR 871-872. Internship in Anthropology (2-3). Students following applied or multidisciplinary tracks, such as museology, international business education, or health professions receive professional work experience in their field through an internship at a designated work place approved by departmental committee. Course need not require a tangible end product (e.g., paper). May be repeated, but limited to a total of 4 credit hours. Prerequisite: committee consent.

ANTHR 873-874. Advanced Project in Anthropology (2-4). 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 anthropological 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, thesis, museum exhibit). May be repeated, but limited to a total of 4 credit hours. Prerequisite: committee consent.

ANTHR 875-876. Thesis (2-3). Biological Sciences (BIOL)
The Department of Biological Sciences offers a broad and flexible curriculum leading to the Bachelor of Arts (BA), the Bachelor of Science (BS), the major field 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 major field (BA) or the Bachelor of General Studies (BGS) programs. All students who intend to pursue one of the programs within the Department of Biological Sciences should contact the department as early in their educational careers as possible for assignment to a faculty academic advisor. Candidates for all degrees are required to take the Field Achievement Test in Biology during the senior year and contribute examples of 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.

Major in Biological Sciences with Biological/Biomedical Emphasis.
A major in biological sciences leading to the BA with a biological/biomedical emphasis requires a minimum of 30 semester hours of biological sciences course work; up to 40 semester hours may be taken for credit. A major in biological sciences leading to the BS with a biological/biomedical emphasis requires a minimum of 40 semester hours of biological sciences course work; up to 50 semester hours may be taken for credit. Candidates for either degree must complete BIOL 210, 211, 418, 419, 420; either BIOL 497 or 499; and one course chosen from the following: BIOL 502, 503, 523, 524, or 532. Candidates for either degree must also complete CHEM 111, 112, 531, and 532. Candidates for the BS degree must also complete PHYS 213 and 214.

Major in Biological Sciences with Ecological/Environmental/Ornithological Emphasis.
A major in biological sciences leading to the BA with an ecological/environmental/ornithological emphasis requires 35 semester hours of biological sciences course work. A major in biological sciences leading to the BS with an ecological/environmental/ornithological emphasis requires 50 semester hours of biological sciences course work. Candidates for either degree must complete BIOL 210, 211, 418, 419, 420; either BIOL 497 or 499; and one course chosen from the following: BIOL 502, 503, 523, 524, or 532. Candidates for the BA degree must also complete a minimum of 5 additional hours of courses chosen from among those approved for the ecological/environmental/ornithological emphasis (see academic advisor or departmental offices for approved courses); CHEM 111, 112, and 531. Candidates for the BS degree must also complete 15 additional elective hours from biological sciences chosen in consultation with a departmental advisor; CHEM 111, 112, and 531, and PHYS 213.

Minor in Biological Sciences. Candidates for a minor in biological sciences must complete BIOL 210, 211, and any two of the following: BIOL 418, 419, or 420, or one course chosen from the following: BIOL 502, 503, 523, 524, or 532.

Biochemistry Field Major.
The departments of biological sciences and chemistry participate jointly in this program. Required courses are BIOL 210, 211, 419, and 420; CHEM 111, 112, 531, 532, 662, 663, and 664; PHYS 213 and 214; and MATH 112 (or 111 and 123). Also required are BIOL (CHEM) 666 and 669 (two enrollments); and 21 elective hours chosen in consultation with a biochemistry academic advisor.

Major in Biological Sciences: Secondary Education. This major allows for the completion of the requirements for a degree in biological sciences and the certification requirements to teach biology and general science—grades 7-12. Students selecting this option should work closely with the teacher education advisor. The BA in Secondary Education requires the completion of BIOL 210, 211, 330, 418, 419, 420, 524; one 4-hour course in botany; and one of the following: BIOL 503, 560, 575, or 578. Also required are CHEM 111, 112, 531, and 532; PHYS 213; GEOL 302; MATH 123; either CL 772 or 786; and the professional education requirements for majors in science as outlined by the College of Education. For the BS in Biological Sciences in Secondary Education, students must complete additional hours to total a minimum of 40 semester hours of course work in biological sciences (a maximum of 50 hours may be taken for credit) and PHYS 214.

Field Major (BA) or Bachelor of General Studies (BGS). Students interested in such interdisciplinary programs should consult with a departmental advisor early to design a curriculum with a focus in biological sciences that will satisfy Fairmount College of Liberal Arts and Sciences requirements for these degrees.

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 or the minor.

Nonmajor Courses.
(May not be used to satisfy the requirements for the major)

Lower-Division Courses

>BIOL 103. Microbes and You (3). General education introductory course. Surveys general information about microbioli...
BIOL 106. The Human Organism (3). General education introductory course. Introduces the non-science major to certain biological principles as they relate to the human organism, provides biological information and understanding of subject 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 106 is recommended for students needing general education credit for a natural science laboratory experience. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences. Only one of the following may be taken for credit: BIOL 104, 105G, 106 and/or 107. Students wishing to repeat BIOL 105G (no longer offered) should enroll in BIOL 106 and 107.

BIOL 107. The Human Organism Laboratory (1). 2L. General education introductory course. For the non-science major. Supplements and reinforces the material covered in BIOL 106 with a laboratory experience. Uses a hands-on approach and covers topics relevant to the students and their role in the biosphere. Includes cell structure, human organ systems, the role of microorganisms in our environment, nutrition, metabolism, genetics, and ecology. Requires no animal dissection. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences. Only one of the following may be taken for credit: BIOL 104, 105G, 106 and/or 107. Students wishing to repeat BIOL 105G (no longer offered) should enroll in BIOL 106 and 107.

BIOL 140. Topics in Biological Science (2-4). Selected offerings in the biological sciences for the non-science major. Consult Schedule of Courses for current offering. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences.

BIOL 223. Human Anatomy and Physiology (5). 4R; 2L. Presents the structure and function of the major human body systems. Demonstrates the structure and function of certain systems further in the laboratory setting. For students majoring in programs other than biological sciences or biochemistry. Students who have completed BIOL 225 or 226 (both no longer offered) may not receive credit for prior enrollment in these courses and subsequent enrollment in BIOL 223. Students seeking to repeat BIOL 225 or 226 may enroll in this course, subject to the credit limitations indicated above. Prerequisite: CHEM 101 or 103 or 111.

Upper-Division Courses

BIOL 230, 231. Human Reproduction: Issues and Perspectives (3). General education issues and perspectives course. Presents a comprehensive survey of the many biological aspects of reproduction. Covers structure and function of the reproductive system, as well as information on in vitro fertilization, fertility testing, contraception, population problems, AIDS, cancer, reproductive issues, ethical problems, and other concerns about the control of human reproduction. Prerequisite: any one of the following: BIOL 104, 105G (no longer offered), 106, 203, or 223.

BIOL 370. Introductory Environmental Science (3). General education issues and perspectives course. Examines the relationship of the earth's human populations to resource use/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 509. Foundations of Human Heredity (3). General education further study course. Introduction to the mechanisms and societal significances 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. Does not carry credit toward a biological sciences major or minor. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: junior standing.

BIOL 518. Biology of Aging (3). Cross-listed as GERON 518. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence emphasizing humans. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: a basic course in biological sciences that satisfies general education requirements.

Major Courses

(Used to satisfy the requirements for the major)

Lower-Division Courses

BIOL 210, General Biology I (4). 3R; 2L. General education introductory course. Introduces fundamental concepts in cellular and molecular biology. Includes basic biological chemistry; cell and membrane structure and function; respiratory, aerobic and anaerobic pathways; regulation of cellular activity at the genetic and protein level; cellular reproduction; genetics of inheritance at the molecular level, and population levels; genetics of aging; and evolution. The laboratory develops skills in the experimental methods, basic laboratory procedures, and written and oral communication of scientific information using topics related to the lectures. Students may not receive credit for both BIOL 210 (no longer offered) and BIOL 210. Students wishing to repeat BIOL 210 may enroll in this course, subject to the credit limitations indicated above. Prerequisite: BIOL 111 recommended.

BIOL 211. General Biology II (4). 3R; 2L. Introduces fundamental concepts of biology as they apply to levels of organization from microorganisms to ecosystems. Focuses on morphology, physiology, diversity, and ecology of organisms. Introduces growth and anatomy, transport of materials, regulatory mechanisms, and reproduction in plants and animals. Principles of ecology presented include population growth and regulation, interspecific interactions and food webs, and energy flow and material cycling through ecosystems. The laboratory includes a survey of organismal diversity including prokaryotes, protists, fungi, plants, and animals and emphasizes evolutionary trends in the plant and animal kingdoms. Students may not receive credit for both BIOL 210 (no longer offered) and BIOL 211. Students wishing to repeat BIOL 210 may enroll in this course, subject to the credit limitations indicated above. Prerequisite: BIOL 210. Concurrent enrollment in CHEM 112 is recommended.

Upper-Division Courses

BIOL 305. Introductory Plant Physiology (5). Introduces the physiological mechanisms which control higher plant functions. Includes a review of basic physiological principles; gas exchange; water absorption, transport, and loss; mineral nutrition and the processes of photosynthesis and respiration, including end products of photosynthesis 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 longer offered) will not receive major credit for this course. Prerequisites: BIOL 211 and CHEM 112.

BIOL 330. General Microbiology (5). 3R; 6L. Introduces the structure, function, systematics, ecology, and population dynamics of microorganisms emphasizing prokaryotes. Prerequisites: BIOL 211 and CHEM 112.

BIOL 418. General Ecology (4). 3R; 3L. Principles underlying the interrelationships of living organisms and their envi-
BIOL 419. Genetics (4), 3R; 3L. The mechanisms of heredity and variation in animals, plants, and prokaryotes with a critical review of gene structure and function. Students who have completed BIOL 384 may not receive credit for prior enrollment in this course. Prerequisite: BIOL 204.

BIOL 420. Molecular Cell Biology (4), 3R; 2L. Concerned primarily with the molecular biology of eukaryotic cells. Covers individual cellular components (organelles) and processes, including the plasma membrane, mitochondrion and energy conversion, intracellular sorting, the cell nucleus and genetic mechanisms, control of gene expression, cell signalling, 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 this course. Students seeking to repeat BIOL 500 may enroll in this course. Prerequisites: BIOL 211 and CHEM 531.

BIOL 471. Wildlife Management (4), 3R; 3L. Presents both theoretical and practical principles of wildlife management. Includes wildlife legislation, ecological rules applicable to wildlife populations, procedures for habitat analysis and inventory, and wildlife restoration. Conduct laboratory exercises and class projects at local field sites. Emphasizes habitat analysis and restoration during the field portion. Prerequisite: BIOL 418.

BIOL 481. Cooperative Education (2-4). Course complements and enhances the student's academic program by providing an opportunity to apply knowledge gained throughout coursework to job-related situations. For information, contact the coordinator of undergraduate studies or the Cooperative Education program office. No more than 4 credit hours earned in BIOL 481 may be applied toward satisfying the requirements for a major in biological sciences. Prerequisite: applicant and cooperative education position approved by the departmental affairs committee. Offered CR/NC 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). S/U grade only. Students perform library scholarship under the direct supervision of faculty and write a report. No more than 6 credit hours earned from BIOL 498, 499, or equivalent independent study courses may be applied toward departmental major graduation requirements. Prerequisites: at least 20 hours of biology course work that satisfies the major requirements, instructor's consent, a Directed Independent Study Abstract form, and departmental consent.

BIOL 499. Undergraduate Research (2-4). S/U grade only. Students perform laboratory or field research under the direct supervision of faculty and write a report. No more than 6 credit hours earned from BIOL 498, 499, or equivalent independent study courses may be applied toward departmental major graduation requirements. Prerequisites: at least 20 hours of biology course work that satisfies the major requirements, instructor's consent, a Directed Independent Study Abstract form, and departmental consent.

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 systematic. 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 and Chautauqua 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 523. Freshwater Invertebrates (4), 2R; 4L. Emphasizes the ecology, taxonomy, and form and function of free-living, freshwater invertebrates. Half of the course deals with arthropods. Includes methods of collecting, culturing, and preserving specimens. Part of the course grade is based on a collection of invertebrates correctly prepared and identified. For graduate credit, students submit a term paper or a more extensive collection within a given taxon. Prerequisites: BIOL 211 and CHEM 112.

BIOL 524. Vertebrate Zoology (4), 2R; 4L. Evolution, distribution, systematic, natural history, and special characters of vertebrate animals. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: BIOL 404; BIOL 527 is also 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, and population level. Covers basic ecological assessments, such as Index of Biological Integrity, Index of Biological Well-Being, and Rapid Bioassessment Protocols and toxicological protocols like acute and chronic bioassays, biomarkers, and modeling techniques using Quantitative structure activity relationships. Recommended for students interested in learning about the applied methodology used in the rapidly evolving field of ecotoxicology. Prerequisites: BIOL 418 or equivalent and CHEM 531 or equivalent, or instructor's permission.

BIOL 526. Endocrinology (4), 3R; 3L. Considers the hormonal regulation of bodily functions in representative vertebrate systems, including humans. Students enroll in both lecture and laboratory portions of class. Students earning graduate credit submit a term paper on a topic chosen in consultation with the instructor. Prerequisite: BIOL 204.

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 developing proficiency in a specific topic by performing an individual systematics project. Prerequisite: BIOL 204.

BIOL 534. Mammalian Physiology Laboratory (2). An empirical approach to mammalian physiology. Students seeking graduate credit submit an additional laboratory report relating the results of a laboratory experiment to those found in the current technical literature. Prerequisite or corequisite: BIOL 534.

BIOL 550. 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 probability 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 consent.

BIOL 554. Mammalian Physiology Laboratory (2). An empirical approach to mammalian physiology. Students seeking graduate credit submit an additional laboratory report relating the results of a laboratory experiment to those found in the current technical literature. Prerequisite or corequisite: BIOL 534.
BIOL 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-assisted instruction, Internet and online 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). Supplement to 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 independently designed research projects. Emphasizes the design of experiments to answer specific hypotheses, the treatment of non-normally distributed data sets and nonhomogeneous experimental units, and the use of packaged computer programs for certain statistical tests. Access to calculators with at least two memory banks is strongly encouraged. Students earning graduate credit complete an additional statistical analysis assignment involving the use of the computing facilities. Prerequisite: 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 a community structure and report the results as a technical paper. Prerequisite: BIOL 418 or instructor's consent.

BIOL 576. Aquatic Ecology (4). 2R; 6L. Introduction to the biological and physical processes that operate in lakes, streams, and estuaries. Requires assigned readings, individual projects, and field trips. Students earning graduate credit investigate and compare the characteristics and properties of two freshwater ecosystems or investigate a specific taxon or trophic level in a freshwater ecosystem. The results of this investigation are reported as a technical paper. Prerequisite: BIOL 418 or instructor's consent.

BIOL 590. Immunobiology (3). The nature of antigens and antibodies and their interactions. Includes cellular and humoral aspects of immunologic phenomena. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 418 or instructor's consent.

BIOL 610. Topics in Botany (3-4). Selected offerings in botany. Consult the Schedule of Courses for current offerings.

Students wishing to enroll in courses not listed in the current Schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 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 examine altruism and kin selection, kin recognition mechanisms, sexual behavior, sexual selection and mate choice, mating systems, and reproductive strategies from the perspective of natural selection. Students earning graduate credit write a term paper based on the technical literature and present this in a class seminar. Prerequisite: BIOL 418.

BIOL 640. Topics in Zoology (3-4). See BIOL 610. Prerequisites: BIOL 204 and instructor's consent.

BIOL 654. Pathogenic Microbiology (4). 2R; 4L. An introduction to the important pathogenic microorganisms 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 350.

BIOL 660. Topics in Microbiology (2-4). See BIOL 610. Prerequisites: BIOL 330 and instructor's consent.

BIOL 666. Special Topics in Biochemistry (3). Primarily for students who choose the biochemistry field major. Discusses a small number of current problems in biochemistry in depth. Requires reading published research papers in the field. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204, CHEM 662 and 663.

BIOL 669. Research in Biochemistry (2). Cross-listed as CHEM 669. S/U grade only. Primarily for students who choose the biochemistry field major. Requires participation in a biochemistry research project under the direction of a faculty member and a written report summarizing the results. May be repeated once for credit. Prerequisites: BIOL 420 or 500, CHEM 662 or 663, CHEM 664, and Instructor's consent.

BIOL 702. Environmental Science I (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, aquatic chemistry, and phase interactions. The laboratory portion addresses local environmental problems from a risk assessment perspective. BIOL 702 and 703 (or equivalent) are required for all graduate students in the master's program in environmental science. Prerequisite: acceptance into the master's program in environmental science or instructor's consent.

BIOL 703. Environmental Science II (4) 2R; 3L. Cross-listed as GEOL 703 and CHEM 703. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic microbial biochemistry, environmental biochemistry, water treatment, phytoremediation, and hazardous waste chemistry. The laboratory portion addresses local environmental problems from a risk assessment perspective. BIOL 702 and 703 (or equivalent) are required for all graduate students in the master's program in environmental science. Prerequisite: acceptance into the master's program in environmental science or instructor's consent.

BIOL 704. Environmental Science Colloquium (1). Cross-listed as GEOL 704 and CHEM 704. Students in the master's program in environmental science may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internships with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: BIOL 702 and 703 or equivalent.

BIOL 710. Glycobiology (3). 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 (3). Basic course in contemporary neurobiology emphasizing learning and memory. Exploration of the current research literature covering various levels of organization from complex behavior to brain information processing pathways, neuronal cell biology, and molecular biology. Each student chooses a topic, completes a written report, and gives an oral presentation to the class. Graduate students do more reading in the primary neuroscience literature. Prerequisites: BIOL 420 and 534 or equivalents and instructor's consent.

BIOL 737. Aquatic Toxicology (4). 2R; 2L. The qualitative and quantitative study of the fate and effects of toxic agents in the aquatic environment. Class examines the concentrations or quantities of chemicals that occur in the aquatic environ-
ment 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. Prerequisites: BIOL 525 or equivalent and CHEM 531 or equivalent, or instructor's consent.

BIOL 750. Biology Workshop (1-3).

BIOL 760. Experimental Molecular Biology (4). 2R; 6L. Introduces upper-level undergraduate and graduate students to molecular biology techniques. The methodology primarily involves the manipulation of DNA and the expression of genetic material in prokaryotic and eukaryotic systems. Prerequisite: BIOL 419 or 420.

BIOL 767. Mechanisms of Hormone Action (3). The mechanism of action of several hormones is described and used to illustrate the major intracellular signal transduction pathways. Includes gonadotropin-releasing hormone, the glycoprotein hormones, luteinizing hormone, follicle-stimulating hormone, chorionic gonadotropin, thyroid-stimulating hormone, steroid hormones, thyroid hormone, androgen, and estrogen. Most basic lectures cover signal transduction pathways. Students write brief summaries of recent research papers related to the current week's lecture topics. Each student makes an oral presentation of a research paper in journal club format. Students earning graduate credit write a term paper describing in detail a hormone not described in class and its mechanism of action. Prerequisites: BIOL 420 and CHEM 662 or their equivalents, plus either BIOL 534 or 526 or their equivalents, and instructor's consent.

BIOL 771. Evolutionary Ecology (4). 3R; 2L. Presents a synthesis of basic principles in population genetics and ecology as a framework for the study of topics in evolutionary ecology. Emphasizes (1) the maintenance and structure of population level genetic variation; (2) mating structure and the evolutionary advantages of sex; (3) individual, kin, group selection; (4) population demographic structure; (5) population regulation and dispersal; (6) life history strategies in heterogeneous environments; and (7) demographic and genetic covariance. Teaches basic techniques in population ecology on several short field trips throughout the semester. Prerequisite: BIOL 418, 419, or instructor's consent.

BIOL 780. Molecular Genetics (3). Studies the physiochemical nature of genetic material and the mechanisms of genetic regulation of metabolism. Students earning graduate credit produce a term paper and deliver a class seminar based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: BIOL 419 or 584.

BIOL 790. Advanced Immunology (3). Contemporary problems in immunologic research. Includes lectures, assigned readings, and reports. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with instructor. Prerequisites: BIOL 900 and instructor's consent.

BIOL 797. Departmental Seminar (1). Forum for the weekly presentation and discussion of the ongoing research projects performed by departmental faculty, graduate students, and guest scientists from outside departments and institutions. All MS degree-bound graduate students are required to attend the seminar each semester and must enroll for credit during the two semesters in which they give presentations that are the basis for their grade. One of these presentations may be their thesis defense. Prerequisite: acceptance into MS program.

BIOL 798. Biology Seminar (2). Reviews of current research in biological sciences. Repeatable once for credit.

Courses for Graduate Students Only

BIOL 890. Research (2-5). SU 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). SU 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, 547, 613, 615, 661, 2 credit hours of 690, and their necessary prerequisites, including MATH 344 and PHYS 313, 314, 315, and 316, or their equivalents. An additional 4 credit hours of professional elective courses must be taken. Courses that will satisfy the professional elective requirement are: (a) CHEM 602, 603, 605, 662, 663, 664, 666, 669, and 1 additional credit hour of 690; (b) mathematics courses with MATH 344 prerequisite or MATH 555; (c) physics courses with PHYS 314 prerequisite; (d) one academic year of German or French; and (e) other courses as approved by the Undergraduate Affairs Committee.

In agreement with the American Chemical Society 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 Chemistry—Premedicine

Students in premedical, preental, preveterinary, prepharmacy, preoptometry, or other preprofessional programs may design this option for which the following courses are required: CHEM 514, 524, 532, and 663 and their necessary prerequisites, MATH 144 or 242, and a one-year sequence of physics courses above 201: 6 additional credit hours of chemistry courses numbered above 500 (CHEM 605 is recommended) and 8 credit hours consisting of BIOL 210 and 211.

This program is designed for students not expecting to become professional chemists and therefore does not necessarily meet standards of certification by the American Chemical Society or entry requirements for graduate work in chemistry.

Bachelor of Arts in Chemistry

This degree requires CHEM 524, 532, 545, 546, and 547 and the necessary prerequisites, including MATH 344 and one year of physics (PHYS 313, 314, 315, and 316) or their equivalents. Students with a substantial interest in the biological sciences may satisfy the BA requirements by substituting CHEM 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 6 hours of professional development courses. Students planning to become teachers of chemistry should complete the Bachelor of Arts program.

Biochemistry Field Major

The departments of biological sciences and chemistry participate jointly in this program. Students selecting this major should seek the advice of one of the departmental chairpersons as early as possible. The required courses are: BIOL 210, 211, 419, and 420; CHEM 111, 112, 523, 531, 532, 662, 663, and 664, PHYS 213 and 214; and MATH 112 (or 111 and 123). Also required are CHEM 666 and 669 (two enrollments), which are cross-listed in the Department of Biological Sciences, and 21 hours of biochemistry electives.

Chemistry/Business Field Major

The Charles M. Buesse program in chemistry/business is designed for students who wish to pursue careers in chemical sales, management, advertising, and other related areas. This program requires 30 hours of business courses as follows: ACCT 210 and 220; ECON 201 and 202; 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 111, 112, 523, 661 or 662, 531, 532, and 603; and MATH 144 or 242.

Students selecting this option should contact the chairperson of the Department of Chemistry as early as possible for advice.
### Bachelor of Science in Chemical Science

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<th>Course</th>
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<tr>
<td>CHEM 111, 112</td>
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<td>CHEM 531, 532</td>
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<td>CHEM 662, 663</td>
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<td>MATH 112, 242, 243, 244</td>
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#### Minimum Requirements—Chemistry Programs

**Bachelor of Science**

**Course**

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<tr>
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<td>CHEM 505, 546</td>
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**Typical Course Sequence**

**Freshman First semester**

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<td>MATH 111, Precalculus Mathematics*</td>
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<td>ENGL 101, College English I</td>
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<td>COMM 111, Public Speaking</td>
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**First semester**

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<td>MATH 242, 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>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

**Senior First semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 546, Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 547, Physical Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry major electives</td>
<td>3-4</td>
</tr>
<tr>
<td>CHEM 690, Independent Study and Research</td>
<td>2</td>
</tr>
<tr>
<td>A general education further study or issues and perspectives course in social sciences</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>16-17</td>
</tr>
</tbody>
</table>

**Second semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 615, Advanced Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 613, Inorganic Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry major electives</td>
<td>3-4</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Bachelor of Arts**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 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, 242, 243, 244</td>
<td>18</td>
</tr>
</tbody>
</table>

**Bachelor of Science in Chemical Science**

- CHEM 111, 112: 10 Hrs.
- CHEM 514, 523, 524: 3 Hrs.
- CHEM 531, 532: 8 Hrs.
- CHEM 662, 663: 6 Hrs.
- PHYS 500-600 (605 recommended): 2 Hrs.
- MATH 144 or 242: 3-5 Hrs.
- Physics (one year): 10 Hrs.

**Biochemistry Field Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 523</td>
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<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 (BioI.) 666</td>
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<tr>
<td>CHEM (BioI.) 669</td>
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<tr>
<td>BIOL 210, 211</td>
<td>10</td>
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<tr>
<td>BIOL 419</td>
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</tr>
<tr>
<td>BIOL 420</td>
<td>4</td>
</tr>
<tr>
<td>MATH 112 or 111, 123</td>
<td>5-6</td>
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<tr>
<td>PHYS 213, 214</td>
<td>10</td>
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<tr>
<td>Biochemistry electives</td>
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</tbody>
</table>

**Chemistry/Business Field Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>CHEM 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 523</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 661 or 662</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 603</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111, 112</td>
<td>3-5</td>
</tr>
<tr>
<td>MATH 114 or 242</td>
<td>3-5</td>
</tr>
<tr>
<td>ACCT 210 and 220</td>
<td>6</td>
</tr>
<tr>
<td>ECON 211 and 212</td>
<td>6</td>
</tr>
<tr>
<td>MKT 300, 405, 608</td>
<td>9</td>
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<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>

**Lower-Division Courses**

- CHEM 101. The Science of Chemistry (5) *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.

- CHEM 103. General Chemistry (5). 3R; 4L *Lab fee.* *General education introductory course.* A survey of inorganic, organic, biochemical, and physical 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 111-112 sequence. Credit is not granted for both CHEM 103 and 111. Prerequisite: one year of high school algebra or MATH 011.

CHEM 110. Preparatory Chemistry (3). A general chemistry course for students who have not had adequate preparation in chemistry or physics. Enables students to improve their problem-solving skills and to briefly review mathematics relevant to general chemistry. Introduces the basic chemical concepts of atoms, molecules, chemical reactions, chemical equations, gas laws, and solutions. Credit is allowed in only one of the following: CHEM 103, 110, or 111. Prerequisites: one and a half units of high school algebra or MATH 011.

> CHEM 111. General Chemistry (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 111-112 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 111, 103, or 110. Prerequisites: a college-level chemistry course such as CHEM 110, 103, or 103, or high school chemistry or physics, and concurrent enrollment in MATH 111 or two units of high school algebra or MATH 011.

> CHEM 112. General and Inorganic Chemistry (5). 3R; 4L Lab fee. General education further study course. Continuation of CHEM 111. Includes thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative analysis, and an introduction to theories of bonding. Prerequisite: CHEM 111 with a C or better.

CHEM 301. Issues and Perspectives in Chemistry (3). Students explore the chemical concepts involved in a minimum of four current national and international scientific, social, and economic issues, and analyze the complexity of the possible solutions of these issues. Prerequisites: CHEM 101, 103, or 111.

CHEM 481. Cooperative Education in Chemistry (1-4). Permits chemistry students to participate in the Cooperative Education program. Offered C/NCR only.

Courses for Graduate/Undergraduate Credit

CHEM 505. Chemical Literature (1). 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. Prerequisite: CHEM 531.

> CHEM 514. Inorganic Chemistry (3). General education further study course. Basic inorganic chemistry emphasizing molecular symmetry and structure, fundamental bonding concepts, ionic interactions, periodicity of the elements, systematics of the chemistry of the elements, acid-base chemistry and non-aqueous solvents, classical coordination chemistry, and introductory bioinorganic chemistry. Prerequisite: CHEM 112 with a C or better.

> CHEM 523. Analytical Chemistry (4). 2R; 6L Lab fee. General education further study course. Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization, and oxidation-reduction volumetric analysis. Prerequisite: CHEM 112 with a C or better.

CHEM 524. Instrumental Methods of Chemical Analysis (4). 2R; 6L Lab fee. Introduction to electroanalytical chemistry and optical method of analysis and analysis and separation of complex mixtures, both inorganic and organic. Also discusses basic computer programming as it applies to analytical chemistry. Prerequisite: CHEM 523.

> CHEM 531. Organic Chemistry (5). 3R; 6L Lab fee. General education further study course. An introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry, and spectrographic analysis. Prerequisite: CHEM 112 with a C or better.

CHEM 532. Organic Chemistry (5). 3R; 6L Lab fee. A continuation of CHEM 531 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Prerequisite: CHEM 531.

> CHEM 533. Elementary Organic Chemistry (3). General education further study course. Basic organic chemistry emphasizing topics of importance in health professions and education majors. Special emphasis to carbohydrates, proteins, drugs, pesticides, and energy production. Students should enroll in CHEM 534 simultaneously. Credit is not allowed for both CHEM 533-534 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: CHEM 112 or equivalent.

CHEM 534. Elementary Organic Chemistry Laboratory (2). Lab fee. A basic laboratory course to provide pertinent experiences in the laboratory to fortify the survey lecture course CHEM 533. Prerequisite or corequisite: CHEM 533.

> CHEM 545. Physical Chemistry (3). General education further study course. Thermodynamics. Studies gases, first law, thermodynamics, second and third laws, phase equilibria, solutions, chemical equilibria, electrochemistry, and surface chemistry. Prerequisites: CHEM 112, MATH 344 or its equivalent, and one semester of college physics.

CHEM 546. Physical Chemistry (3). Kinetic theory, kinetics, transport phenomena, quantum mechanics, spectroscopy, and statistical thermodynamics. Prerequisites: one year of college physics and MATH 344 or its equivalent.

CHEM 547. Physical Chemistry Laboratory (2). 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 605. Industrial and Polymer Chemistry (3). Bridges the industrial-academic gap. Includes petroleum refining processes and distillation technology. Inorganic topics include glass technology, electro-refining and electroplating, and battery chemistry. Discusses cellulose-biomass-based products such as-grilling polysaccharides and natural fibers along with industrial adhesives (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 plastic and composites processing. Prerequisite or corequisite: CHEM 532.

CHEM 605. Medicinal Chemistry (3). For students interested in chemistry related to the design, development, and mode of action of drugs. Course describes those organic substances used as medicinal agents and explains the mode of action and chemical reactions of drugs in the body; illustrates the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenicity, etc and brings about a better understanding of drugs. Includes transport, basic receptor theory, metabolic transformation of drugs, discussion of physical and chemical properties in relation to biological activity, drug design, structure-activity relationships, and discussion of a select number of organic medicinal agents. Prerequisites: CHEM 332 or 333 or equivalent; a semester of biochemistry (CHEM 661 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 or corequisite: CHEM 514.

CHEM 615. Advanced Inorganic Chemistry (3). Includes modern bonding theories, structure and spectra of inorganic compounds, coordination and organometallic chemistry, boranes, inorganic ring systems and polymers, inorganic environmental chemistry, mechanisms of inorganic reactions, and solid state chemistry. Prerequisites: 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/business majors and students in life sciences. Not recommended for the BS in chemistry for health sciences or biochemistry field majors for whom CHEM 662 and 663 are required. Introduces thermodynamics and biological oxidation-reduction reactions, structure, metabolism, and synthesis of proteins, carbohydrates, lipids, and...
nucleic acids; enzyme kinetics, photosynthesis, and transfer of genetic information. Prerequisite: CHEM 532.

CHEM 662. Biochemistry of Cell Constituents, Catalysis, Oxidation, Photosynthesis (3). Study of major constituents of the cell: protein, carbohydrate, glycoprotein, lipid, nucleic acid, mucopolysaccharide; enzyme catalysis; biological oxidation; photoreactions; and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Prerequisites: CHEM 523 and 532 or equivalents.

CHEM 663. Biochemistry of Cell Metabolism, Biosynthesis, Structure, Function, and Regulation of Proteins and Nucleic Acids (3). Study of metabolism and control of carbohydrates, lipids, phospholipids, sterols, amino acids and proteins; synthesis of porphyrins, vitamins, and polynucleotides; synthesis and metabolism of purines, pyrimidines, and nucleosides; energy transfer and control of metabolic processes; hormonal disorders; lipid and nucleic acid metabolism; applications of intermediary metabolism to endocrine glands; major nutrients and vitamime body fluids and generalized tissues. A fundamental background of biology or microbiology is recommended but not essential. Prerequisite: CHEM 662.

CHEM 664. Biochemistry Laboratory (3) 1R; 6L. Lab fee. Practical training in biochemical procedures and literature searching; experiments include isolation, characterization, and assay of biopolymers and use of centrifugation, chromatography, spectrophotometry, enzyme kinetics, and radioactive labeling techniques. Should be taken concurrent with CHEM 662 or CHEM 663. Prerequisite: CHEM 532 or equivalent.

CHEM 665. 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.U. grade only. Students in the biochemistry field major participate in a biochemistry research project under the direction of a faculty member. Requires a written report summarizing the results. May be repeated once for credit. Prerequisites: BIOL 420 and CHEM 662 or 663 and 664.

CHEM 670. Independent Study and Research (2-3). Studies performed must be directed by a faculty member in the Department of Chemistry. Repeatable for credit. A maximum of 3 credit hours may be counted toward graduation. Prerequisite: departmental consent.

CHEM 672. 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 700. Chemistry Seminar (1). S.U. grade only. Students give seminars on either papers recently published in the literature or on their own research. Repeatable for credit.

CHEM 701. Chemistry Colloquium (1). S.U. grade only. Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit.

CHEM 702. Environmental Science I (4) 2R; 3L. Cross-listed as BIOL 702 and GEOL 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, ecological chemistry, plant ecology, and biological interactions. Prerequisite: acceptance into the master's program in environmental science or instructor's consent.

CHEM 703. Environmental Science II (4) 2R; 3L. Cross-listed as BIOL 703 and GEOL 703. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemistry, environmental toxicology, aquatic microbial biochemistry, environmental toxics, water treatment, photochemical smog, and hazardous waste chemistry. Prerequisite: acceptance into the master's program in environmental science or instructor's consent.

CHEM 704. Environmental Science Colloquium (1). Cross-listed as BIOL 704 and GEOL 704. Students in the master's program in environmental science are required to enroll in each semester (maximum 4 credit hours). Includes presentations by guest speakers and required readings for class discussion. May also include student involvement in environmentally related community groups and projects.


CHEM 706. Environmental Science Internship (3-6). Cross-listed as BIOL 706 and GEOL 706. Students in the master's program in environmental science may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internships with local businesses, industry, or government agencies. Internship options are an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: CHEM 702 and 703.

CHEM 709. Special Topics in Chemistry (2-3). A discussion of topics of a special significance and interest to faculty and students. Offerings announced in advance. Repeatable for credit.

CHEM 711. Coordination Chemistry (3). The study of the synthesis, characterization, and properties of coordination compounds. Includes nomenclature, fundamental bonding concepts, principles of synthesis, mechanisms of substitution and electron transfer reactions, catalysis, and solid-state phenomena. Prerequisite: CHEM 615 or equivalent.

CHEM 712. Physical Methods in Inorganic Chemistry (3). An introduction to electronic and vibrational spectroscopy, magnetic susceptibility, EPR, NMR, Mossbauer spectroscopy, and X-ray crystallography as applied to inorganic systems. Emphasis on interpretation of results for understanding the electronic and molecular structure of compounds. Prerequisite: CHEM 705 or equivalent.

CHEM 713. Physical Organic Chemistry (3). A discussion of advanced topics in stereochemistry and conformational analysis and organic reaction mechanisms. Prerequisite: CHEM 532.

CHEM 714. Computational Quantum Chemistry (3). An introduction to computational methods and methods for calculating a wide range of physical, chemical, and electronic properties of systems large enough to be of interest to inorganic, organic, and biochemists. Using commercial molecular orbital software packages 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, IR and Raman spectra; thermochromic properties, heat of formation, bond and reaction energies, isomerization energy barriers; reaction pathways; molecular orbits; atomic charges, dipole and multipole moments, ionization potentials, bond orders, orbital energies and photoelectron spectroscopy; excited state properties, singlet and triplet surfaces. Prerequisite: CHEM 546 or equivalent (MATH 344 is necessary).

CHEM 715. 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 716. Step Growth Polymerization (3). Polymerization process which proceed by a step growth or ring-opening mechanism. Preparation of thermoplastics, including relationships between molecular weight and reaction condition. Preparation of thermosets including relationships between structure, conversion, and gelation. Discusses individual sys-
tems such as nylon, epoxy resin, and polyimides in detail. Prerequisite: 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, metal storage and transport, ion transport, 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 experimental 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; fluorescence 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, chromospectrometry, and coulometry; reversible and irreversible diffusion controlled processes; CE (chemical reaction before electrical reaction), BC (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, and pi electron rearrangements, electrocyclic reactions, cyclodadditions, 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, terpenes, 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). Consider advanced applications of quantum mechanics to atomic and molecular problems. Includes determinant wave-functions, angular momentum coupling, time-dependent perturbation theory, density considerations, tensor operators, and molecular orbital calculations. Prerequisites: CHEM 705 and 741 or equivalents.

CHEM 842. Chemical Kinetics (3). A description of reaction systems, including the mathematical and experimental characteristics of simple and complex kinetic systems. Discusses the theories of chemical kinetics, as well as the kinetics of homogeneous reactions in the gas phase, the kinetic aspects of solution reactions, heterogeneous reactions, and selected topics of current interest. Prerequisite: CHEM 546 or equivalent.

CHEM 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, 545, and 555.

CHEM 845. Chemical Thermodynamics (3). A presentation of the basic 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 photoelectron 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.

CHEM 847. Chemistry of Condensed Matter (3). Includes thermodynamics, statistical mechanics, quantum chemistry, and structural determinations of condensed phase matter. Emphasizes metals, alloys, intermetallic compounds, composite materials, and advanced materials. Prerequisite: CHEM 741 or equivalent.

CHEM 852. Techniques of Polymer Characterization (3). A study of physical, spectroscopic, and diffraction techniques to determine the size, structure, and morphology of polymers.

CHEM 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 features which produce the development of polymer crystals and encourage amorphous character, relationshiips between structure, and Tg. and Tn, are discussed with emphasis on the influence of structure and Tg. and Tn, on the thermal stability of polymers. Prerequisite: CHEM 732.

CHEM 861. Enzyme Mechanisms (3). An introduction to the study of enzyme mechanisms. Modern approaches include steady-state, relaxation, and chemical modification methods. Prerequisite: CHEM 662 or 663 or equivalent.

CHEM 862. Biotechnology: Principles and Applications (3). Introduction to biotechnology including its role in the production of products from biological raw materials. Biotechnology involvement in the production of products include energy, food, drink, flavors, chemicals, biomaterials, and agricultural products. Prerequisites: CHEM 741 or equivalent.

CHEM 863. Analytical Biochemistry (3). A review of modern analytical methods used in biochemistry and molecular biology including absorbance and fluorescence spectroscopy, chromatography (affinity), gel filtration, HPLC, ion-exchange, ion-pair), gel electrophoresis, radiotracers, chromatography, and mass spectrometry. Prerequisites: CHEM 741 or equivalent.

CHEM 864. Nucleic Acids: Structure, Chemistry, and Function (3). A comprehensive examination of the structure and conformation of DNA, RNA, and their components. Studies reactivity and modification of nucleotides and polynucleotides for different chemicals and mixtures. Reviews chemical synthesis of polynucleotides and analysis of nucleic acids, including site-specific mutagenesis. Studies nucleic acid function and information transfer in biochemical systems. Also studies major nucleases and discusses the production of purine derivatives.

CHEM 890. Research in Chemistry (2-12). S/U grade only. Research for the student planning to receive an MS. Research is directed by a faculty member. Repeatable for credit.

CHEM 990. Research in Chemistry (2-16). S/U grade only. Research for the student planning to receive the PhD. Research is directed by a faculty member. Repeatable for credit.

Communication (COMM), Elliott School of
The Elliott School of Communication offers an integrated major in communication leading to the Bachelor of Arts (BA) degree. Students can develop a special (open) emphasis that respects their background and
experience and is consistent with their educational and professional goals, or choose a structured emphasis in strategic communication, broadcast journalism, electronic media, integrated marketing communications, or print journalism.

This comprehensive communication degree has three distinguishing characteristics:

1. It is interdisciplinary in nature, reflecting the contemporary belief that all communication media are engaged in essentially the same functions (gathering information and creating and disseminating messages) and that the present-day communication professional must be schooled in the basic skills—writing, 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 and standards 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 radio stations, eight television stations, nine dailies and thirty-two weekly newspapers, more than 25 advertising agencies, and a range of large 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 130, 301, 305, 325, 472, 505, 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 requirements in the emphasis areas are listed below.

a. Strategic Communication: One course from 311, 328, and 360 (Foundation cluster); choose one course from 290, 302, and 312 (Interpersonal Communication cluster); choose one course from 349, 640, and 650 (Organizational Communication cluster); choose one course from 313, 502, and 632 (Public Affairs cluster); choose one course from the following or two courses that combine for three credits from 398, 402, 481, 581, 622, and 690 (Practicum); choose one additional course selected in consultation with your advisor (Elective).

b. Broadcast Journalism: COMM 401, 422, 622, one course from 304, 500, 522, 604, and 690; and 6 hours of upper-division communication elective credit.

c. Electronic Media: COMM 303, 304, 332, 604, 609, and 3 hours of upper-division communication elective credit.

d. Integrated Marketing Communications: COMM 324, 502, 510, 525, 626, and 3 hours of upper-division communication elective credit. Outside course requirements: MKT 300 and 405.

e. Print Journalism: COMM 310, 401, 500, 510, one course from 340, 550, 571, 660; and 3 hours of upper-division communication elective credit.

f. 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 emphasis 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, 312, 325, 328, 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, 130, 190, 311, and 661; and THEA 143 and 272. Students seeking the journalism teaching certification must complete the following courses: COMM 120 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 2.500 GPA, both overall and in the student’s major field of study.

Admission 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 Fairmount 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 portfolio that reflects their academic and professional work in communication, and which can be used in seeking employment or opportunities for further study upon graduation. The portfolio, which can include videotapes, interactive media, brochures, and scholarly papers, will be reviewed by a three-member committee of communication faculty and professionals. Students should enroll in the seminar upon achieving senior status (i.e., finished 90 hours of course work) and after completing at least 18 hours of communication core course work.

Communication Core Courses

COMM 130. 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 media judgment and ethics. Course is a prerequisite to many specialized Elliott School courses. Prerequisites: grade of C or better in ENGL 101, ENGL 102, and COMM 130; 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 methods by which visual images inform, educate, and persuade readers.

COMM 325. Speaking in Business and the Professions (3). A study of the basic concepts of public speaking and discussions as they apply to the business and professional person. Emphasizes public presentations, group leadership, and interpersonal communication as appropriate to business and professional oral communications. Prerequisite: COMM 111 with a grade of C or better.

COMM 430. Communication Research and Inquiry (3). General education further study course. Introduces the process of research and inquiry across the discipline of communication. Helps students in communication become more intelligent consumers of research and investigative inquiry; and to become more adept at designing their own research projects. Includes information gathering, structuring inquiry with qualitative and quantitative research designs, and processing and reporting information. Prerequisite: junior standing and COMM 130 or instructor's consent.

COMM 472. Senior Portfolio Seminar (1). Students prepare a resume and portfolio of their best work to be evaluated by faculty members and professional students in their area of emphasis. Ideally completed in a student's final semester before graduation. Graded Cr/NCr. Prerequisites: senior standing, completion of 18 hours of communication course work, and departmental consent.

Courses for Graduate/Undergraduate Credit

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 to become more discerning consumers of the various forms of public and mass-mediated messages. Analysis includes print advertisements, radio and television messages, newspaper features, and public speeches. Prerequisites: junior standing and COMM 301 with a C or better or instructor's consent.

COMM 630. Communication Law and Responsibility (3). Emphasizes both oral and written aspects of communication law and responsibility. Addresses general functions of the law including the right to communicate, broadcast law, and law of the press. Includes discussion of the First Amendment rights, libel, privacy, copyright, advertising, obscenity, pornography, and corporate communication concerns. Prerequisite: COMM 301 with a C or better or instructor's consent.

COMM 631. Historical and Theoretical Issues in Communication (3). General education further study course. Examines the development of various issues in communication in historical context. Emphasizes different historical and scientific theories of communication and the historical development of mediated communication. Uses selected theories to generate critiques of specific communication events. Prerequisites: junior standing and COMM 130 or instructor's consent.

Lower-Division Courses

COMM 011. Reducing Fear of Speaking (2). For students who feel an unwarranted degree of fear, nervousness, or stage fright when confronting situations calling for oral communication, especially 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 enhance leadership potential by improvement in traditional public speaking situations (The University's requirements in oral communication must be fulfilled by completion of COMM 111. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the Elliott School of Communication.

COMM 111H. Public Speaking (4). General education basic skills course. Counts as an Honors Seminar. Studies basic concepts of speech communication as applied to public speaking and critical analysis. Goal is to learn basic strategies for tailoring messages to overcome obstacles in a variety of public speaking situations. Prerequisite: Honors standing.

COMM 150. Debate Workshop (2). Instruction in theory and techniques of debate and preparation for debating the national high school debate topic. Not repeatable for credit. Prerequisite: departmental consent.

COMM 190. Introduction to Human Communication (3). General education introductory course. Explores alternative frameworks by which humans cope with and control the communication environment. Uses observational and experiential opportunities to discover the variety of patterns used by humans to symbolically interact with themselves, each other, and entire cultures. Utilizes multimedia instructional procedures.

COMM 202. Debate and Forensics (3). Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition, and debate and forensics squad meetings. Repeatable for a maximum of 6 hours credit. May not be counted toward a major. Prerequisite: departmental consent.

COMM 220. Introduction to Film Studies (3). Emphasizes the nature and function of film as a mode of communication with attention to film theory and technical criticism. Selected films are shown in class.

COMM 221. Oral Interpretation (3). General education further study course. Cross-listed as THEA 221. Develops the mental, vocal, and analytical techniques essential to the oral interpretation of literature.

COMM 222. Improving Voice and Diction (3). Cross-listed as THEA 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Course is performance oriented; however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.

COMM 260. Seminar in Communication (1-3). Special seminars dealing with current problems, issues, or interests in various areas of communication. For the introductory student in communication. Repeatable for credit in different topics only.

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). 2R; 2L. Basic principles, procedures, and techniques of video production, including operation of studio equipment and direction of television programs and other video productions. Prerequisite: COMM 303 or instructor's consent.

COMM 310. Introductory Photojournalism (3). 2R; 3L. Lab fee. Basic photographic theory and technique emphasizing aspects of importance to journalists, writers, and editors.
Students take, develop, and prepare pictures for publication. 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 312. Nonverbal Communication (3). General education further study course. A study of theory and research in nonverbal communication. Students explore different aspects of nonverbal communication and engage in original research and study in the field of nonverbal communication. Emphasizes the application of nonverbal communication to the total human communication process. Prerequisite: COMM 111.

COMM 313. Argumentation and Advocacy (3). General education further study course. Studies the principles of effective rational discourse, oral and written, dealing with controversial issues in public deliberative, forensic, and educational areas. Includes valid and 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 audience research, the creation of specialized messages, and message delivery systems. Prerequisite: COMM 301 or departmental consent.

COMM 328. Teamwork, Leadership, and Group Communication (3). Studies the nature and functions of groups and the development of skills for identifying and evaluating communication behavior in small group situations emphasizing the dynamics of teamwork and group leadership.

COMM 332. Writing for Electronic Media (3). Writing formats, commercials, continuity, and drama for the electronic media, including audio and video programs and productions. Prerequisite: COMM 301 with a C or better or instructor's consent.

COMM 340. Applied Photojournalism (2). 3R; 3L. Lab fee. Covers 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 Negotiations (3). An introductory course focusing upon the study of negotiation management and techniques appropriate to the handling of hostage negotiations, 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 191 and COMM 302 or equivalent or instructor's consent.

COMM 360. Applied Communication Strategies (3). Surveys communication strategies as applied in 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 130 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 (3). Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition, and debate and forensics squad meetings. Repeatable for a maximum of 6 credit hours. Three hours may be counted toward the major. Prerequisite: departmental consent.

COMM 422. Broadcast News (3). Theory and techniques of preparing news for the electronic media, including preparation of newscasts and news reports for radio and television. Prerequisite: COMM 401 or instructor's consent.

COMM 440. Advanced Photojournalism (3). 3R; 3L. Lab fee. Advanced photographic theory and technique emphasizing the feature page photo essay, advertising photography for daily news publications, and the photojournalist's personal viewpoints and philosophies. Using their own camera equipment and the department's laboratory facilities, students shoot, process, and print photographs for publications. Prerequisite: COMM 310.

COMM 460. Seminar in Communication (1-3). Special seminars dealing with current problems, issues, or interests in various areas of communication. For the intermediate student in communication. Repeatable for credit in different topics only.

COMM 481. Cooperative Education (1-2). Credit for cooperative field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated, but limited to a total of 4 credits in COMM 481 and COMM 680. Graded CR/NO: Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

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; 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 are valuable in writing grant proposals, committee reports, pamphlets, and journal articles. Prerequisites: COMM 301 with a 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 C or better.

COMM 522. Advanced Broadcast News (3). 3R; 3L. Advanced techniques of preparing news for radio and television presentation emphasizing actual work in radio and television newsrooms. Lab periods arranged with instructor. Prerequisite: COMM 422.

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. Prerequisites: COMM 324 and COMM 301 with a 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 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. Prerequisites: 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 set-
tions 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 teachers who currently supervise a student newspaper or yearbook. Emphasizes techniques for teaching various forms of writing and design, duties relating to production and finance of school publications, and methods to help students become better communicators. Prerequisite: COMM 301 with a C- or better or instructor's consent.

COMM 620. 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 plans book, as well as produce advertising and public relations campaign materials. Prerequisite: COMM 324 or instructor's consent.

COMM 627. American Public Address (3). General education further study course. A detailed study of notable American speakers and their public utterances. Assesses their impact on the political, economic, and social history of this nation from colonial time to the present.

COMM 630. Leadership Techniques for Women (3). Cross-listed as WOM 630. Provides the female student experience in decision making and improves skills in leadership through role-playing and exercise in group dynamics.

COMM 635. Advanced Presentations (3). Skills development in a variety of advanced presentation methods, including speaking from a TelePrompter, using PowerPoint technology, spokesperson/press conference speaking, conducting a training session, formal manuscript speaking, after dinner speaking, and writing a speech for another person. Prerequisite: COMM 325.

COMM 640. Issues in Corporate Communication (3). Examines how corporations craft messages that are persuasive to their various publics. Special attention to how companies use communication strategies to cope with situations that threaten their reputations.

COMM 650. Communication Training and Development (3). An examination of communication concepts, processes, technologies, and strategies related to training and development. Includes the application of these elements to formal instruction across disciplines and at various educational levels as well as in 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 4 credits in COMM 690 and COMM 491. Graded Cr/No: Prerequisite: departmental consent.

COMM 712. Advanced Interpersonal Communication (3). A study of the processes of communication and of the role of communication in interpersonal relationships. Includes the study of communication patterns and communication barriers in interpersonal relationships. Prerequisite: COMM 202 or instructor's consent.

COMM 713. 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 720. Dimensions of Mass Communication (3). A detailed study of mass media, their role as social institutions; their control, support, content, and audience, and their effects.

COMM 722. The Art of Conversation (3). Conversation is the form of communication people engage in most naturally and frequently, but about which they seldom think seriously. Helps participants enhance their understanding and appreciation of, as well as their skill in, the art of conversation. Includes the nature of conversation, principles of conversational communication, types of conversation, conversation in the media, and conversation analysis. Prerequisites: COMM 302 and junior standing or departmental consent.

COMM 750. Workshops in Communication (1-4).

COMM 770. The Audience (3). Application of research techniques to the measurement of audience behavior emphasizing mass media audiences. Includes focus group interviews, survey research, and radio and television ratings.

Courses for Graduate Students Only

COMM 801. Introduction to Communication Research (3). An introduction to the nature and scope of communication research and graduate studies in communication and theatre/drama. Provides an overview of current research in the discipline. Instruction in the basic steps of research: availability of library and other sources; bibliographic search; computer accessing of source materials; organization, style, and format of a research report and citation of sources in accordance with standard style guides. Should be taken at the beginning of the graduate program.

COMM 802. Historical and Qualitative Methodologies in Communication Research (3). An introduction to historical, critical, and observational methodologies in communication research. Emphasizes historical, critical, and observational research, particularly those forms of research common to communication studies. Prerequisite: COMM 801.

COMM 803. Empirical/Quantitative Research Methodology in Communication (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 some phase of a) speech communication, b) electronic media, or c) speech education. Repeatable for credit up to a total of 6 hours.

COMM 825. Group Communication (3). Examines communication processes that operate in groups in various contexts. Provides an overview of relevant theory, as well as methodologies through which group communication may be critically analyzed in applied settings.

COMM 830. Theories of Rhetoric: Classical (3). Cross-listed as ENGL 825. An intensive study of the rhetorical theo-
COMM 831. Theories of Rhetoric: Renaissance to Early Modern (3) Cross-listed as ENGL 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, Feklem, Bulver, Sheridan, Steele, Rush, John Quincy Adams, Blair, Campbell, and Whately.

COMM 860. Seminar in Communication (1-3). Special seminars dealing with current problems, issues, or interests in various areas of communication. Repeatable for credit in different topics only.

COMM 865. Organizational Communication (3). Cross-listed as MGMT 865. An analysis of communication 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 (1-3-1-3). Prerequisite: departmental consent.

Communicative Disorders and Sciences (CDS)
For students desiring an emphasis in applied language study, see requirements and curriculum for a major in communicative disorders and sciences through 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, ethnic studies, and gerontology to form a unique and diverse curriculum to better serve the needs of students to work in an ever-changing urban and global community. Additionally, the Midwest Criminal Justice Institute (MCJI), the Regional Community Policing Training Institute (RCPTI), and the Juvenile Justice Research Center 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. ENGL 210 and ETH S 360 are additional requirements to be taken during the first two semesters as a criminal justice major. Students who plan to graduate with a BS in criminal justice must also satisfy 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 191, 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 24 additional credit hours beyond the 32 hours required for the major (for a total of 50 hours). There is a maximum of 6 hours in each of the following: 481, 482, or 483; and there is a maximum of 12 hours total in any combination of 481, 482, and 483.

Minor. The minor in criminal justice consists of at least 18 hours of criminal justice courses, of which at least 6 hours must be at the upper-division level (300 and above). The following requirements must be met for the minor:

1. CJ 191
2. A minimum of two and a maximum of three of the following courses: CJ 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 in forensics as a possible career choice.

To qualify for a Certificate in Forensic Criminology, students must complete four of the following courses with an average grade of B or better. CJ 191, Introduction to Criminal Justice, is a prerequisite for all courses.

CJ 341, Criminalistics and Scientific Crime Detection
CJ 343, Special Investigations
CJ 341, Medical and Legal Aspects of Death Investigation
CJ 600, Forensic Anthropology

Certificate in Cross-Cultural Communications in Criminal Justice
The Certificate in Cross-Cultural Communications provides learning experiences that will prepare practitioners to promote favorable interaction between criminal justice agencies and the minority groups they serve. This emphasis area prepares students to develop empathetic responsiveness, combined with humanitarian insights, and to develop and maintain mutually dependent helping and working relationships between criminal justice agencies and a variety of minority groups.

Students majoring in criminal justice also may obtain the Certificate of in Cross-Cultural Communications in addition to the BS in criminal justice degree. These students seeking this certificate must satisfactorily complete ETH S 210, Fundamentals of Cross-Cultural Communication, and one of the following: ETH S 531, The Black Family
ETH S 332, The Native American
ETH S 333, Issues in the Chicano Community
ETH S 334, Ethnic American in the Twentieth Century
Also, students must take 12 additional hours in ethnic studies course work, 9 of which must be in upper-division courses.

Certificate in Corrections
The Certificate in Corrections is designed to enhance the career needs of:

- Individuals who are employed as correctional practitioners.
- Individuals who want exposure to corrections as a possible career choice.

To qualify for a Certificate in Corrections, students must complete four of the following courses with an average grade of B or better. CJ 191, is a prerequisite for all courses.

CJ 291, Corrections
CJ 310, Community-Based Corrections or
CJ 896, Seminar in Corrections
CJ 610, Correctional Counseling
CJ 622, Juvenile Justice and Social Policy

Certificate in Law Enforcement
The Certificate in Law Enforcement is designed to enhance the career needs of:

- Law enforcement officers.
- Individuals who want exposure and knowledge of law enforcement as a career choice.

To qualify for a Certificate in Law Enforcement, students must complete four of the following courses with an average grade of B or better. CJ 191 is a prerequisite for all courses.

CJ 292, Law Enforcement
CJ 895, Seminar in Policing
CJ 341, Criminalistics and Scientific Crime Detection or CJ 343, Special Investigations
CJ 692, Community Policing
CJ 861, Police Administration
Lower-Division Course

>CJ 191. Introduction to Criminal Justice (3). General education introductory course. Introduces crime and the criminal justice system by discussing the nature of crime and by identifying multiple facets of the justice system, including the police, courts, and correctional agencies. Studies the role of the criminal justice system as it relates to the individual and society. Students become acquainted with criminal justice careers.

>Upper-Division Courses

CJ 191, unless otherwise noted, is a prerequisite or corequisite for all criminal justice 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 191.

CJ 315. Criminal Law (3). History, scope, and nature of law; parties to crime; classification of offenses; act and intent; capacity to commit crime; and defenses. Examines elements of major criminal statutes and an overview of criminal processes and rules of evidence. Prerequisite: CJ 191.


CJ 343. Special Investigations (3). Care, collection, and preservation of evidence. Studies sources of information and locating subjects, crime scene recording, and investigative techniques applicable to specific offenses. Prerequisite: CJ 191.

>CJ 351. The Victim in Criminal Justice (3). General education 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 191.

CJ 353. Organized and White Collar Crime (3). Surveys the history, scope, and impact of organized and white-collar crime in America, areas of influence, remedial practices, and methods of legal control. Reviews the societal conditions involved in the appearance, spread, and expansion of organized and white-collar crime in America and the overlap and interrelationship between corporate and business crime (white collar and organized crime). Emphasizes the processes of infiltration, fraud, and corruption that are characteristic of these conspiratorial crimes. Prerequisite: CJ 191.

>CJ 355. Special Populations in the Criminal Justice System (3). General education further study course. Cross-listed as ETH 525. Examines the role of women and minorities as employees of the criminal justice system. Also explores the role of women, minorities, juveniles, and older citizens as individuals who commit crime and are apprehended and sanctioned by the criminal justice system. Considers the unique challenges of each of the four identified populations, including their interactions with law enforcement, the judiciary, and corrections. Prerequisite: CJ 191.

CJ 381. Special Topics (1-3). Detailed study of topics in criminal justice with particular emphasis established according to the expertise of the various instructors. Prerequisite: CJ 191.

CJ 382. Workshop in Criminal Justice (1-3). Prerequisites: CJ 191 and instructor's consent.


CJ 392. Law Enforcement (3). Examines the interaction of police and citizens as regulated by constitutional provisions and other legal and social constraints. Prerequisite or corequisite: CJ 191.


>CJ 394. Courts and Judicial Systems (3). General education further study course. Consists of a case study approach of an individual defendant from the time the crime is committed through the defendant's parole (or an actual homicide case in California). Includes legal analysis of the procedures and rules involved throughout the criminal justice process. Student plays the role of the decision maker for the law enforcement, court, and correction agencies, resulting in an in-depth view of the adversary procedures which form the basis for the criminal justice system. Prerequisite: CJ 191.

CJ 401. Management of Criminal Justice Agencies (3). An intensive examination of a variety of emerging administrative and management concepts and the processes related to the determination and implementation of management philosophy. Prerequisite: CJ 191.

CJ 402. Computer and Statistical Applications (3). Cross-listed as ETH S 402, GERON 402, and PADM 402. Introduces computer and statistical applications used in public agencies. Emphasizes availability and use of data sources, quantitative decision-making techniques, and interpretation of statistical analyses. Prerequisite: MAT 111 or equivalent.


CJ 420. Criminal Evidence (3). Concepts of criminal evidence rules as they pertain to kinds and degrees of evidence—procedure for admitting or excluding evidence; witness and privileged communications; the hearsay rule and its exceptions; and judicial notice, burden of proof, and presumptions. Emphasizes the rules of evidence that govern the criminal justice process. Prerequisite: CJ 191.


>CJ 453. Crime Prevention (3). General education further study course. A study of the theories of crime prevention efforts by governmental and nongovernmental agencies. Analyzes factors which contribute to the reduction of crime; crime analysis and prediction; the methodology of gathering crime data; and the relationship between the criminal justice system and the public. Prerequisite: CJ 191.

CJ 481. Cooperative Education (1-6). Provides a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation and with approval by the cooperative education coordinator. Prerequisites: criminal justice major, 15 hours of CJ courses, junior or senior standing, and consent of the criminal justice agency. Offered Cr/No credit.

CJ 482. Internship (1-3). Supervised field placement with a governmental or private law enforcement, court, correction, juvenile justice, forensic science, or security agency. Provides a learning experience in which the student can integrate and apply knowledge and theory derived from the criminal justice curriculum. Interns work 96 hours for 3 hours credit; there is a maximum of 6 credit hours. Prerequisites: 15 hours in criminal justice, junior or senior standing, consent of the criminal justice agency, and internship coordinator's consent.

CJ 483. Individual Directed Study (1-3). Study in a specialized area of the criminal justice system emphasizing the student's research project. Repeatability for credit not to exceed a total of 6 hours. Prerequisites: 15 hours in the criminal justice core and individual directed study coordinator's consent.


Courses for Graduate/Undergraduate Credit

CJ 501. Integrity in Public Service (3). Cross-listed as ETH S 501, GERON 502, PADM 501. Exposes the student to basic
principles of personal and professional integrity and how those principles apply to their daily life as a member of the community and as an employee of a government or social service agency. Employs a case study method, using cases and examples from a wide range of government and non-profit agency experiences. Students become aware of the moral and ethical issues which may arise in their professional and personal lives; begin to develop critical thinking and analytical skills regarding ethical behavior; and become more personally and professionally responsible. Prerequisite: junior- or senior-level or instructor’s permission.

CJ 541. Medical and Legal Aspects of Death Investigation (3). Emphasizes the manner, cause, and mechanism of death; physiological effects of trauma; postmortem changes; identification techniques; investigation of child death; and the components of a complete death investigation. Considers and analyzes the history, function, and responsibilities of the coroner/medical examiner. Prerequisite: CJ 191.

CJ 551. Workshop (1-6). Specialized instruction using variable formats in relevant criminal justice subjects. Repeatable for credit up to 6 hours.

> CJ 593. Crime Causation and Criminal Justice Policy (3). General education further study course. Introduction to theoretical issues in criminal justice. Primary emphasis is on the etiology of criminal and delinquent activity and the response of the criminal justice system to such behavior. Discusses the significant contributions of outstanding criminologists, as well as elaborating the application of these perspectives to criminal justice agencies. Prerequisite: CJ 191.


CJ 600. Forensic Anthropology (3). Cross-listed as ANTHR 600. Encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition, and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification, and identification emphasizing anthropological interpretation. Prerequisite: CJ 191.

CJ 610. Correctional Counseling (3). Analysis of the role of a correctional counselor. Emphasizes current practices in community-based and institutional correctional counseling. Discusses application of theories of counseling which are widely used in correctional settings, rehabilitative programs, and special needs of offenders. Prerequisite: CJ 191.

CJ 621. Environmental Law (3). Cross-listed as ETH S 621 and P ADM 621. An in-depth analysis of emerging federal, state, and local legislation; judicial decisions, and administrative policies in environmental protection. Explores the roles of a variety of governmental agencies and nongovernmental organizations as related to prevention and enforcement processes of environmental protection. Includes issues in the development and implementation of environmental policy. Prerequisite: an approved methods class.


CJ 641. Forensic Psychiatry (3). Analysis of the role of psychiatry in the criminal justice process. Introduces the student to concepts and procedures of forensic psychiatry. Prerequisite: CJ 191.


CJ 651. Dispute Resolution (3). Cross-listed as ETH S 651, GERON 651, P ADM 651. Examines a range of topics including causation, typologies, communications, mediation, arbitration, and other dispute resolution techniques. Includes criminal and victim mediation and inter-group and inter-organization relations and dispute resolution techniques. Analyzes case studies.


CJ 655. Policy Analysis and Program Evaluation (3). Cross-listed as ETH S 655. 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.

Courses for Graduate Students Only

CJ 782. Workshop in Criminal Justice (1-6). Prerequisite: CJ 191 and instructor’s consent.

CJ 783. Advanced Special Topics in Criminal Justice (1-3). Detailed study of topics in criminal justice with particular emphasis established according to the expertise of the various instructors. Prerequisite: CJ 191 and junior, senior, or graduate-level standing.

CJ 797. Policy Analysis and Program Evaluation (3). Cross-listed as P ADM 745. 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 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.

CJ 816. Correctional Administration (3). Analyzes basic methods utilized in the organization and accomplishment of objectives in correctional institutions. Reviews methods utilized in traditional correctional institutions, diagnostic centers, halfway houses, and other treatment models.

CJ 817. Crime in Popular Culture (3). Analyzes film as an expression of popular culture; focuses on films dealing with subject of crime, particular attention to portrayal of violence and the images of women. Discusses the images of police, correctional officers, and other criminal justice professionals.

CJ 820. Terrorism and Modern Societies (3). A broad overview of the many theoretical approaches to the study of terrorism and studies recurring issues regarding the interpretation of various types of terrorism. Focuses not only on theoretical concerns, but also on policy debates and the substantive ramifications of current events. Exposes students to the range and complexity of both domestic and international terrorism and also to different approaches to the study of terrorism.

CJ 821. Hostage Negotiation (3). A comprehensive examination of theory, research, and practice in hostage negotiation from the perspectives of both law enforcement and the behavioral sciences. Exposes students to the range and complexity of both domestic and international hostage negotiations with the focus not only on theoretical concerns, but also on policy
debates and the substantive ramifications of current events. Explores the need for more rigorous application of behavioral science to the practice of crisis negotiation.

CJ 850. Workshop (1-6). Specialized instruction using variable format in relevant criminal justice subjects. Repeatable for credit up to 6 hours. Restricted to graduate students.

CJ 853. Crime Prevention through Environmental Design (3). Examines the premises and concepts of Crime Prevention through Environmental Design (CPTED), including access control, natural surveillance, territorial reinforcement, and activity support. Emphasizes case studies and field research.

CJ 861. Police Administration (3). A comparative survey and analysis of administrative philosophy, problems, procedures, organizations, and functions of effective agency organization. Considers administrative skills related to operations and personnel.

CJ 881. Internship (3-6). Supervised field placement in a criminal justice agency. For 3 credits, the student works 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 criminal justice. Prerequisite: consent of graduate coordinator and instructor.

CJ 891. Seminar in the Judicial Process (3). Reviews and analyzes the functional and legal theories impacting the administration and operation of the judicial system. Examines actual practice as well as statutory and case law.

CJ 892. Criminal Justice and Community Action (3). An overview of the literature on community organizations and 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. Proseminar in Criminal Justice (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 modern corrections in America. Includes both institutional programs such as prisons and jails, as well as alternatives in community settings, such as diversion, probation, parole, halfway houses, work release centers, and community corrections.

CJ 897. Advanced Research Methods (3). Cross-listed as GERON 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, ETH S 597, GERON 597, or equivalent.

CJ 898. Applied Research Paper (1-3). Original research project under a faculty member's direction. Project requires a written report and defense of that report before a faculty committee. Must be an individual effort, not a group project. Intended to be a major project or capstone activity completed at the end of a student's program of study. Prerequisite: graduate-level research methods class.

CJ 899. Thesis (3-6). Prerequisite: consent of graduate advisor.

Ethnic Studies (ETH S) Ethnic studies is an interdisciplinary program whose primary focus is on developing skills to effectively communicate across cultural boundaries. Also discussed are the unique experiences of various United States ethnic groups within the context of the larger society. This discussion helps the students understand the role of past experiences in influencing current race and ethnic relations. Students from all backgrounds engage in constructive debates and critical thinking and work diligently with dedicated faculty to develop strategies for harmonious living.

Major. The major in ethnic studies consists of at least 30 hours, including ETH S 100 and 210 and two of the following: 200, 240, 250, 260, 275, 280, 330, 340, 350, 360, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990. Students must complete 18 additional elective hours from ethnic studies in consultation with their advisor.

Minor. A minor in ethnic studies consists of at least 12 hours. The courses are to be approved by the student's advisor in the program.

Lower-Division Courses

> ETH S 100. Introduction to Ethnic Studies (3). General education introductory course. Orientation to the nature and scope of ethnic studies. Emphasizes the unique nature of the experience of ethnic groups in this country. Also studies communication and its relationship to behavior in the United States.

> ETH S 210. Fundamentals of Cross-Cultural Communications (3). General education introductory course. Examines the effects of different cultures on language and methods of communicating. Also studies communication and its relationship to behavior.

> ETH S 240. Ethnic Women in America (3). General education further study course. Cross-listed as WOM S 240. An examination of the lives, talents, and contributions made by ethnic women to the American culture. Analyzes the misconceptions about ethnic women that have been generated and perpetuated through the ages. To help people relate better to ethnic women in America and understand their attitudes, sensibilities, and emotions.

> ETH S 251. Special Populations in the Criminal Justice System (3). General education further study course. Cross-listed as CJ 251. Examines the role of women and minorities as employees of the criminal justice system. Explores the role of women, minorities, youths, and older 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: ETH S 100.

> ETH S 260. Prominent Ethnic People in the Making of America (3). General education further study course. Explores, compares, and contrasts ethnic thought and processes for social, economical, and political reform. Delves into the social perceptions of prominent American ethnic people as portrayed in popular movies, biographies, autobiographies, and rhetoric. Prerequisite: ETH S 100.

Upper-Division Courses

ETH S 320. Martin Luther King (3). Studies the life and philosophy of the Rev. Dr. Martin Luther King, Jr. Emphasizes Dr. King's motivation, obstacles he faced, and the impact of his life on the civil rights movement and race relations in the United States.

> ETH S 330. Ethnic America, ca 1500-1924 (3). General education further study course. Cross-listed as HIST S 330. An introduction of the ethnic experience from the 1500s to the 1920s. Themes include the context of emigration, immigration laws, nativism, exclusion, adaptation, and acculturation, community development, and political empowerment.

> ETH 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: ETH S 100, 210, or instructor's consent.

> ETH S 332. The Native American (3). General education further study course. Examines contemporary issues facing the Native American focusing on the Osage tribe. Prerequisites: ETH S 100, 210, or instructor's consent.

> ETH S 333. Issues in the Chicano Community (3). General education further study course. Examines a variety of social, psychological, and political issues affecting Mexican Americans, especially the impact of immigration and the
media's role in the portrayal of Chicanos. Prerequisites: ETH S 100, 210, or instructor's consent.

> ETH S 334. Ethnic America in the Twentieth Century (3). General education further study course. Cross-listed as HIST 333. 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.

> ETH S 350. Workshop (1-4). Focuses on the nature and scope of ethnic studies. Emphasizes the unique nature of the experiences of specific American ethnic groups.

> ETH 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, with particular attention to the global community.

> ETH S 370. The Black Experience in America (3). Examines the status of blacks in American society. Emphasizes the status of blacks in the current and historical social, economic, and political framework of this country. Prerequisites: ETH S 100, 210, or instructor's consent.

ETH 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.

> ETH S 381. Special Topics (1-3). Detailed study of topics in ethnic studies with particular emphasis established according to the instructor's expertise. Prerequisite: ETH S 100.

> ETH S 390. Asian American Contemporary Issues (3). General education further study course. Explores current trends and issues that affect Asian Americans in the U.S. Includes the history of Asian American immigration, education, work, violence, and family.

ETH S 400. The Black Child (3). Examines the historical impact of the black experience on black childhood, growth, and development. Emphasizes the social, educational, and psychological theories, perspectives, and interventions applied to black childrearing. Explores student to good practices at home and school and in urban communities that build a healthy sense of self among children. Focuses on contemporary issues and concerns of parents, professionals, and others assisting black children with the transition into adult life. Prerequisites: ETH S 100, 210, or equivalent, or instructor's consent.

ETH S 402. Computer and Statistical Applications (3). Cross-listed as CJ 402, GERON 402, and P ADM 402. Introduces computer and statistical applications used in public agencies. Emphasizes availability and use of data sources, quantitative decision-making techniques, and interpretation of statistical analyses. Prerequisite: MATH 111 or equivalent.


> ETH S 410. The African American Male (3). General education further study course. Examines the impact of racism on the role and lifestyle of the African American male in American society. Prerequisites: ETH S 100, 210, or instructor's consent.

ETH S 481. Cooperative Education (1-4). Allows the student to examine the impact of minority status in the work environment. Examines interpersonal interactions, communication, and acceptance in and adjustment to the multicultural work environment. Offered Co-req only. Prerequisite: program consent.

ETH S 491. Urban Seminar (3). Explores students to contemporary literature on urban problems in the context of the Wichita community. Instructors and neighborhood leaders familiarize students with the history, demographics, and culture of the neighborhood. Students required to devote 16 hours per month for three months with a neighborhood-based agency. WSU will make a 3-hour tuition (in-state rate) gift to the student upon acceptance to the course. Prerequisites: 2.00 GPA; must be currently enrolled in the department for at least 3 hours in addition to ETH S 491; ETH S 100 or 210 or instructor's permission.

Courses for Graduate/Undergraduate Credit

ETH S 501. Integrity in Public Service (3). Cross-listed as CJ 501, GERON 502, P ADM 501. Explores the student to basic principles of personal and professional integrity and how those principles apply to their daily life as a member of the community and as an employee of a government or social service agency. 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.

> ETH S 512. Aging and Ethnicity (3). Cross-listed as GERON 512. General education further study course. This course is designed to address the needs of students interested in (1) providing services to; (2) exploring the "issues" of; (3) becoming familiar with the rights of; (4) learning the legal procedures for resolving specific problems; and (5) offering practical solutions for the difficulties encountered by ethnic older persons. Prerequisites: ETH S 100, GERON 100, SOC 111, or instructor's consent.

> ETH S 532. Women in Ethnic America (3). General education further study course. Cross-listed as HIST 532 and WOM 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender, and sexuality in women's lives.


ETH S 545. Cross-Cultural Communications Theory (3). An examination of current cross-cultural communication theory and its impact on contemporary cross-cultural issues.

ETH 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. Highlights 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.

ETH S 551. Workshop (3). Specialized instruction using variable format in relevant ethnic studies subjects. Repeatable for credit up to 6 hours.

ETH S 580. Individual Projects (3). Student conducts independent research related to a specific ethnic group. Prerequisite: 50 hours of Wichita State credit or program consent. Repeatable for a total of 6 hours.


ETH S 612. Environmental Law (3). Cross-listed as CJ 621 and P ADM 621. An in-depth analysis of emerging federal, state, and local legislation; judicial decision; and administrative policies in environmental protection. Explores the role 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.


ETH S 651. Dispute Resolution (3). Cross-listed as CJ 651, GERON 651, P ADM 651. Examines a range of topics including causation, typologies, communications, mediation, arbitration, and other dispute resolution techniques. Includes criminal and victim mediation and both inter-group and inter-organization relations and dispute resolution techniques. Analyzes case studies.
ETH S 702. Research Methods (3). Cross-listed as CJ 702, GERON 702, P ADM 702. Acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising, and utilizing both primary and secondary sources of data of the type used in policy planning, and administrative research. Students must complete several short research projects.

ETH S 725. Concepts of Cross-Cultural Communications (3). A critical survey of the concepts of cross-cultural communications. An in-depth examination of the rationale used to evaluate different ethnic groups' language and behavior. Course provides a conceptual understanding of special implications and necessary adaptations of communications to, between, and among diverse ethnic groups in our society.

ETH S 750. Workshop (1-4). Focuses on the nature and scope of ethnic studies. Emphasizes the unique experiences of ethnic groups in this country.

Gerontology (GERON)
The gerontology program offers the Bachelor of Science 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 Fairmont 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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>GERON 100</td>
<td>Introduction to Gerontology</td>
<td>3</td>
</tr>
<tr>
<td>GERON 401</td>
<td>Aging, Work, and Retirement</td>
<td>3</td>
</tr>
<tr>
<td>GERON 404</td>
<td>Psychology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>GERON 501</td>
<td>Field Experience</td>
<td>6</td>
</tr>
<tr>
<td>GERON 513</td>
<td>Sociology of Aging</td>
<td>3</td>
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<tr>
<td>GERON 518</td>
<td>Biology of Aging</td>
<td>3</td>
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<tr>
<td>GERON 560</td>
<td>The Aging Network</td>
<td>3</td>
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Students who have professional work experience in aging may, with faculty approval, substitute 3 hours of elective credit for the second 3 hours of field experience.

Required research courses. Gerontology majors also complete 3 hours in approved statistics courses and 3 hours in an approved research methods course.

Elective courses. Students will enroll in 15 hours of elective course work in gerontology, including at least one course from each of the following four clusters:

Cluster I. Humanities. GERON 514, Anthropology of Aging; GERON 515, Women and Aging; PHIL 327, Philosophy of Health Care.

Cluster II. Behavioral/Social Science. GERON 512, Aging and Ethnicity; GERON 520, Family and Aging; GERON 715, Adult Development and Aging.

Cluster III. Physiology/Health, GERON 527, The Social Consequences of Disability; GERON 550M, Long Term Care and Aging; HS 331, Principles of Dietetics and Nutrition; SOC 538, Medical Sociology.

Cluster IV. Applied Social Science, SC WK 300, Understanding Social Welfare; COMM 325, Speaking in Business and the Professions; MGMT 360, Management and Organizational Behavior; POLS 321, Introduction to Public Administration.

Minor. The minor in gerontology consists of at least 15 hours of gerontology courses, including GERON 100 and 560, and 9 hours selected from the following: GERON 401, 404, 513, and 518.

Note: For other relevant/required courses, see P ADM 710, 725, 745, 775, and 865; NURS 789; ACCT 800; MKT 800; HHS 804, 812, 818, 822, 826, 834, and 858; and PSY 813.

Lower-Division Courses

GERON 100. Introduction to Gerontology (3). A multidisciplinary overview of the field of aging, with attention to cultural, social, psychological, biological, and economic factors which influence the circumstances of the elderly.

GERON 150. Workshop in Gerontology (1-3). Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

Upper-Division Courses

GERON 401. Aging, Work, and Retirement (3). Examines the impact of population aging upon the nation: income and poverty among the elderly, retirement and work choices; the lifetime income stream: Social Security, Medicare, private pensions, and health on the income security of the elderly. Prerequisite: GERON 100.

GERON 402. Computer and Statistical Applications (3). Cross-listed as ETIS 402, ETH S 402, and P ADM 402. Introduces computer and statistical applications used in public agencies. Emphasizes availability and use of data sources, quantitative decision-making techniques, and interpretation of statistical analyses. Prerequisite: MATH 111 or equivalent.


GERON 481. Cooperative Education (1-3). Provides practical field experience under academic supervision, that complements and enhances the student’s academic program. Repeatable up to 6 hours. Offered On/Cr only. Prerequisites: GERON 100 and instructor’s consent.

Courses for Graduate/Undergraduate Credit

GERON 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 6 hours credit. Prerequisite: 12 hours of gerontology credit and instructor’s consent.

GERON 502. Internship in Public Service (3). Cross-listed as CJ 501, ETH S 501, P ADM 501. Exposes the student to basic principles of personal and professional integrity and how these principles apply to their daily life as a member of the community and as an employee of a government or social service agency. Emphasizes 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.

>GERON 512. Aging and Ethnicity (3). Cross-listed as ETH S 512. General education further study course. Addresses the needs of students interested in (1) providing services to; (2) exploring the “issues” of; (3) becoming familiar with the rights of; (4) learning the legal procedures for resolving specific problems of; and (5) offering practical solutions for the difficulties encountered by ethnic older persons. Prerequisites: ETH S 100, GERON 100, SOC 111 or instructor’s consent.

GERON 513. Sociology of Aging (3). Cross-listed as SOC 513. Analysis of the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: SOC 111.

GERON 514. Anthropology of Aging (3). Cross-listed as ANTH 514. An anthropological analysis of the latter stages of the life cycle with historical and cross-cultural perspectives.

GERON 515. Women and Aging (3). Introduces students to issues in aging that are unique to women, 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 518. Biology of Aging (3). Cross-listed as BIOL 518. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, emphasizing humans. Students earning graduate credit produce a term paper based on the technical literature on a
topic chosen in consultation with the instructor. Prerequisite: a basic course in biology that satisfies the general education requirements.

GERON 520. Family and Aging (3). Cross-listed as SOC 520. An analysis of the families and family systems of older people. Emphasizes demographic and historical changes, widowhood, caregiving, and intergenerational relationships as these relate to the family life of older people. Prerequisites: GERON 100, SOC 111, 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 social service professions. Prerequisite: SOC 111.

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 6 hours. Prerequisite: Instructor's consent.

GERON 551. Workshop (3). Specialized instruction using a variable format in relevant gerontology subjects. Repeatable for credit up to 6 hours.

GERON 560. The Aging Network (3). An overview of federal, state, and local programs concerned with planning, managing, or direct delivery of services to the older population. Prerequisite: 9 hours of gerontology credit or instructor's consent.


GERON 651. Dispute Resolution (3). Cross-listed as CJ 651, ETH S 651, and P ADM 651. Examines a range of topics including causation, typologies, communications, mediation, arbitration, and other dispute resolution techniques. Includes criminal and victim mediation and both inter-group and inter-organization relations and dispute resolution techniques. Analyzes case studies.

GERON 663. Economic Insecurity (3). Cross-listed as ECON 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 insecurity. Prerequisites: ECON 202 or instructor's consent, and junior standing.

GERON 708. Grant Proposal Preparation (3). Concerned with the process of research and project proposal development, including response to published guidelines, project planning, and proposal development and submission. Examines grant funding, including types of funding sources and their purposes and methods and processes of proposal evaluation. Students write and evaluate proposals.

GERON 702. Research Methods (3). Cross-listed as CJ 702, ETH S 702, PADM 702. Acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising, and utilizing both primary and secondary sources of data of the type used in policy planning, and administrative research. Students must complete several short research projects.

GERON 715. Adult Development and Aging (3). Explores theory and research related to the development of adults and to the aging process. Utilizing an interactive, interdisciplinary perspective, the course examines the process of change, transition, growth, and development across the adult lifespan. Prerequisites: GERON 708 or 6 hours of gerontology.

GERON 720. Independent Readings in Gerontology (1-3). Directed study in a specialized topic in gerontology. Repeatable up to 6 hours. Prerequisite: 12 hours of gerontology credit and departmental consent.

GERON 750. Workshop in Gerontology (1-3). Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

GERON 781. Cooperative Education (3-6). Provides practical field experience, under academic supervision, that is suitable for graduate credit and complements and enhances the student's academic program. Repeatable up to 6 hours. Prerequisites: 12 hours of gerontology and instructor's consent.

GERON 798. Multidisciplinary Perspectives on Aging (3). Introduction to the advanced study of the process of aging from a multidisciplinary point of view. Not open to students with an undergraduate major or minor in gerontology. Prerequisite: admission to Graduate School.

Courses for Graduate Students Only

GERON 801. Field Research in Gerontology (3). An examination of the methods of participant observation and 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 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 802. Quantitative Methods for Public Sector Professionals (3). Cross-listed as CJ 802, PADM 802. Uses standard microcomputer statistical software and analysis to introduce statistics and quantitative analysis for organizational and policy decision making. Emphasizes the application of statistics and writing with quantitative evidence to real public sector policy questions. Assumes little or no background in statistics and software applications. Prerequisite: either CJ 702, GERON 702, or PADM 702.

GERON 804. Aging Programs and Policies (3). Analyzes and evaluates policies and programs related to aging and old age. Emphasizes the importance of social values and historical context for understanding current policies, programs, and practices. Prerequisite: GERON 798, 12 hours of gerontology, or instructor's consent.

GERON 810. Advanced Gerontology Internship (3-6). Integrates academic gerontology and practical experience through supervised placement of students in an agency or organization engaging in planning, administering, or providing direct services to older people. Internship requires 200 contact hours for each 3 hours of credit. An internship paper also is required. Prerequisites: 12 hours of gerontology credit and instructor's consent prior to registration.

GERON 850. Selected Topics in Gerontology (1-6). Advanced study in a specialized area of gerontology focusing upon professional programs and current issues in the field of aging. Emphasizes knowledge and skills in applied areas of gerontology as they relate to an emerging area of research and application. Repeatable up to 6 hours. Prerequisite: instructor's consent.

GERON 897. Advanced Research Methods (3). Cross-listed as CJ 897, PADM 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 897, ETH S 897, GERON 897, PADM 897, or equivalent.

GERON 898. Applied Research Paper (1-3). Original research project under a faculty member's direction. Project requires a written report and defense of that report before a faculty committee. Must be an individual effort, not a group project. Intended to be a major project or capstone activity completed at the end of a student's program of study. Prerequisite: graduate-level research methods class. Repeatable.

GERON 899. Thesis (1-3). Repeatable, but total credit hours counted toward degree shall not exceed 4 hours.
Computer Science (CS)
The Department of Computer Science offers a broad and flexible curriculum that emphasizes core computer science technologies and their applications.

Students may earn either the Bachelor of Science (BS) or the Bachelor of Arts (BA) degree in computer science. Both degrees provide in-depth preparation for professional work in business, industry, or government. The BS degree also provides a good preparation for graduate study in computer science or related areas.

Major: Bachelor of Science (BS)
1. Computer science: The following computer science courses are required: CS 100, 210, 310, 320, 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.

2. Mathematics: The following required mathematics courses add strength to the major in computer science: MATH 111, MATH 144, and STAT 370.

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 210 (4)
   BIOL 211 (4)
   Any one of the following:
   CHEM 111 (5)
   CHEM 112 (5)
   PHYS 213 (5)
   PHYS 313 (4)

B. PHYS 313 (4)
   PHYS 315 (1)
   PHYS 314 (4)
   PHYS 316 (1)
   ANTHR 101 (3) or BIOL 210 (4)

C. CHEM 111 (5)
   CHEM 112 (5)
   ANTHR 101 (3) or BIOL 210 (4)

D. GEOL 111 (4)
   GEOL 320 (3)
   ANTHR 101 (3) or BIOL 210 (4)
   One additional course chosen from any option

E. PHYS 213 (5)
   PHYS 214 (5)
   ANTHR 101 (3) or BIOL 210 (5)

4. Additional required course for CS majors: PHIL 354, Ethics and Computers, gives students an ethical context for their professional work.

Major: Bachelor of Arts (BA)
1. Computer science: The following required core computer science courses provide a good foundation for the discipline: CS 110, 210, 310, 320, 410, 440, 510, 540.

2. Mathematics: The following required mathematics courses add strength to the major in computer science: MATH 111, MATH 144, and STAT 370.

3. Additional required course for the major: PHIL 354, Ethics and Computers, gives students an ethical context for their professional work. ENGL 210, Composition: Business, Professional, and Technical Writing, improves students' workplace communication.

4. Sequence electives: In addition, students complete 15 hours of sequence electives. These courses can be chosen from fields such as computer science, information systems, software engineering, system analysis, or some application area such as business administration. Other choices are also possible. Students should choose sequence electives in consultation with and with the approval of the departmental academic advisor.

Minor
The minor provides a valuable addition to other majors and can help a student demonstrate ability in the computer science discipline. Students complete a required minimum of 18 hours of computer science courses. These 18 hours must include CS 210, CS 211, CS 300 and two CS courses numbered above 300. CS 350 workshops are not counted toward meeting the minor requirements. Also, students may count no more than one 497 course toward the minor.

Certificates in Computer Science
The computer certificates are designed for job seekers, job changers, and employees needing additional training, or anyone simply needing well-rounded computer experience. Individuals may choose to earn any or all of the certificates. The minimum grade point average for each certificate is 2.00.

Information Technology Certificate: 22 hours minimum
CS 105, An Introduction to Computers and their Applications (3)
MATH 111, College Algebra (or equivalent)
ENGL 101, College English I
CS 211, Problem Solving and Programming in C
CS 440, Computer Organization and Architecture (3)

6 hours of computer science electives chosen in consultation with the departmental academic advisor

Computer Competency Certificate: 5 hours
CS 151L, Windows-98-1 for Beginning Users
CS 151N, Word-2000-1
CS 151P, Excel-2000-1
CS 151S, Access-2000-1
CS 150W, Internet Tools

Advanced Computer Competency Certificate: 5 hours
CS 151M, Windows-98-2
CS 151O, Word-2000-2
CS 151R, Excel-2000-2
CS 151T, Access-2000-2
CS 151K, Advanced Internet Tools

Internet Competency Certificate: 6 hours
CS 150W, Internet Tools
CS 151K, Advanced Internet Tools
CS 350P, Web Design Using Dynamic HTML
CS 151I, Internet Research Skills
CS 151J, Multimedia Literacy

Example Schedule for BS in Computer Science
Students must complete ENGL 100 or ENGL 101 and MATH 111, College Algebra, with a C or better, or have equivalent CLEP or transfer credit before taking any computer science courses toward the BS degree.

Freshman Year
(fewer than 30 credit hours earned)
ENGL 101, College English I.............3
MATH 242, Calculus I................3
First Natural Science course..............3
COMM 111, Public Speaking.............3

Second Year
ENGL 102, College English II...........3
CS 210, Introduction to Computer Science...4
CS 211, Problem Solving and Programming in C...3
MATH 243, Calculus II...............5

Sophomore Year
(30-59 credit hours earned)
CS 300, Data Structures and Algorithms...........4
CS 320, Discrete Structures in Computer Science......4
Second Natural Science course........3-5
American Government (HIST 131 or 132 or POL S 121) (HIST is Humanities; POL S is Social and Behavioral Sciences)...........3

Second Semester
CS 312, Assembly Language and Systems Programming...........3
CS 410, Programming Paradigms........3
STAT 460, Elementary Probability and Mathematical Statistics........3
Third Natural Science course........3-5
Elective...........3

Junior Year
(60-89 credit hours earned)
CS 440, Computer Organization and Architecture...........4
CS 510, Programming Language Concepts...........3
Humanities Introductory course (PHIL 125)...........3

Senior Year
(fewer than 120 credit hours earned)
General elective course.............3
### Example Schedule for BA in Computer Science

#### Freshman Year

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Arts Introductory course</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Introductory course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CS 340, Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>Advanced CS elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities/Fine Arts further study or Issues and Perspectives course (PHIL 354)</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Senior Year</strong></td>
<td>15</td>
</tr>
<tr>
<td>(90 credit hours earned)</td>
<td></td>
</tr>
<tr>
<td>Advanced CS elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Introductory course (literature)</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences Further Study or Issues and Perspectives course</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Sophomore Year

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 300, Data Structures and Algorithms I</td>
<td>4</td>
</tr>
<tr>
<td>CS 320, Discrete Structures in Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>MATH 144, Business Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>5</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td>15</td>
</tr>
<tr>
<td>CS 312, Assembly Language and Systems Programming</td>
<td>3</td>
</tr>
<tr>
<td>STAT 370, Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>5</td>
</tr>
<tr>
<td>Natural Science Introductory course and lab (biology or biological anthropology)</td>
<td>4</td>
</tr>
</tbody>
</table>

#### Junior Year

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 410, Programming Paradigms</td>
<td>3</td>
</tr>
<tr>
<td>CS 440, Computer Organization and Architecture</td>
<td>4</td>
</tr>
<tr>
<td>First Social and Behavioral Sciences course</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts Introductory course</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Introductory Course (PHIL 125)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td>16</td>
</tr>
<tr>
<td>CS 510, Programming Language Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Computer science sequence elective</td>
<td>3</td>
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<tr>
<td>Natural Science Introductory Course (physical)</td>
<td>3</td>
</tr>
<tr>
<td>Second Social and Behavioral Sciences course</td>
<td>3</td>
</tr>
<tr>
<td>Humanities/Fine Arts further study or Issues and Perspectives course (PHIL 354)</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Senior Year

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS sequence elective</td>
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</tr>
<tr>
<td>CS sequence elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Introductory course (literature)</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science further study or Issues and Perspectives course</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences Introductory course (second area)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td>15</td>
</tr>
<tr>
<td>CS 540, Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS sequence elective</td>
<td>3</td>
</tr>
<tr>
<td>CS sequence elective</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 210, Composition: Business, Professional, and Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td><strong>Social and Behavioral Sciences or elective course</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

#### Programming Courses

No credit toward BS Degree in Computer Science

**CS 201. FORTRAN Programming (3)**, **CS 202. C Programming (3)***: Fundamentals of computer programming in FORTRAN and their application to problems. No credit toward the BS in computer science. Prerequisites: ENGL 101 and MATH 111 or 112, or equivalents, with a C or better; or departmental consent.

**CS 203. Visual BASIC Programming (3)**: Fundamentals of computer programming in Visual BASIC and their application to problems. No credit toward the BS in computer science. Prerequisites: ENGL 101 and MATH 111 or 112, or equivalents, with a C or better; or departmental consent.

**CS 205. COBOL Programming (3)**, **CS 206. BASIC Programming (3)**: Fundamentals of computer programming in COBOL and their application to problems. No credit toward the BS in computer science. Prerequisites: ENGL 101 and MATH 111 or 112, or equivalents, with a C or better; or departmental consent.

**CS 207. C Programming (3)**, **CS 208. C++ Programming (3)**: Fundamentals of computer programming in C and their application to problems. No credit toward the BS in computer science. Prerequisites: C or better in a high-level programming language course, or departmental consent.

**CS 217. C++ Programming (3)**: Fundamentals of object-oriented programming in C++ with applications to problems. No credit toward the BS in computer science. Prerequisite: CS 207 or 211 with a C or better or departmental consent.

### Upper-Division Course

**CS 303. Advanced Visual BASIC (3)**: Advanced concepts of Visual BASIC, particularly database topics including ADO (ActiveX Data Objects), Data Report Designer, the SQL query language, creating ActiveX Controls, and object-oriented programming. No credit toward the BS in computer science. Prerequisite: CS 203 with a C or better; or departmental consent.

### Lower-Division Courses

**CS 105. An Introduction to Computers and their Applications (3)**: 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 and spreadsheets. No credit 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.
Upper-Division Courses

>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 equivalents with a C or better in each.

CS 211. Problem Solving and Programming in C (4). 3R; 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 a high-level language. Prerequisites: ENGL 101, MATH 111, 112 or equivalents with a 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 C or better.

CS 312. Assembly Language and Systems Programming (3). 3R; 1L. Fundamentals of assembly language programming. Includes assembler, text editor, arithmetic, machine instructions, macros, code view debugger, and memory segments. Programming assignments reinforce textbook knowledge. Prerequisites: CS 210 and 211, each with a C or better.

CS 320. Discrete Structures in Computer Science (4). Deals with discrete structures relevant to computer science, including propositional and predicate logic, proof techniques, recursion, induction, and analysis of algorithms; sets and combinations; 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 C or better.

CS 350. Workshop (1-5). Short-term courses with special computer science emphasis. Repeatable for credit. No credit toward the major or minor in computer science. Prerequisite: departmental consent.

CS 365. Introduction to Computer Graphics (3). 2R; 1L. Introduces interactive computer graphics, presenting the basic concepts of the field. Includes geometry of computer graphics, graphics primitives, two- and three-dimensional representation, 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 C or better in each.

CS 440. Computer Organization and Architecture (4). 3R; 2L. A study of 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 330 and 312 with a C or better in each.

CS 444. Introduction to Unix (3). Teaches the fundamentals of the Unix operating system. Covers the Unix file system, essential commands and utilities of Unix, and shell programming. Prerequisite: any high-level programming language with a C or better.

CS 465. Oracle Development Environment (3). Oracle is a widely used database management system. Course covers basic relational database concepts; the SQL query language; PL/SQL; object creation, including indexes, tables, triggers, and stored procedures; Oracle Forms; SQL; Loader in the transition of legacy systems; and web-enabled applications. Students work with real-life projects. Prerequisite: CS 211 with a C or better or departmental consent.

CS 479. Cost Effective Programming in Computer Science (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. Prerequisite: departmental consent. Offered Credit 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 6 hours of credit. Graded: SU 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 240 and CS 300 with grades of C or better.

CS 510. Programming Language Concepts (3). Theoretical concepts in the design and use of programming languages, including scope of declarations, storage allocation, subroutines, modules, formal methods for the description of syntax, and semantics. Introduction to the concepts of different styles of languages—imperative languages, functional languages, logic languages, object-oriented languages, etc. Prerequisite: CS 410 with a C or better.

CS 540. Operating Systems (3). 3R; 1L. Covers the fundamental principles of operating systems; process synchronization, scheduling, resource allocation, deadlocks; memory management, file systems. Studies a specific operating system in depth. Programming assignments consist of modifications and enhancements to the operating system studied. Prerequisite: CS 440 with a C or better.

CS 560. Data Structures and Algorithms II (3). 3R; 1L. Design and analysis of algorithms and proof of correctness. Analysis of space-time complexities of various algorithms including sorting algorithms. Hashing, binary search trees, and height balanced trees. Algorithm design techniques including divide and conquer, greedy strategies, and dynamic programming. Elementary graph algorithms. Prerequisites: CS 300, CS 320; and Math 243 and STAT 460 with a C or better in each.

CS 612. Systems Programming (3). 2R; 2L. A study of system software including assemblers, debuggers, microprocessors, link editors, loaders, language translators, and debuggers. Practical experience in building system software through programming laboratory exercises. Prerequisites: CS 300 and 312 with a C or better.

CS 615. Compiler Construction (3). 2R; 2L. First compiler course for students with a strong background in programming languages and sufficient programming experience. Covers over-all design and organization of compilers and interpreters, lexical and syntax analysis, construction of symbol tables, scope analysis, type checking, error recovery, runtime organization, intermediate code and its interpretation, code generation, and optimization. Project-oriented course. Emphasizes practical experience gained through the design and implementation of a simplified but non-trivial compiler for a strongly typed, procedural language. The implementation is carried out in a modern systems programming environment. Prerequisite: CS 510 or equivalent with a C or better.

CS 632. Symbolic Computation with LISP (3). An in-depth study of LISP as a functional programming language with its application to artificial intelligence, polynomial computation, and theorem proving. Complete substantial programming projects in LISP. Prerequisites: Math 243 with a C or better; and CS 300 and CS 320 with a B or better in each; or CS 410 or CS 560 with a C or better; or departmental consent.

CS 644. Advanced Unix Programming (3). Improves skills in C programming under the Unix environment. Covers file I/O, both buffered and unbuffered, working with the Unix file system, concurrent programming with multiple processes, and process control. Also includes the use of signals and concepts of interprocess communication with pipes and FIFOs. Students must have prior knowledge of C language and its use of structures and pointers. Prerequisite: CS 300 with a C or better or instructor's consent.

CS 655. Information Delivery on the Internet (3). Explores the capabilities of providing information on the World Wide Web. Information is typically provided through some sort of Web site that incorporates static text and the dynamic capabilities of the Web. Learn how to create an interactive Web site through the use of CGI and Java programming and how to interconnect a Web site to databases and generate
images on the fly, Java portion covers a wide range of Java language and the Applet interface and utilities. Prerequisite: CS 300 with a C or better or instructor's consent.

CS 655. 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. Prerequisites: CS 300 and 320 with a C or better.

CS 680. Introduction to Software Engineering (3), 2R; 2L An introduction to the body of knowledge, presently available tools and current theories and concerns regarding the process of program development. Studies these topics from different viewpoints, ranging from the individual program statement to a large programming project. Prerequisites: CS 300 and 410, each with a C or better.

CS 684. Applications Systems Analysis (3). A study of the methods for analyzing business systems problems and other large-scale applications of the computer. At the crossroads of computer technology, management science and human relations, systems analysis is the cornerstone of the education of the well-trained computer applications analyst. Includes systems design, cost/benefit analysis, data base design, distributed processing, project management, and documentation. Prerequisite: CS 300 with a C or better.

CS 690. Information Systems Engineering (3). Study of information systems design techniques, issues of systems evolution, project management, engineering design, various views of information systems and software, and formal design approaches. Covers structured analysis and design approach, object-oriented approach, software design, database design, rule modeling, user interface design, performance evaluation issues relative to software design, systems evolution aspects from a software maintenance perspective, project management techniques, and information systems engineering. Prerequisite: CS 300 with a C or better.

CS 697. Selected Topics (1-3). Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

CS 720. Theoretical Foundations of Computer Science (3). Provides an advanced level introduction to the theoretical bases of computer science. Computer science theory includes the various models of finite state machines; both deterministic and nondeterministic, and concepts of decidability, computability, and formal language theory. Prerequisites: CS 520 or equivalent with a C or better.

CS 742. Computer Communication Networks (3), 2R; 2L. Introduction to network programming for the Internet environment including the basic concepts of TCP/IP, client/server paradigm, programming of clients, and various types of servers, remote procedure calls, concurrency management, and interconnection techniques. Emphasizes the design principles that underlie implementation of practical applications. Prerequisite: CS 300 with a C or better or departmental consent.

CS 750. Workshop in Computer Science (1-5). Short-term courses with special focus on introducing computer science concepts.Repeatable for credit. Prerequisite: departmental consent.

CS 771. Artificial Intelligence (3). Heuristic versus algorithmic methods, principles of heuristic 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, explanation facilities, metaphors, and dealing with uncertainty. Introduces basics of a production system language. Prerequisite: CS 410 with a 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 On/No only. Prerequisites: departmental consent and graduate GPA of 3.00 or above.

CS 798. Individual Projects (1-3). Allows beginning graduate students and mature undergraduate students to pursue individual projects of current interest in computer science. Graded S/U only. Prerequisite: departmental consent.

Courses for Graduate Students Only


CS 817. Advanced Java Technology (3). Covers advanced features of the Java language, the underlying implementation technology (Java Virtual Machine), and extensions of the Java technology. Includes concurrent object-oriented programming and Java core reflection, and extensions of the Java technology providing parametric polymorphism and persistence. Includes challenging programming projects. Time also devoted to recent Java research and development results. Prerequisites: CS 510 with a B or better.

CS 821. Analysis of Algorithms (3). Dealing with advanced topics in the design and analysis of algorithms, including sorting, networking, algorithms for parallel computers, Strassen's algorithm for matrix multiplication, polynomial multiplication and the FFT, number theoretic algorithms (gcd computation), and hard problems and intractability. Prerequisites: CS 560 with a B or better; CS 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 for lists and trees, and algorithms for selection, merging, sorting, searching, as well as algorithms for graph problems. Prerequisite: CS 560 with a B or better.

CS 841. Advanced Computer Architecture (3). A study of advanced topics in computer architecture like parallel processing, stack architectures, computer performance evaluation, and reliability of computing systems. Studies architectures of typical systems belonging to the IBM, CDC, and Burroughs families of computers. Prerequisite: CS 540.


CS 843. Distributed Computing Systems (3). A study of hardware and software features of on-line multiple computer systems emphasizing network design and telecommunication. Includes distributed data bases, interprocessor communication, and centralization versus distribution. Also includes study of the use of microcomputers in large-scale 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 867. Object-Oriented Databases (3). Covers object-oriented technology as it applies to databases and persistent object systems. Focuses on the advantages of the object-oriented database technology in complex application areas. Java database and persistent technologies and the associated tools...
have an important role here, along with the related industrial standards, such as ODMG. Provides design and implementation experience using a challenging application. Devoted to recent research and development results. Prerequisites: CS 665 and an object-oriented programming language course such as CS 217 or 350L or instructor's consent.

CS 872. Machine Learning and Discovery (3). An advanced study of computer programs that learn, improve performance, and make discoveries. Includes objectives, methods, and research paradigms for such systems, a survey of existing methods and applications, including the most recent developments; theoretical principles for learning and discovery systems; computational theories of learning processes and cognitive models of human learning; concept and theory formation; and use of analogy in learning. Includes participation in a group project such as developing a computer learning system. Prerequisites: CS 771 or 776.

CS 873. Computer Vision (3). An introduction to computer vision, a rapidly growing subfield of artificial intelligence. The basic topic is the understanding or description of images by a computer or robot. Covers two-dimensional Fourier analysis, scene matching and understanding, texture, motion, shape recognition, relational image structure, and human perception. Prerequisite: CS 771 or instructor's consent.

CS 874. Simulation and Modeling (3). An up-to-date treatment of important aspects of simulation modeling, including data collection, input and output data analysis, modeling principles, simulation with general-purpose programming languages, and special-purpose simulation languages. Emphasizes theory, design, and implementation of modeling languages. Prerequisites: CS 300 and STAT 460 with a C or better in each; or instructor's consent.

CS 881. Software Specification and Design (3). A detailed presentation of the techniques and tools available for the specification of software requirements and their translation into a design. Includes formal specification and design methods such as 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. Includes the phases and activities involved in building a project, the skills and tools required for estimating and scheduling, and the responsibilities of the individuals involved. Prerequisite: CS 680.

CS 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 topic(s) to be selected with the approval of their graduate advisors. Repeatable up to 4 credit hours. Graded SU 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; it can be job-related. Students must write a report on the project and pass an oral final examination by an ad hoc faculty committee headed by the project advisor. Graded SU only. Prerequisite: departmental consent.

CS 892. Thesis (1-6). May be repeated for up to 6 hours of credit. Graded SU only. Prerequisite: departmental consent.

CS 893. Individual Reading (1-5). Graded SU only. Prerequisite: departmental consent.

CS 896. Special Topics (2-3). Topics of current interest to advanced students of computer science. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Criminal Justice

See Community Affairs, School of.

Economics

The economics major in Fairmount College 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 242 is required. Students who plan to major in economics should consult with the undergraduate advisor in the Department of Economics in Clinton Hall. Students in this major or minor must achieve a minimum 2.250 GPA. The following courses are required:

Course

MATH 144, Business Calculus or MATH 242, Calculus I

ECON 201 and 202, Principles of Economics I and II

ECON 231, Introductory Business Statistics

ECON 301, Intermediate Macroeconomics

ECON 302, Intermediate Microeconomics

ECON 340, Money and Banking

Upper-division electives

ECON 201 and 202 may be taken as part of the Fairmount College general education requirements.

Minor. A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of 15 hours exclusive of ECON 101, 102, and 231, ECON 201 and 202, or the equivalents, must be included.

Teaching of Economics. Because Kansas Department of Education regulations governing the licensure of secondary economics teachers are very specific and contain requirements beyond the economics major, students planning to be teachers of economics should contact a secondary social studies advisor in the College of Education for program planning.

Courses. Economics courses are listed in the Barton School of Business section of the Catalog.

English Language and Literature (ENGL)

English Language and Literature

The English department offers a broad and flexible program of courses that are central to a liberal arts education while offering students the opportunity for personal enrichment and a variety of career possibilities. The department offers degree programs in creative writing, literature, and English teaching, as well as a range of courses in linguistics. Students who combine an English major with substantial work in other disciplines will find the knowledge and communications skills acquired in their work in English a valuable asset as they seek entrance into a wide range of fields that include communications, education, government, law, and even business.

Major. A major consists of 33 hours, 3 of which may, with departmental consent, be taken in a cognate subject (such as foreign literature, theatre, and so forth) offered in a course by another department. The course work must be distributed as follows:

I. Basic Requirements (21 hours)

ENGL 272; 310; 320 or 330; 360; 361; 362; 274 or 313


Minor. A minor consists of 15 hours and requires ENGL 310 and either 320 or 330. Of the remaining 9 hours, at least 6 must be of upper-division work. ENGL 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 ENGL 101 and 102 and thereafter complete 33 hours of course work in English, including the following courses:

I. Basic Requirements (12 hours)

ENGL 272; 310; 320 or 330; 274 or 315

II. Major Requirements (3 hours)

ENGL 285 (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 ENGL 301, 303, 401, 403, 517, 518, 565, 586, (except for ENGL 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 coursework including ENGL 285 and 9 hours of skill courses listed above, plus 3 hours of ENGL 310 or 320 or 330.

Teaching

Students must file a declaration of English teaching major with an assigned English-education advisor at the time they apply to the teacher education program. A 2.500 grade point average in English is required of all majors applying for admission to the professional semester of student teaching in secondary school English.

Major for Students Planning to Teach English in Secondary Schools: The teaching major in either Fairmont College or the College of Education is 51 hours distributed as follows:

I. Language (6 hours)
   ENGL 315 and one of the following: 316, 317, 667 or 224

II. Composition (6 hours)
   ENGL 680 and one of the following: 210, 685 or any course in the creative writing sequence

III. Literature (27 hours)
   A. Foundations: ENGL 272; 310; 320 or 330; and 340
   B. British and American literature:
      ENGL 362 or 303; 252 or 304; 360 or 361
   C. Cross-cultural language/literature:
      ENGL 342, 345, 365 or 672
   D. Literature for adolescents: CI 516
   IV. Other (6 hours)
      A. THEA 143 and 221
      V. Electives (6 hours)
         Six hours in English or in certifiable minor

Composition

Noncredit Courses

ENGL 011. Syntax, Logic and Organization (3). Offered CR/NC 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/NC 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/NC 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 013.

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 nonfiction 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 after ENGL 101 in the freshman year. Prerequisite: ENGL 101, with a C or better.

ENGL 103. Reading, Thinking, and Writing (3). A third semester of English composition. Writing assignments based on literature read during the semester. Reading material varies with instructor, but generally follows a specific theme. Prerequisites: ENGL 101 and 102.

ENGL 150. Workshop (1-4). Repeatable for credit. Material varies according to the needs of students.

ENGL 210. Composition: Business, Professional, and Technical Writing (3). Provides instruction and practice in writing the kinds of letters, memos, instructions, and reports required in the professional world of business and industry. Emphasizes both formats and techniques necessary for effective and persuasive professional communication. Prerequisites: ENGL 101 and 102 or instructor's consent.

ENGL 481. Cooperative Education (1-3). Provides the student with practical experience, under academic supervision, that complements and enhances the student's academic program. Individual programs must be formulated in consultation with appropriate faculty sponsors and approved by departmental consent. Offered CR/NC only.

Courses for Graduate/Undergraduate Credit

ENGL 581. Composition Practicum (1). Required for all teaching assistants in English. Does not count for credit toward the MA or MFA degree. Focuses on techniques and strategies for teaching composition. Each participant enrolls in the syllabus group appropriate to the composition course he or she teaches. 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 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 685. Advanced Composition (3). Explores the relationships among contemporary issues, problem-solving, and communication. First objective: engage students in interdisciplinary inquiry into some aspect of social policy, inquiry which asks students to apply the analytical approaches of their major fields to current issues of broad, general interest. Second objective: 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 285. 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 285 with a 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 285 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. Prerequisite: ENGL 301.

ENGL 403. Poetry Workshop (3). Advanced course. Manuscripts will be critiqued to develop skill in writing, rewriting,
Courses for Graduate/Undergraduate Credit

ENGL 517-518. Playwriting I and II (3-3). Cross-listed as THTR 517 and 518. The writing of scripts to perform. Emphasizes both verbal and visual aspects of playwriting. If possible, the scripts are performed. Not repeatable for credit. Prerequisite: instructor's consent.

ENGL 585. Writer's Tutorial: Prose Fiction (3). Tutorial work in creative writing in prose fiction with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 586. Writer's Tutorial: Poetry (3). Tutorial work in creative writing in poetry with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing director.

Courses for Graduate Students Only

ENGL 501. Creative Writing: Fiction (3). Advanced work in creative writing. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 503. Creative Writing: Nonfiction (3). Advanced work in creative nonfiction: forms of nonfiction requiring a distinctive voice and demanding a formal strategy generally associated with fiction. Prerequisite: consent of creative writing director.

ENGL 505. Creative Writing: Poetry (3). Advanced work in the writing of poetry. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 672. Studies in Language Variety (3). Cross-listed as LING 672. Introduces the study of language variety with special attention to regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite: ENGL 315 or departmental consent.


Literature

Lower-Division Courses

>ENGL 220. The Literary Heritage: English Masterpieces (3). General education introductory course. Introduces the lower-division general student selections from the English masterpieces that constitute the literary heritage.

>ENGL 230. Exploring Literature (3). General education introductory course. Perceptive reading of literature in its major traditional periods and in its various genres (especially fiction, drama, and poetry). Deepens the appreciation and understanding of literature: what it is, what it does, and how it does it. Readings are selected with careful attention to the needs and interests of non-English majors and a cultural rather than a technical approach is employed.

>ENGL 232. Themes in American Literature (3). General education introductory course. Instruction in perceptive reading through the study of representative works in American fiction, poetry, drama, and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Multimedia presentations (films, readings, and recordings), which are closely correlated to the representative works being studied, amplify the scope and range of literature per se.

>ENGL 254. Modern British Literature (3). General education further study course. A survey of important works by major British writers since World War I.

>ENGL 275. Studies in Popular Literature (3). General education further study course. A study of the literary forms that first appear in popular and critical literature and reappear in the English literary tradition. Readings from mythology, the classics, and selected books of the Bible.

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 535. Literary Images of Women: Diverse Voices (3). Cross-listed as WOM 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 WM 536. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored and specific authors studied vary in different semesters.

ENGL 537. Contemporary Women's Drama (3). Cross-listed as WM 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 580. Special Studies (1-3). Topic selected and announced by the individual instructor. Repeatable for credit. Prerequisite: departmental consent.

ENGL 610. Old English (3). Cross-listed as 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 Criseyde, and selected lyric, with a few works by other late 14th century authors and some critical and historical studies. Focuses on close reading of Chaucer in Middle English. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 681. Editing American English (3). Students master the rules and conventions of grammar, sentence structure, spelling, punctuation, usage, and mechanics, and learn how to apply them while they are revising and editing a written text. Students work as tutors in the Writing Center to learn and understand the practical application of editing rules. Includes instruction in the conventions of editing Standard English (also known as Edited American English) and in methods of effective tutoring. Prerequisites: ENGL 101 and 102.

ENGL 750. Workshop (2-4). Repeatable for credit.

Courses for Graduate Students Only

ENGL 800. Introduction to Graduate Study in English (3). Prepares students to perform effectively in graduate classes in English. Covers: (1) basic bibliographical tools; (2) terminology both technical and historical; (3) various approaches to the study of literature, such as intrinsic analysis of a literary work, the relationships of biography to literary study, and the relevance of other disciplines, such as psychology, to literature; and (4) the writing of interpretative and research essays. Maintains a balance between criticism and research throughout the semester.

ENGL 817. Graduate Readings in 20th Century British Literature (3). Yeats, Joyce, Lawrence, Auden, Spender, and their contemporaries.

ENGL 818. Graduate Readings in American Literature I (3). From the beginnings to 1870 emphasizing Emerson, Thoreau, Hawthorne, Melville, Whitman and Dickinson.

ENGL 822. Graduate Readings in American Literature II (3). From 1870 to 1920 emphasizing James, Twain, Crane, Dreiser, Robinson and Frost.

ENGL 823. Graduate Readings in American Literature III (3). From 1920 to 1970, including Eliot, Stevens, Hemingway, Faulkner, and their contemporaries.

ENGL 825. Theories of Rhetoric: Classical (3). An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Emphasizes Isocrates, Plato, Aristotle, Quintilian, Cicero and Longinus.

ENGL 826. Theories of Rhetoric: Renaissance to Early Modern (3). Cross-listed as COMM 831. 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, Mendelssohn, Bulver, Sheridan, Steele, Rush, John Quincy Adams, Blair, Campbell, and Whitelaw.

ENGL 830. Graduate Studies in Drama (3). Selected topics in the history and nature of dramatic literature.

ENGL 832. Graduate Studies in Fiction (3). Selected topics in the development of the form and content of prose fiction.

ENGL 834. Graduate Studies in Poetry (3). Selected topics in forms, techniques, and history of poetry.

ENGL 840. Graduate Studies in Criticism (3). Selected topics in the theory and practice for literary criticism.

ENGL 841. Graduate Studies in Contemporary Literature (3). Covers selected topics in the literature of the last quarter-century, including literature in translation. Deals with a broad range of authors and genres. Repeatable for credit with change of content and departmental consent.

ENGL 845. Graduate Studies in a Major Author (3). Careful study of the works of a major author with readings in secondary sources; reports, discussions, and papers. Repeatable for credit with change of content.

ENGL 855. Directed Reading (2-3). For graduate students who want to pursue special research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

ENGL 860. Graduate Seminar in Special Topics (1-3). Intensive study of selected texts, writers, or literary problems. Seminar discussions, reports, and research projects. Repeatable for credit with departmental consent.

ENGL 870. Master's Essay (2-3).

Environmental Science

WSU offers an interdisciplinary Master of Science degree program in environmental science. This graduate program educates scientists in a multidisciplinary approach (involving primarily biology, chemistry, and geology) rather than from the perspective of a single discipline. For more information, consult the WSU Graduate Bulletin.

In preparation for entry to the graduate program in environmental sciences, students may complete an undergraduate program using one of a variety of degree designs. See the LAS Advising Center for assistance.

Ethnic Studies

See Community Affairs, School of.

Film Studies

The film studies minor at Wichita State University is designed to provide students interested in film and the visual media with a focused sense of the possibilities, limitations, and actual accomplishments of the visual media as they have, in fact, developed. The minor also offers opportunities to study film as an art form and to gain experience in media production. The film studies minor consists of 18 semester hours from the courses listed below, selected with the approval of the Coordinator of Film Studies.

Wichita State University does not at this time offer a film studies major. However, the minor can prove useful to students majoring in literature, journalism, and speech; it also can appeal to those in fields where some knowledge of mass communication as a cultural phenomenon is desirable, including sociology, history, anthropology, psychology, education, administration, and American studies.

Students seeking more information about the film studies minor should contact Dr. Christopher Brooks in the Department of English.

Courses approved for the film studies minor are:

HIST 106, The Western Civilization in Film
COMM 220, Introduction to Film Studies
ART 231, Basic Photography (Motion Picture)
ENGL 307, Narrative in Literature and Film
COMM 320, Cinematography
ART 430, Television for Graphic Design
COMM 304, Studio Video Production
COMM 604, Field Video Production
ENGL 308, Critical Studies in Film  
WOM S 480A, Hollywood Melodrama: The Women's Film  
WOM S 523, Feminist Film Criticism  
ANTHR 150, American Culture in Film  
POL S 390V, Topics in Film (film topic varies)  
HIST 499, The Holocaust in Film*  
SPAN 515, Classic Spanish Films*  

“Offered only occasionally.

French  
See Modern and Classical Languages and Literatures.

Geography (GEOG)  
Only courses 201 and 235 are intended as physical science offerings. All other geography courses are intended as social science offerings.

Geography Minor. A minor in geography consists of at least 15 hours including GEOG 125 or 201 or the equivalent.

Lower-Division Courses  

> GEOG 150. Workshop in Geography (1-4). Short-term courses focusing on geographical problems. Prerequisite: instructor's consent.

> GEOG 201. Physical Geography (3). 2R; 3L. General education introductory course (natural science). Lab fee. Emphasizes the physical basis of geography, including climate, terrain, soils, landforms, and the seas; economic resources; cartographic elements; introduction to regional studies. Field trips are required at the option of the instructor.

> GEOG 210. Introduction to World Geography (3). General education introductory course (social science). A general survey of world geography including an analysis of the physical, political, economic, historical, and cultural geography of the world’s 11 regions.

> GEOG 235. Meteorology (3). 2R; 2L. General education further study course (natural science). Lab fee. An introductory study of the atmosphere and its properties and the various phenomena of weather. Includes a brief survey of important principles of physical, dynamic, synoptic, and applied meteorology. Does not apply toward a major or minor in geography. Requires field trips at the option of the instructor. Prerequisite: instructor's consent.

> GEOG 262. Cultural Geography (3). An introduction to cultural geography emphasizing the geographical distributions of people, the spatial aspects of their cultural activities, the sources and techniques of their livelihood, and the relationships to his environment.

Upper-Division Course  

> GEOG 320. 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 costs 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 210.

> 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 580. Economic Geography (3). A geographical analysis of the distribution and utilization of basic world resources.

> GEOG 695. Special Studies in Geography (1-3). 3R or 2R; 3L. Lab fee (Lab is included when appropriate.) Systematic study in a selected area of topical interest in geography. Course given on demand; repeatable for credit when content differs. May require field trips. Prerequisite: junior standing.

Geology (GEOI)  

Geology is the comprehensive study of the solid Earth, atmosphere, ocean, other planets, and the fossil record of life. It also encompasses the study of the effects of human activities on the Earth’s environment and the availability and extraction of natural resources. Earth science is interdisciplinary, and the study of geology frequently employs tools, concepts, and theories from mathematics and the other natural sciences, including chemistry, biology, and physics. Geologists work to solve problems of local and global perspectives related to all Earth systems. The study of minerals, rocks, and fossils continues to be an essential and exciting component of a geologist's training.

Through the geology program at Wichita State, students may earn either a Bachelor of Arts (BA) or Bachelor of Science (BS) degree. The program also offers a minor in geology and courses designed to fulfill general education requirements in the natural sciences.

Candidates for either the BA or BS degree are required to contribute examples of their course work and other scholarly achievements to the department’s assessment program. Students also are required to take at least one integrating capstone course, preferably during their senior year. Capstone courses are identified below.

The Department of Geology also offers a Master of Science (MS) degree in geology and, in conjunction with the departments of biological sciences and chemistry, an MS degree in environmental science. For more information about the graduate programs, see the Graduate Bulletin.

Through the generosity of its alumni and industry supporters, the geology department proudly awards more than $20,000 annually in scholarships and awards to qualified undergraduate majors and graduate students. Contact the geology department office for a complete listing of scholarship amounts, qualifications, and application procedures.

Active student associations for geology majors and other students interested in geology include the Geology Club, the student chapter of the American Association of Petroleum Geologists (AAPG), and Sigma Gamma Epsilon (SGE), the national geology honorary society. These clubs co-sponsor such extracurricular activities as field trips, visiting lecturers, short courses, attendance at academic conferences, and social gatherings.

Geology Major—BA. The BA degree program, providing flexible, broad training in the Earth sciences, is for students who wish to combine the geology major with teacher preparation (K-12), environmental studies, land-use planning, science journalism, environmental law, natural resource management/business, or similar majors. The BA degree also is suited to students discovering geology as an interest later in their college of life experience. This program represents a minimum proficiency. Students are strongly advised to elect additional courses in geology and supporting sciences if they are interested in pursuing graduate studies in the geosciences after earning the BA.

A major with the BA requires a minimum of 30 hours in geology, including:

1. Required core courses—24 hours
   GEOI 102, Earth Science and the Environment, with lab (4) or
   GEOI 111, General Geology (4)
   GEOI 302, Earth and Space Sciences (3)
   GEOI 312, Historical Geology (4)
   GEOI 250, Mineralogy and Optical Mineralogy (3)
   GEOI 526, Sedimentary Geology (3)
   GEOI 544, Structural Geology (3)
   One of these capstone courses:
   GEOI 621, Geochemical Cycling (3)
   GEOI 640, Field Geology (6)
   GEOI 650, Geohydroslogy (3)
   GEOI 678, Geologic Perspectives on Climatic Change (3)
   GEOI 681, Computer Applications in Geology (3)

2. An additional 6 hours of electives chosen from the Catalog listings for geology to match the student's career interests and in consultation with an advisor from the geology department.

3. Required supporting sciences:
   STAT 370, Elementary Statistics (3)
MATH 112, Precalculus Mathematics (5) or MATH 123, College Trigonometry (3) CHEM 103, General Chemistry (5) or Chem 111, General Chemistry (5) PHYS 111, Introductory Physics (3) (if the student did not have high school physics)

It is recommended that these courses be taken prior to, or at least concurrently with, the required core courses in geology listed above. Students interested in pursuing graduate degrees in environmental science should also consider taking PHYS 213 and 214, BIOL 210 and 418, CHEM 111 and 112, and MATH 242 or earning a BS degree in geology. CS 105 is recommended for students with little experience with computers.

Geology Major—BS. The BS degree program, providing comprehensive training in geology and allied natural sciences, prepares graduates for professional work in industry or government, as well as for graduate study in any field of geoscience or environmental science. This program prepares students for the examination for the professional geologist license. Students who expect to earn the BS in geology within a minimum amount of time (four years as a full-time student) should have completed geometry, trigonometry, two years of algebra, and chemistry in high school.

A major with the BS requires a minimum of 45 hours in geology, including:

1. Required core courses—35 hours
   - GEOL 111, General Geology (4)
   - GEOL 312, Historical Geology (4)
   - GEOL 320, Mineralogy (3)
   - GEOL 324, Petrology and Petrography (3)
   - GEOL 326, Sedimentary Geology (3)
   - GEOL 540, Field Mapping Methods (2)
   - GEOL 544, Structural Geology (3)
   - GEOL 552, Physical Stratigraphy (3)
   - GEOL 570, Paleontology (3)
   - Required capstone course: GEOL 640, Field Geology (6)

2. An additional 11 hours of upper-division electives chosen from the Catalog listings for geology to match the student's career interests and in consultation with an advisor from the geology department. An additional elective capstone course is GEOL 650, Geodynamics (5).

3. Required supporting sciences:
   - MATH 242 and 243, Calculus I and II (10)
   - STAT 370, Elementary Statistics (3)
   - CHEM 111 and 112, General and Inorganic Chemistry (10)
   - PHYS 213 and 214, General College Physics I and II (10) or PHYS 313 and 314, University Physics I and II (8)

It is recommended that these courses be taken prior to, or at least concurrently with, the required core courses in geology listed above. Students interested in pursuing graduate degrees in environmental science should also consider taking BIOL 210 and 418. CS 105 is recommended for students with little experience with computers.

Minor. A minor in geology consists of at least 15 hours of geology including GEOL 102 (with lab for 4 credit hours) or GEOL 111. It is suggested that students minoring in geology consult with the department in selecting courses that would be most appropriate to their major field of study.

Lower-Division Courses

- GEOL 102, Earth Science and the Environment (3; 3R, or 4; 3R; 2L). General education introductory course. Studies the processes that shape the earth’s physical environment: the impact of human activities on modifying the environment; use and abuse of natural resources including soil, water, and air; waste disposal, and natural environmental hazards. GEOL 102 (4) 3R, 2L, is recommended for students desiring general education credit for a natural science laboratory experience. Credit not allowed in both GEOL 102 and 111.

- GEOL 105, Natural Disasters (3). Introduces both natural (intrinsic and extrinsic) and human-induced disasters and hazards affecting earth’s population. Includes (a) natural disasters intrinsic to geologic processes on earth—floods, fires, volcanic activity, shoreline erosion, landslides, earthquakes, and severe weather; (b) natural disasters extrinsic to earth—meteors and cometary impacts, evidence of past impacts and their effects on ancient life and environment, and the fossil record of mass extinctions; and (c) human-induced natural disasters such as global warming and its predictable effects.

- GEOL 111, 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’s laboratory. Credit not allowed in both GEOL 102 and 111.

- GEOL 235, Meteorology (3; 2R; 2L). General education further study course (science). Lab fee. An introductory study of the atmosphere and its properties and the various phenomena of weather. Includes a brief survey of important principles of physical, dynamic, synoptic, and applied meteorology. Does not apply toward the major or minor in geology. Requires field trips at the option of the instructor. Prerequisite: Instructor’s consent.

Upper-Division Courses

- GEOL 300, Energy, Resources, and Environment (3). General education issues and perspectives course. Studies the dependence of human beings on the earth’s metallic, non-metal, industrial mineral, energy, soil, and water resources; the methods for their discovery and recovery; their uses; and the influence of economics, politics, and social institutions in determining how exploitation affects the natural environment and our standard of living. Prerequisite: any introductory course in biology, chemistry, geology, or physics.

- GEOL 302, Earth and Space Sciences (3; 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; law of the sea, and the effect of people on the marine environment.

- GEOL 312, Historical Geology (3). General education further study course. Stratigraphic aspects and systematic review of earth history and its preservation in the rock record using field evidence for sequences of physical, biological, and tectonic events in selected areas. Also includes the origin and evolution of life. Field trips required. Prerequisite: GEOL 102 or 111 or 302 or equivalent.

- GEOL 320, Mineralogy (3). 1R; 6L. Elementary crystallography. A study of the crystal, composition, and structure of the rock-forming minerals with laboratory emphasis on recognition of their typical forms, occurrences, associations, and identification. May require field trips. Prerequisite: GEOL 111.

- GEOL 324, Petrology and Petrography (5; 1R; 6L). The origin, distribution, occurrence, description, and classifications of igneous, metamorphic, and sedimentary rocks with laboratory emphasis on their hand-sample and optical (thin-section petrographic) recognition. Prerequisite: GEOL 320.

- GEOL 410, Honors in Geology (3). Senior thesis for departmental honors. The independent study project on a topic of the student’s choice must be original research or creative work. Repeatable to a maximum of 6 credit hours. Prerequisite: acceptance by the Emory Lindquist Honors Program and departmental approval.

- GEOL 430, Field Studies in Geology (2-6). Off-campus, systematic field study in a selected area of geologic significance. Course is given upon demand and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging, and board costs are charged.

Courses for Graduate/Undergraduate Credit

- GEOL 526, Sedimentary Geology (3). 2R; 3L. Origin, classification, primary structures, and physicochemical processes controlling deposition of sedimentary rocks. Reviews diagenesis of carbonate rocks and evaporites. Includes a survey of modern and ancient sedimentary depositional environments and petrographic study of sedimentary rocks in thin sections. May require field trips. Prerequisite: GEOL 102 (with lab) or 111.

- GEOL 540, Field Mapping Methods (2). 6L. Field mapping methods with special reference to use of level, compass, barometer, altimeter, and airphotos. Field trips required. Prerequisite: GEOL 102 (with lab) or 111 or GEOL /EEOG 201.

- 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 lab
GEOL 602. Laboratory Methods in Geology (1). Methods of data collection and analysis of geologic samples; special instruction in the use of (a) scanning electron microscope; (b) X-ray diffractometry; (c) atomic absorption spectrophotometry; (d) cathodoluminescence petrography; and (e) other instrumentation. Repeatable for credit. Prerequisite: GEOL 312 or instructor’s consent.

GEOL 621. Geochemical Cycling (3). Capstone course. The geochemistry of earth materials and the important geochemical processes: cycles operating on and within the atmosphere, hydrosphere, and lithosphere through time; anthropogenic effects on these cycles today. Prerequisites: GEOL 102 (with lab) or GEOL 111 and CHEM 111; or instructor’s consent.

GEOL 630. Field Studies in Geology (2-6). (A) Geology of Kansas (1-3); (B) Geology and Natural History of Tropical Marine Environments (3). Off-campus, systematic field study in a selected area of geographical significance. Course given upon demand; repeatable for credit when locality and/or content differ. Where appropriate, travel, lodging, and board costs are charged. Prerequisite: instructor’s consent.

GEOL 640. Field Geology (6). Capstone course. Field investigation of sedimentary, igneous, and metamorphic rocks and their structures. Includes the application of mapping methods in solving geologic problems. Held at an off-campus field camp for five weeks (including weekends). Preparation of geologic columns, sections, maps, and an accompanying report are due on campus during the sixth week. Prerequisite: GEOL 324, 540, 544, and 552.

GEOL 650. Geohydrology (3). 2R; 3L. Capstone course. The hydrologic cycle, physical, and chemical properties of water; fluid flow through permeable media; exploration for and evaluation of groundwater: water quality and pollution; and water law. Prerequisites: GEOL 552, MATH 242 and 243; or instructor’s consent.

GEOL 657. Earth Science Instructional Methods (3). Practice in teaching an introductory course in the earth sciences. Developing and presenting the latest scientific laboratory techniques and evaluating their effectiveness. May be taken more than once if content and objectives differ. Prerequisite: senior standing and department chairperson’s permission.

GEOL 678. Geologic Perspectives on Climatic Change (3). Capstone course. Modern climate and climatic changes and analysis of climatic deterioration; systematic study of geologic evidence of climate change through time. Emphasizes theoretical causes; feedback mechanisms; and recognition of effects on climatic perturbations in the rock record. Prerequisites: GEOL 312 and 526.

GEOL 680. Geologic Resources and the Environment (3). 2R; 3L. Occurrence and origin of metallic and nonmetallic economic mineral deposits; laboratory examination of ores and industrial minerals. Occurrence and supply, regeneration, and future demand for water and soil resources; and fossil and nuclear fuels. Studies environmental aspects of resource exploitation and use, generation and disposal of waste, environmental hazards, and reclamation. May require field trips. Prerequisite: GEOL 324.

GEOL 681. Computer Applications in Geology (3). Capstone course. Applications of computers in the solution and presentation of geologic and affiliated studies, using available software. Lectures and practical work: (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; and (f) methods of presentation of geologic data utilizing computer graphics programs. Prerequisites: GEOL 526 and 552, STAT 570; or senior standing.

GEOL 682. Petroleum Geology (3). 2R; 3L. The origin, migration, and accumulation of oil and gas in the earth’s crust; reservoir traps in common hydrocarbon fields, origin and types of porosity systems, and distribution of world petroleum supplies. Introduces subsurface study techniques. May require field trips. Prerequisites: GEOL 526 and 552.

GEOL 684. Methods of Subsurface Analysis (2). 1R; 3L. Methods of remotely logging and describing the geologic occurrence of subsurface strata; characterization of subsurface strata, including laboratory analysis of recovered subsurface samples; application to petroleum geology, mineral resource evaluation, and environmental geology. Prerequisites: GEOL 312, 526, and 552; or instructor’s consent.

GEOL 690. Special Studies in Geology (1-5). Systematic study in selected areas of geology. Offered on demand; repeatable for credit when content differs. Requires laboratory work or field trips (instructor’s option). Prerequisite: instructor’s consent.

GEOL 698. Independent Study in Geology (1-3). Independent study on special problems in selected areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (h) stratigraphy, (i) geophysics, and (j) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

GEOL 702. Environmental Science I (4) 2R; 3L. Cross-listed as BIOL 702 and CHEM 702. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry, and phase interactions. Prerequisite: acceptance in the master’s program in environmental science 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. Includes environmental chemical analysis, environmental toxicology, aquatic microbial biochemistry, environmental biochemistry, water treatment, photochemical smog, and hazardous waste chemistry. Prerequisite: accept-
ance in the master's program in environmental science or instructor's consent.

**GEOL 704. Environmental Science Colloquium (1).** Cross-listed as BIOL 704 and CHEM 704. Students in the master's program in environmental science are required to enroll each semester (maximum 4 credit hours). Includes presentations by guest speakers and required readings for class discussion. May also include student involvement in environmentally related community projects and groups.

**GEOL 706. Environmental Science Internship (3-6).** Cross-listed as BIOL 706 and CHEM 706. Students in the master's program in environmental science may gain interdisciplinary skills in environmental science by participating in applied and/or basic research internship projects with local business, industry, or government agencies. Internship option is an alternative to thesis research for degree requirements. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. Prerequisites: Environmental Science I and II.

**GEOL 720. Geochemistry (3).** The chemistry of natural aqueous solutions and their interaction with minerals and rocks; thermodynamics and kinetics of reactions; emphasizes application to sedimentary environments and environmental problems. Requires some laboratory work. Prerequisites: GEOL 324 and Chem 112 or instructor's consent.

**GEOL 724. Soils (3).** Geologic analysis of soil types, their formation, occurrence, and mineralogy; soil management and conservation; environmental aspects of soil occurrence including stability studies, pollution, and reclamation.

**GEOL 725. Clay Mineralogy (3).** 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).** The origin and genetic description of carbonate particles, sediments and rocks, mineralogy and petrographic 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).** Analyzes diagenesis of carbonate sediments and rocks. Includes mineralogic stability in natural waters, meteoric, marine and deep-burial diagenesis, dolomitization processes and products; trace-elements and isotopes as diagenetic tools, cathodoluminescence and x-ray diffraction studies of carbonates; origin and porosity. Prerequisite: GEOL 726 or instructor's consent.

**GEOL 730. Perspectives Geoscience and the Environment (3).** A perspective of global issues of geo-environmental concern with regard to past, present, and future exploitation, use, and availability of earth's resources; marine and terrestrial pollution and resource use; water, minerals, and fuel resources; population growth and resource availability; the Greenhouse effect, global climatic change, and sea level rise and their effects on populations; future trends in environmental management and remediation of environmental problems of geologic scope. Prerequisite: Geol 312, 680; or instructor's consent.

**GEOL 740. Basin Analysis (3).** A practical course in analysis of petroleum-bearing or other sedimentary basins; emphasizes detailed subsurface mapping to document depositional, tectonic, and burial history of sedimentary basins; subsurface stratigraphic and geochemical sample analysis and evolution of sedimentary facies systems and hydrocarbons maturation history. Includes compilation of existing data to determine geologic evolution of basins. Prerequisites: GEOL 682, 684, or instructor's consent.

**GEOL 745. Advanced Stratigraphy (3).** Analysis of stratigraphic sequences at the local to global scales in terms of sequence stratigraphic concepts and high-resolution interpretation of depositional sequences (from outcrop and subsurface data); seismic sequence stratigraphy; and significance of unconformities in sequence identification and development; local to global correlation of sequences and sea level history through time; cratonic sequences of North America. Required 7-day field trip. Prerequisites: Geol 312, 526, and 726.

**GEOL 750. Workshop in Geology (1-3).** Short-term courses with special focus on geological problems. Prerequisites: graduate standing and/or instructor's consent.

**GEOL 751. Advanced Geohydrology (3).** Integrations of practical and theoretical coverage of subsurface fluid flow as applied to shallow aquifers. Cover the mass transport in both the saturated and vadose zones as well as the occurrence and movement of non-aqueous fluids. Covers groundwater quality; sources of groundwater contamination, retardation of contaminants, retardation and attenuation of dissolved solids and the response of inorganic and organic substances to subsurface sequestration and groundwater 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).** Introduces the theory and application of geophysical techniques for hydrocarbon, mineral, and groundwater prospecting. Includes use of seismic techniques; instrumentation for acquisition on land and sea; seismic processing; structural and stratigraphic modeling; 3-D seismic exploration; and seismic refractive techniques. Prerequisites: completion of geology undergraduate math and physics requirements; MATH 344 or 555; GEOL 324 and 544; and instructor's consent.

**GEOL 781. Advanced Numerical Geology (3).** Involves practical implementation of algorithms and computer code. Includes the analysis of multivariate techniques and the development of the computer algorithm needed to handle very large datasets. Covers standard statistical approaches to data analysis; treatment of applied linear algebra and matrix theory; and the application of linear and non-linear discriminate analysis, various factor analytic techniques, hard and fuzzy clustering, linear and non-linear unmixing analysis, and other forms of data modeling. Prerequisites: GEOL 681 or equivalent, competence in one or more high level computer languages, Math 344 or 555, and instructor's consent.

**Courses for Graduate Students Only**

**GEOL 800. Research in Geology (3).** Research in special areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (h) stratigraphy, (i) geophysics, and (j) 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; repeatable for credit when content differs. May require field trips. Prerequisites: graduate standing, instructor's consent, and two years of professional postgraduate practice in geology.

**GEOL 821. Special Studies in Geochemistry (3).** A systematic study in selected areas of geochemistry. Content differs upon demand to provide in-depth analysis in fields of (a) sedimentary carbon and silicate geochemistry and mineralogy, (b) organic geochemistry, (c) high pressure and temperature thermodynamics of earth materials, (d) exploration geochemistry, (e) evaporation 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).** 6L Mineral paragenesis, bulk chemical compositions, physical chemical relationships, textures, structures, origins, and classifications of igneous and metamorphic rocks. Thin-section studies to facilitate rock identification and the determination of petrogenetic relationships. May require field trips. Prerequisite: instructor's consent.

**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, polarized petrological, and geochemical analyses. May require field trips. Prerequisite: GEOL 526.

**GEOL 830. Field Studies in Geology (2-6).** Off-campus, systematic field study in a selected area or region of geologic significance. Course given upon demand; repeatable for credit when locality and content differ. Where appropriate, travel, lodging, and board costs are charged. Prerequisites: summer field geology (or equivalent) and instructor's consent.
The purpose of WSU's Department of History is to illuminate and enlighten students emphasizing community structure, biological evolution, and human behavior. It provides opportunities for students to participate in research projects that study social, cultural, and economic developments in different eras, from ancient civilizations to modern societies. Students are encouraged to develop their skills in critical thinking, analysis, and writing, which are essential for understanding past events and their impact on the present.

**Major Requirements**

The major in history requires the successful completion of a minimum of 33 hours. All majors must complete HIST 100 and 101, or 102; 3 credit hours of either HIST 130 or 131; and a minimum of 15 upper-division hours (600-level or above), including at least 3 hours from each of the following areas: ancient and medieval history, modern European history, or American history (including Latin America).

**Courses**

- **HIST 100. The Human Adventure: World Civilization Since 1500 (3).** 
- **HIST 101. History of Western Civilization to 1648 (3).** 
- **HIST 102. History of Western Civilization since 1648 (3).**
- **HIST 131. History of the United States: Colonial to 1865 (3).**
- **HIST 132. History of the United States since 1865 (3).**
- **HIST 150. Workshop in History (2-3).**
- **HIST 200. Survey of History (3).**
- **HIST 220. Media Courses in History (2-3).**
- **HIST 222. East Asia (3).**
- **HIST 300. Introduction to Historical Research and Writing (3).**

**Upper-Division Courses**

- **HIST 381. Special Topics in Geophysics (3).**
- **HIST 382. Special Topics in Geology (3).**
- **HIST 383. Special Topics in History (3).**

**Prerequisites**

- **HIST 100. The Human Adventure: World Civilization Since 1500 (3).** Requires a course in general education.
- **HIST 101. History of Western Civilization to 1648 (3).** Requires completion of HIST 100 and 101, or 102; 3 credit hours of either HIST 130 or 131; and a total of 15 upper-division hours (600-level or above), including at least 3 hours from each of the following areas: ancient and medieval history, modern European history, or American history (including Latin America).

**History (HIST) Courses**

- **HIST 104. World Civilization to 1500 (3).** Introduces great world civilizations before 1500, both western (Near East, Greece, Rome, and Medieval Europe) and non-western (China, Japan, India, Sub-Saharan Africa, and the Americas). Readings help define civilization, stress the individual contributions of each culture to world civilization, and examine the interactions and influences between cultures.

- **HIST 106. The Way It Was: Western Civilization in Film (3).** Selected topics in the history of Western civilization on topics dealt with in films from the 17th century to the present. Not open to history majors or to those who have credit in HIST 100 and 101.

- **HIST 110. Russian Studies (3).** Cross-listed as RUS 100 and POL 310. Focuses on Russian history, culture, and society. Taught by faculty from history, political science, and modern and classical languages and literatures. Prepares students to pursue additional courses and/or programs in Russian history, Russian language and literature, Russian government and politics, and international relations, including business.

- **HIST 210. History of the United States: Colonial to 1865 (3).** General education introductory course. Begins with the native peoples who occupied this continent and continues through the Civil War. Explores the origins and development of the United States, including the influence of the Puritans, the struggle for independence, the quest of the 19th century "hippies" to find utopia, and the challenge to abolish slavery. Examines the formation of our institutions, their political and economic issues, and the expansion of the country's boundaries.

- **HIST 211. History of the United States since 1865 (3).** General education introductory course. Examines the rapid change characterizing the period of U.S. history from the Civil War to the present. Studies the growth of big business, reform movements, and the emergence of the U.S. as a world power. Explores how political, social, and economic factors as well as WW I, WW II, and Vietnam—continue to affect Americans and present a challenge to democracy within a growing diverse population that tests traditional institutions.}

**Upper-Division Courses**

- **HIST 381. Special Topics in Geophysics (3).**
- **HIST 382. Special Topics in Geology (3).**
- **HIST 383. Special Topics in History (3).**

**Prerequisites**

- **HIST 101. History of Western Civilization to 1648 (3).** Requires completion of HIST 100 and 101, or 102; 3 credit hours of either HIST 130 or 131; and a total of 15 upper-division hours (600-level or above), including at least 3 hours from each of the following areas: ancient and medieval history, modern European history, or American history (including Latin America).

- **HIST 132. History of the United States since 1865 (3).** Requires completion of HIST 131 and 132; 3 credit hours of either HIST 130 or 131; and a total of 15 upper-division hours (600-level or above), including at least 3 hours from each of the following areas: ancient and medieval history, modern European history, or American history (including Latin America).

- **HIST 210. History of the United States: Colonial to 1865 (3).** Requires completion of HIST 100 and 101, or 102; 3 credit hours of either HIST 130 or 131; and a total of 15 upper-division hours (600-level or above), including at least 3 hours from each of the following areas: ancient and medieval history, modern European history, or American history (including Latin America).

- **HIST 211. History of the United States since 1865 (3).** Requires completion of HIST 131 and 132; 3 credit hours of either HIST 130 or 131; and a total of 15 upper-division hours (600-level or above), including at least 3 hours from each of the following areas: ancient and medieval history, modern European history, or American history (including Latin America).
research and presenting findings in a professional manner. Required of history majors.

HIST 302. American Popular Culture (3). Examines American popular culture from the Civil War to the present. Explores how popular music, cinema, pulp magazine literature, comics, television, and fashion have developed over time to reflect changes in society, its myths, and its values.

HIST 306. The U.S. Century: Decades of Change (3). Telecourse. Examines major social and political events and issues in the U.S. during the 20th century.

HIST 308. A History of Lost Civilizations (3). General education issue and perspectives course. A comparative examination of lost civilizations of both the Old World and New World, including the Sumerians, Hittites, Minoans, Mycenaeans, Etruscans, Mohenjo-Daro, Khmers, Incas, Mayas, and Aztecs.

HIST 310. Special Topics in History (2-3). Repeatable twice for credit. Prerequisite: departmental consent.

HIST 311. Colonial Latin America (3). General education further study course. Explores the pre-Columbian civilizations in the New World, Spanish and Portuguese exploration and colonization, the consequences of contact between Europeans and Americans, and forces that set in place the drive for independence in the early 19th century.

HIST 312. Modern Latin America (3). General education further study course. Begins with the word for independence, continues with the challenges to achieve nationhood, and concludes with an exploration of major social, political, and economic issues Latin America nations faced in the 20th century. Roles of Bolivar, Santa Anna, Evita, and Castro are key components.

HIST 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 origins 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 1989.

HIST 316. The Jewish Experience in Christian Europe (3). Introductory survey course. exposes students to some of the main themes in the history of Jewish civilization in Western culture and society from the early Middle Ages to the present.

HIST 317. The Holocaust (5). General education further study course. Investigates the conditions within European society which led to and ultimately culminated in the murder of approximately 6 million Jews.

HIST 318. The Holocaust in Film (3). Examines the Holocaust to evaluate the problematic nature of historical representation in film.

HIST 320. Russian History Survey (3). General education further study course. A survey of Russian history from 862 A.D. to the present.


HIST 324. Modern East Asian History (3). A comparative survey of the modern era in the history of China and Japan from approximately 1800 to the present. Considers indigenous and external factors for the political, economic, and social developments of these societies, as well as their current roles in international affairs.


HIST 332. Ethnic America, ca. 1500-1924 (3). General education further study course. Cross-listed as ETHS 332. An introduction to the history of the ethnic experience from the 1500s to the 1920s. Themes include immigration, segregation, nativism, and assimilation, adaptation and acculturation, community survival, and political empowerment.

HIST 333. Ethnic America in the Twentieth Century (3). General education further study course. Cross-listed as ETHS 334. An in-depth study of the ethnic experience in the 20th century. Major historical topics include identity formation, intergenerational conflict, class differentiation and social mobility, the politics of ethnicity, resistance and civil rights movements, the racialization of immigration laws, and transnationalism.

HIST 339. Religion in America (3). Cross-listed as REL 339. Surveys various religious traditions in American history from colonial times to the present. Discusses how religious groups, beliefs, and issues have changed over time and how they interact with each other. Includes the different branches of Christianity and Judaism; the study of awakenings and revivals; the stories of prominent religious thinkers and leaders; immigrant religious traditions; the tensions between liberal and traditional religious forms; the prophetic and apocalyptic traditions in America; and the impact of Native American, Asian and African beliefs and practices on the religious landscape.

HIST 340. World War II (3). General education further study course. An introduction to the background and causes of World War II, as well as the military, diplomatic, economic, psychological, and scientific dimensions of the war. Considers the legacy of the war in light of the postwar world.

HIST 348. History of Baseball (3). Explores the evolution of America's national pastime and examines the relationship between baseball and the development of American culture, society, and character. Examines the development of the sport as a uniquely American game, its heroes and huns, champions and cheaters, fans and critics, labor and owners.

HIST 357. Women in the Ancient World (3). General education further study course. Examines the myth and real of women's lives in the traditional societies of ancient Greece and Rome. Explores how women's social and economic roles varied from culture to culture and how they changed over time from the age of primitive matriarchy to the Christian era. Investigates the influence of these cultures on our own.

HIST 359. 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 question: 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 CoRe 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 (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. The United States, 1865 to 1900 (3). Covers the great economic, political, social, and moral questions of the late 19th century. Includes industrialism, the frontier, the city, immigration, race, class, culture, empire, gender, and reform.

HIST 507. The United States, 1900-1945 (3). General education further study course. Examines political, social, and economic issues from the Progressive Era through World War II.
HIST 508. The United States Since 1945 (3). General education further study course. Examines the complex events and institutions since World War II, focusing on the Cold War, civil rights movements, economic changes, and foreign policy.

HIST 511. Women in Early America, 1600-1830 (3).

HIST 512. Women and Reform in America, 1830-present (3).


HIST 516. History of American Business (3). General education further study course. A history of American business enterprise from colonial times to the present, emphasizing the 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 origins to 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, 1865-present, emphasizing the lessons of local history for future planning and its importance to an individual citizen's sense of place.

HIST 530. The American Woman in History (3). Cross-listed as WOM 530. Examination of the history, status, and changing role of women in American society.

HIST 531. American Environmental History (3). General education further study course. Examines the historical, physical, economic, scientific, technological, and industrial interactions of the peoples of America with their environment. Emphasizes the period, 1800-present.

HIST 532. Women in Ethnic America (3). Cross-listed as ETH S 532 and WOM S 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender, and sexuality in women's lives.

HIST 533. The American City: from Village to Metropolis (3). A study of urbanization and urban life from colonial times to the present—changing lifestyles and thought patterns, urban architecture, ethnic assimilation, emergence of the suburban, political and ecological adjustments, and the influence of new technology and forms of business organization.

HIST 534. History of the Old South (3). General education further study course. Examines Southern civilization prior to the American Civil War.

HIST 535. History of Kansas (3). General education further study course. History of the Kansas region from Spanish exploration to the present, emphasizing the period after 1854.

HIST 536. Survey of American Indian History (3). General education further study course. Surveys the history of Native American nations from prehistoric times to the present. Includes the process of European colonization and indigenous responses; the strategies of accommodation, assimilation, and resistance; and the resurgence of tribalism in the 20th century.

HIST 537. The Trans-Mississippi West (3). Spanish, French, and Anglo-American penetration and settlement west of the Mississippi River from the 16th century to about 1800.

HIST 538. The American West in the Twentieth Century (3). General education further study course. Explores the growth of the trans-Mississippi West in the 20th century, emphasizing political development, economic growth, cultural manifestations, the role of minority groups, and the impact of science and technology.

HIST 541. Modern France (3). General education further study course. History of the major trends in French history from Napoleon to DeGaulle emphasizing French attempts to adjust politically, socially, economically, and culturally to the changing conditions of modern industrial society.

HIST 545. Neither War Nor Peace: The World Since 1945 (3).

HIST 553. History of Mexico (3). General education further study course. Pre-Columbian Mexico; the Spanish conquest and the colonial period; the independence movement; Juarez, the Reform, and the French intervention; the Porfiriatoh; the Mexican Revolution; Mexico in recent years.

HIST 558. The Ancient Near East (3). General education further study course. Political and cultural history of ancient Mesopotamia, Iran, Egypt, Palestine, Syria, and Asia Minor to the death of Alexander the Great.

HIST 559 & HIST 560. Greek History (3 & 3). General education further study courses. 559: the Hellenic world from prehistoric times to the end of the Peloponnesian War. 560: the 4th century and the Hellenistic period.

HIST 562 & HIST 563. Roman History (3 & 3). General education further study courses. 562: the Roman Republic. 563: the Roman Empire.

HIST 566 & HIST 567. Medieval History (3 & 3). General education further study courses. 566: the history of Europe from the fall of the Roman Empire through the Crusades, 500 to 1200. 567: history of Europe, 1200 to 1500.

HIST 568. Social, Economic, and Intellectual History of the Middle Ages (3). Examines fundamental themes in the development of the social, economic, and intellectual history of the Middle Ages, emphasizing the rise of cities, universities, scholastic thought, diverse patterns of daily life, and economic activities of the Middle Ages.

HIST 569. Medieval England (3). Examines the development of Medieval England from the Anglo-Saxon Invasions until the end of the 14th century. Studies the Norman Conquest, the role of the Angevins, the reign of Edward I, and the daily life of those peoples who become the English.

HIST 575. The Italian Renaissance (3). General education further study course. Italian history from the 14th through the 16th centuries emphasizing cultural achievements.

HIST 576. The Reformation (3). General education further study course. Cross-listed as REL 476. The great religious changes in the 16th century in the political, social, and intellectual contexts.

HIST 577. Medieval Women (3). Deals with the lives and accomplishments of Christian women in Late Antiquity and the Middle Ages.

HIST 581. Europe, 1815-1870 (3). General education further study course.

HIST 582. Europe, 1870-1945 (3). General education further study course. Surveys European history, 1870-1945.


HIST 588. History of Early Russia (3). General education further study course. Covers the social, political, and cultural history of Kievian and Muscovite Russia.

HIST 589. History of Imperial Russia (3). General education further study course. A survey of the political, social, and cultural history of Imperial Russia.

HIST 592. History of the Soviet Union (3). General education further study course. A survey of Soviet history from the Bolshevik Revolution to the present.

HIST 593. Former Soviet Union (3). General education further study course. An examination of contemporary life in the former USSR: historical background, Marxist/Leninist ideology, industrial and agricultural economies, roles played by women, national minorities and dissidents in Soviet society, the press, literature and art, health care, and prospects for the country's future.

HIST 613. European Diplomatic History (3). General education further study course. European international politics and diplomatic practices, emphasizing the actions of the great powers and their statesmen. Versailles settlement, totalitarian
aggression, appeasement, World War II, the cold war, and decolonization of Southeast Asia and the Middle East as preludes to major power involvement.

HIST 639. Religion in America (3). Covers major trends in American religious history focusing on the scholarly issues related to the study of these subjects. Students explore such subjects as religious awakenings, fundamentalism, pentecostalism, and rationalism and examine how historians have studied and disagreed over these topics.

HIST 698. Historiography (3). Review of the major schools of historical thought, philosophies of history, and eminent historians from the ancient world to the present. Required of history majors.

HIST 701. Introduction to Public History (3). Introduces the various areas of public history including historic preservation, archival administration, museum studies, litigation support, and corporate history. Students learn the philosophies, techniques, and practices that comprise the field and ways these areas interact with their academic training. Prerequisite: graduate standing or instructor's consent.

HIST 702. Historic Preservation (3). Advanced survey of the multifaceted, multidisciplinary field of historic preservation. Presents a broad and sophisticated view of the many arms of preservation in the U.S., as well as the numerous opportunities available to trained professionals in the field. Prerequisite: HIST 701 or instructor's consent.

HIST 703. Museum Administration (3). Addresses the many facets of museum administration from a specialist's point of view. Covers collecting, management, law and ethics, and resource development. Gives a close view of the operations of American museums. Prerequisite: HIST 701 or instructor's consent.

HIST 704. Interpreting History to the Public: Explaining the Past (3). Looks at ways history can be communicated to audiences, including scholarly texts, popular written histories, movies, videos, guidebooks, museums, and other similar media. Explores the differences between various forms of historical communication and assesses the ways they reach audiences. 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). Introduces the basic knowledge, theory, and related skills of archival administration, including the nature of information, records, and historical documentation; the role of archives in modern society; and issues and relationships that affect archival functions. Covers the theory and skills necessary to understand and apply basic archival functions. Prerequisite: graduate standing and/or instructor's consent.

HIST 725. Advanced Historical Method (3). Reviews basic historical research methods, the general character of field bibliographies and recent interpretations, and the techniques of professional narrative development. Required of graduate degree students during their first year of enrollment. Prerequisite: departmental consent.

HIST 727. Readings in History (3). Readings in ancient, medieval, modern, European, and American field bibliographies. Repeatable for credit. Prerequisite: departmental consent.

HIST 729. Seminar in American History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 730. Seminar in American History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 733. Seminar in European History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 734. Seminar in European History (3). Repeatable for credit. Prerequisite: departmental consent.

HIST 735. Workshop in History (1-3). Repeatable for credit but does not satisfy requirements for history majors.

HIST 781. Cooperative Education in History (1-2). Graduate history students participate in internship experiences through the Cooperative Education program. Prerequisites: HIST 803. Instructor's consent required.

Courses for Graduate Students Only

HIST 801. Thesis Research (2).

HIST 802. Thesis (2).

HIST 803. Internship in Public History (1-2). Public history students practice their skills in summer or semester internships. Type and level of responsibility vary depending on student's interests and work setting. Internship should be in an area related to student's MA thesis. Prerequisites: HIST 701 and consent of public history faculty.

HIST 810. Special Topics in History (1-3). Repeatable for credit to a maximum of 6 hours.

HIST 865. State and Local Government Finance (3). Cross-listed as ECON 865, POL 5 865, 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.

HIST 866. State and Local Government Finance (3). Cross-listed as ECON 865, POL 5 865, 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)

Fairmont College of Liberal Arts and Sciences is the home for interdisciplinary courses and programs. Among those are academic service courses as Introduction to the University, Adult Seminar, Topics in Career Exploration, and Inquiry in Liberal Arts and Sciences. In these and other courses, students learn more about themselves, University life, preparation for careers, and the foundations of liberal arts and sciences. An interdisciplinary certificate program that enables students to focus course work from several departments around a unique area—Great Plains Studies—is also offered through LAS-I. Further, the foundation courses for the Master of Arts in Liberal Studies are part of the LAS-I range of course work. More information about LAS-I, its courses, and its programs may be obtained through the LAS Advising Center.

Certificate in Great Plains Studies

Fairmont College of Liberal Arts and Sciences offers a Certificate in Great Plains Studies, an interdisciplinary program for undergraduate and graduate students. This certificate is for students interested in supplementing their major field of study with a concentration of courses from a number of disciplines focusing on a common topic, the Great Plains. Nondegree adults can earn the certificate for professional or personal enrichment.

Requirements: Undergraduate students must have a 2.500 overall GPA and sophomore standing. They must maintain at least a 2.500 cumulative grade point average with no grade below C in courses applied toward the certificate.

Students may transfer 3 hours of course work from another institution. Exceptions for additional transfer credit or other exceptions to the certificate requirements will be reviewed by the Great Plains Studies advisor and committee.

Students complete 20 hours of course work, including three required courses (LAS-I 201, 501, and 510) with the remaining courses selected from these designated courses: ANT H 612, ANTH 613, BIOL 503, BIOL 575, ENGL 534, ENGL 538, ETH S 501, GEOL 570, HIST 535, and HIST 536.

Lower-Division Courses

LAS-I 100. PASS Program (2). PASS, Personal and Academic Success Seminar, studies the University as a resource for personal development and the development of an individual master plan for study and self-development in the University. Created specifically for the first-time WSU student-athlete, the course assists students in developing and refining personal and academic success skills. Also provides opportunities for one-on-one interaction with other students as well as WSU faculty and staff. Course is required for NCAA student-athletes new to campus.

LAS-I 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 OnNO 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 OnNO only.

LAS-I 101. Introduction to the University (3). Helps students make connections with academic programs, faculty...
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 major plan.

Minor: A minor in linguistics consists of 15 hours from the following courses. At least 6 hours must be taken from Group A.

Note: Courses applied toward another major or minor will not apply toward a minor in linguistics.

Group A—Basic Linguistic Theory

Lower-Division Course

LING 151. The Nature of Language (3). General education introductory course. An overview of the important facts about what language is and how it works and of the ways in which researchers in linguistics and in other disciplines, such as psychology, philosophy, and anthropology, explain and make use of language.

Upper-Division Courses


LING 315. Linguistics. Introduction to English Linguistics (3). General education further study course. Cross-listed as ENGL 315. Introduces linguistic principles, including phonological and grammatical concepts.

LING 316. English Sentence Structure (3). Cross-listed as ENGL 316. The basic rules of English syntax, specifically designed for prospective teachers of English but open to all students interested in English sentence structure.


Courses for Graduate/Undergraduate Credit


LING 682. Linguistics. Structure of a Selected Non-Indo-European Language (3). Language offered depends on student demand and staff availability. May be conducted as a field methods course; repeatable for credit when different languages are offered. Prerequisite: LING 315.

Group B—Linguistic Study of Specific Languages or Language Groups

Courses for Graduate/Undergraduate Credit


LING 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 351. Linguistics and Foreign Languages (3). Cross-listed as ANTH 351 and MCLL 351. Prerequisite: LING 151.

Courses for Graduate/Undergraduate Credit

LING 545. Psychology. Psycholinguistics (3). Cross-listed as PSY 532.

LING 651. Language and Culture (3). Cross-listed as ANTH 651 and MCLL 651. Prerequisite 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

LING 727. Teaching English as a Second Language (2-3). Cross-listed as ENGL 727. Discusses recent 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.


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.

LING 595. Linguistics. Directed Readings (2-3). Credit assigned to Group A, B, or C depending on content. Repeatable for credit.

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 bachelor's (BA and BS), master's (MS), and doctoral (PhD) degrees.

Note: For ease of description, certain courses in mathematics and statistics are categorized in the following groups (the courses in Group R are required of all majors):

Group R: MATH 415, 511, 547, 551, 555
Group A: MATH 513, 615, 621, 690, 720, 725
Group B: STAT 460, 571, 572, 574, 576, 671, 762, 763, 771, 772, 775, 776
Group C: MATH 530, 543, 553, 640, 655, 657, 714, 751, 753, 755
MATHEMATICS

MATH 013. College Algebra Supplement (2). Offered Cr/NoC only. A supplement to MATH 111 to be taken concurrently with designated sections of MATH 111 to allow students 5 contact hours for mastering college algebra. Corequisite: MATH 111.

MATH 021. Plane Geometry (3). Offered Cr/NoC 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 101. 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, exponential and logarithmic functions. High school geometry or MATH 021 is highly recommended preparatory course. Prerequisites: MATH 012 or two years of high school algebra and qualifying score in recent department placement exam. Credit allowed in only one of the two courses MATH 111 and 112.

MATH 112. Precalculus Mathematics (5). General education advanced skills course. Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions, and other standard topics. Prerequisite: MATH 111 or two years of high school algebra, one unit of high school geometry, and qualifying score in recent departmental placement exam. Credit is allowed only in one of the two courses MATH 111 and 112.

MATH 123. College Trigonometry (3). Studies the trigonometric functions and their applications. Credit in both MATH 123 and 112 is not allowed. Prerequisite: MATH 111 with 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 144 and 242 is not allowed. Prerequisite: MATH 111 or 112 with a C or better or equivalent high school preparation.

MATH 150. Workshop in Mathematics (1-3). Topics of interest to particular students and not elsewhere available in the curriculum. May be repeated for a total of 6 hours credit with departmental consent. Prerequisite: departmental consent.

MATH 211. Elementary Linear Algebra (3). Covers topics in linear algebra together with elementary applications. Prerequisite: one and one-half units of high school algebra or MATH 011.

MATH 242. Calculus I (5). General education introductory course. Analytic geometry and the calculus in an integrated form. Credit in both MATH 242 and 144 is not allowed. Prerequisites: MATH 112 with a C or better or two units of high school algebra, and one unit of high school geometry and one-half unit of high school trigonometry, or MATH 123 and 111 with a C or better in each.

MATH 243. Calculus II (5). General education further study course. A continuation of MATH 242. Includes a study of integration and applications and an introduction to infinite series. Prerequisite: MATH 242 with a C or better.

Upper-Division Courses

MATH 300. The Evolution of Mathematics (3). A study of mathematics and mathematicians from antiquity to the present; to see how mathematics has developed from human beings' efforts to understand the world and the extent to which mathematics has molded our civilization and culture. Since mathematics is what mathematicians do, the lives of mathematicians from various ages and countries are studied. Not a mathematical skills course.

MATH 311. Introduction to Linear Algebra (1). A study of systems of linear equations, matrices, vectors, eigenvalues and eigenvectors. Credit not allowed in both MATH 211 and 311. Prerequisite: MATH 344 or concurrent enrollment.

MATH 331. 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 344. Calculus III (3). A continuation of MATH 243. Includes a study of multiple integration and partial derivatives. Prerequisite: MATH 243 with a C or better.

MATH 415. An Introduction to Advanced Mathematics (3). Develops the concept of 'proof' in a setting of mathematical tools needed in advanced courses. Covers topics in number theory, algebra, and analysis. Particular attention to equivalence relations, functions, induction, and mathematical systems. Prerequisite: MATH 344 with a C or better.

MATH 451. Computational Mathematics using MATLAB (3). Introduces the use of MATLAB in computational algorithms. A bridge to upper-division courses in numerical
MATH 547. Advanced Calculus I (3). Covers the calculus of Euclidean space including the standard results concerning functions, sequences, and limits. Prerequisite: MATH 344 and 415 with C or better in each.

MATH 551. Numerical Methods (3). Approximating roots of equations, interpolation and approximation, numerical differentiation and integration, and the numerical solution of first order ordinary differential equations. Some computer use. Prerequisites: MATH 344 and 451 with C or better or departmental consent.

MATH 553. Mathematical Models (3). Covers case studies from the fields of engineering technology and the natural and social sciences. Emphasizes the mathematics involved. Each student completes a term project which is the solution of a particular problem approved by the instructor. Prerequisite: 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 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 6 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. Prerequisite: MATH 531 and 547 with C or better in each.

MATH 655. Differential Equations II (3). A continuation of MATH 555 (but with more emphasis on theoretical issues) that covers higher order differential equations, systems of first order equations (including the basics of linear algebra), some numerical methods, and stability and behavior of solutions for large times. Prerequisite: MATH 555 with C or better or departmental consent.

MATH 657. Optimization Theory (3). Introduces selected topics in linear and nonlinear optimization. Develops the revised simplex method along with a careful treatment of duality. Then extends the theory to solve parametric, integer, and mixed integer linear programs. Prerequisite: MATH 511 with C or better.

MATH 714. Applied Mathematics (3). Cross-listed as PHYS 714. A study of mathematical techniques applicable to physics and other sciences. Instructor selects topics, such as power series, Infinite products, asymptotic expansions, WKB method, contour integration and residue methods, integral transforms, Hilbert spaces, special functions, and integral equations. Prerequisite: MATH 555 or instructor's consent.

MATH 720. Modern Geometry (3). Examines the fundamental concepts of geometry. Prerequisite: MATH 513 with C or better or departmental consent.

MATH 725. Topology I (3). Studies the results of point set and algebraic topology. Prerequisite: MATH 547 with C or better or departmental consent.

MATH 743. Real Analysis I (3). Includes a study of the foundations of analysis and the fundamental results of the subject. Prerequisite: MATH 640 with C or better or departmental consent.

MATH 750. Workshop (1-3). Topics appropriate for mathematics workshops that are not in current mathematics courses. May be repeated to a total of 6 hours credit with departmental consent. Prerequisite: departmental consent.

MATH 751. Numerical Linear Algebra (3). Includes analysis of direct and iterative methods for the solution of linear systems, least squares problems, eigenvalue problems, error analysis, and reduction by orthogonal transformations. Prerequisites: MATH 511, 547, and 551 with C or better in each, or departmental consent.

MATH 753. Ordinary Differential Equations (3). Covers existence, uniqueness, stability, and other qualitative theories of ordinary differential equations. Prerequisite: MATH 545 or 547 with C or better or departmental consent.

MATH 755. Partial Differential Equations I (3). Studies the existence and uniqueness theory for boundary value problems of partial differential equations of all types. Prerequisite: MATH 547 with C or better or departmental consent.

MATH 757. Partial Differential Equations for Engineers (3). Includes Fourier series, the Fourier integral, boundary value problems for the partial differential equations of mathematical physics, Bessel and Legendre functions, and linear systems of ordinary differential equations. Prerequisite: MATH 555 with C or better.

MATH 758. Complex and Vector Analysis for Engineers (3). A survey of some of the mathematical techniques needed in engineering, including an introduction to vector analysis, line and surface integrals and complex analysis, contour integrals, and the method of residues. Not applicable toward a graduate degree in mathematics. Prerequisite: MATH 555 with C or better.
Courses for Graduate Students Only

MATH 813. Abstract Algebra II (3). A continuation of MATH 713. Prerequisite: MATH 713 or equivalent.

MATH 818. Selected Topics in Number Theory (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 825. Topology II (3). A continuation of MATH 725. Prerequisite: MATH 725 or equivalent.

MATH 828. Selected Topics in Topology (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 829. Selected Topics in Geometry (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 839. Selected Topics in Foundations of Mathematics (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

MATH 843. Real Analysis II (3). A continuation of MATH 743. Prerequisite: MATH 743 or equivalent.

MATH 845. Complex Analysis II (3). A continuation of MATH 745. Prerequisite: MATH 745 or equivalent.

MATH 848. Calculus of Variations (3). Includes Euler-Lagrange equations, variational methods, and applications to extremal problems in continuum mechanics. Prerequisite: MATH 547 or 757.

MATH 849. Selected Topics in Analysis (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.


MATH 852. Numerical Analysis of Partial Differential Equations (3). Includes analysis of algorithms for the solution of initial value problems and boundary value problems or systems of PDEs with applications to fluid flow, structural mechanics, electromagnetic theory, and control theory. Prerequisite: MATH 751.

MATH 854. Tensor Analysis with Applications (3). 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 859. Selected Topics in Applied Mathematics (2-3). Repeatable with departmental consent.

MATH 880. Proseminar (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing.

MATH 881. Individual Reading (1-5). Repeatable up to a maximum of 6 hours with departmental consent. Prerequisite: departmental consent.

MATH 885. Thesis (1-4). May be repeated to a maximum of 6 hours credit. Prerequisite: departmental consent.

MATH 941-942. Applied Functional Analysis I and II (3-3). Introduces functional analysis and its applications. Prerequisites: MATH 843 and 755 (MATH 755 may be a corequisite).

MATH 947-948. Mathematical Theory of Fluid Dynamics I and II (3-3). Mechanics of fluid flow, momentum and energy principles, Navier-Stokes and Euler equations, potential flows, vortex dynamics, stability analyses, and numerical methods applied to fluid dynamics. Prerequisite: MATH 745.

MATH 952. Advanced Topics in Numerical Analysis (3). Advanced topics of current research interest in numerical analysis. Topics chosen at instructor's discretion. Possible areas of concentration are numerical methods in ordinary differential equations, partial differential equations, and linear algebra. Prerequisites: MATH 751, 851, and instructor's consent.

MATH 958 & MATH 959. Selected Advanced Topics in Applied Mathematics (3 & 3). 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 6 hours. Prerequisites: must have passed the PhD qualifying exam and instructor's consent.

MATH 985. PhD Dissertation (1-9). Repeatable to a maximum of 24 hours. Prerequisite: must have passed the PhD preliminary exam.

Statistics (STAT)

No major or minor in statistics is available, but a BS degree with emphasis in statistics is offered as described under the mathematics section. Statistics courses satisfy general education requirements. As part of the 124 semester hours required for graduation, students may take up to 15 semester hours of statistics courses in addition to the 45 or 50 semester hours of course work allowed in mathematics.

Lower-Division Course

STAT 170. Statistics Appreciation (3). A non-technical course stressing and explaining how statistics and probability help solve important problems in a variety of fields (e.g., biology, economics, education, government, health sciences, social sciences, etc.). The material is developed by examples rather than by traditional statistical methods and does not require any special knowledge of mathematics.

Upper-Division Courses

STAT 360. Elementary Probability (3). Includes probability functions, random variables and expectation of finite sample spaces. Prerequisite: MATH III with a C or better or equivalent.

>STAT 370. Elementary Statistics (3). General education introductory course. Surveys elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference, linear correlation and regression. Not open to mathematics majors. Prerequisite: MATH III with a C or better or equivalent.

>STAT 460. Elementary Probability and Mathematical Statistics (3). General education further study course. Covers elementary probability concepts, some useful discrete and continuous distributions and mathematical aspects of statistical inference including maximum likelihood estimation, confidence intervals, hypothesis testing and regression. Prerequisite: MATH 243 with a C or better.

>STAT 471. Probabilistic Models and Statistical Methods (3). General education further study course. Covers concepts of Probability, Bayes' Theorem, random variables and their distributions, joint distributions of random variables, transformations of random variables, moment generating functions, characteristic functions, central limit theorem and other topics with applications to engineering. Prerequisite: MATH 344 with a C or better.

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

STAT 570. Special Topics in Statistics (3). Covers topics of interest not otherwise available. Prerequisite: departmental consent.

>STAT 571-572. Statistical Methods I and II (3-3). General education further study course. Includes probability models, points and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance, and topics in design of experiments. Prerequisite: 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 costs. 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 C or better.

STAT 762. Applied Stochastic Processes (3). Studies random variables, expectation, limit theorems, Markov chains, and stochastic processes. Prerequisite: STAT 761 or STAT 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. Prerequisite: MATH 545 or 547 with C or better or departmental consent.

STAT 774. Statistical Computing I (3). Trains students to use modern statistical software for statistical modeling and writing of technical reports. Examines many of the advanced features of most commercial statistical packages. Students perform complete statistical analyses of real data sets. Prerequisites: STAT 763 and 764 or departmental consent.

STAT 775. Applied Statistical Methods I (3). Covers selected topics from time series analysis including basic characteristics of time series, autocorrelation, stationarity, spectral analysis, linear filtering, ARIMA models, Box-Jenkins forecasting and model identification, classification, and pattern recognition. Prerequisite: STAT 763 with C or better or departmental consent.

STAT 776. Applied Statistical Methods II (3). Covers selected topics from multivariate analysis including statistical theory associated with the multivariate normal, Wishart and other related distributions, partial and multiple correlation, principal component analysis, factor analysis, classical and discriminant analysis, cluster analysis, James-Stein estimates, multivariate probability inequalities, majorization and Schur functions. Prerequisite: STAT 764 with C or better or departmental consent.

Courses for Graduate Students Only

STAT 861-862. Theory of Probability I and II (3-3). The axiomatic foundations of probability theory emphasize the coverage of probability measures, distribution functions, characteristic functions, random variables, modes of convergence, the law of large numbers and central limit theorem, and conditioning and the Markov property. Prerequisites: MATH 743 and STAT 761 or 771.


STAT 872-873. Theory of Linear Models I and II (3-3). An introduction to the theory of linear models and analysis of variance. Includes multivariate normal distribution, distributions of quadratic forms, general linear models, general linear hypothesis, confidence regions, prediction and tolerance intervals, design matrices (1-factor and 2-factor), analysis of covariance, and components-of-variance models. Prerequisites: MATH 511 and STAT 772.

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 572 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; measures of association for bivariate samples; and asymptotic efficiency. Prerequisite: STAT 772.

STAT 877. Multivariate Statistical Methods (3). Elementary theory and techniques of analyzing multidimensional data; covers Hotelling's T², multivariate analysis of variance, principal components analysis, linear discrimination analysis, canonical correlation analysis, and analysis of categorical data. Prerequisites: MATH 511 and STAT 772.

STAT 878. Special Topics (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

STAT 879. Individual Reading (1-5). Prerequisite: departmental consent.

STAT 884. Statistical Computing II (3). Teaches special graphics and numerical methods needed in the analysis of statistical data. Includes advanced simulation techniques, numerical methods for linear and nonlinear problems, analysis of missing data, smoothing and density estimation, projection-pursuit methods, and graphic techniques. Prerequisites: MATH 751 and STAT 772 with C or better or departmental consent.

STAT 971 & STAT 972. Selected Advanced Topics in Probability and Statistics (3&3). Topics of current research interest in probability and statistics. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

STAT 978. Advanced Independent Study in Probability and Statistics (1-3). Arranged individual directed study in an area of probability or statistics. Repeatable to a maximum of 6 hours. Prerequisites: must have passed the PhD qualifying exam and instructor's consent.

STAT 986. PhD Dissertation (1-9). Repeatable to a maximum of 24 hours. Prerequisite: must have passed the PhD preliminary exam.

Modern and Classical Languages and Literatures

The Department of Modern and Classical Languages and Literatures works to instill in students an awareness and appreciation of other languages and cultures. The department grants the Bachelor of Arts degree in modern and classical languages and literatures. Students can specialize in French, Latin, or Spanish. Minors are also available in French, German, Greek, Latin, Russian, and Spanish. Courses are also offered in Italian and Japanese. The department also offers the Master of Arts in Spanish and participates in the Master of Arts in Liberal Studies program, which may include graduate work in French, German, Greek, Latin, Russian, or Spanish.

A wide range of courses in language, literature, civilization, translation, and linguistics is offered on campus as well as in summer programs in Puebla, Mexico, Strasbourg, France; and Orleans, France (Wichita’s Sister City). See Exchange and Study Abroad programs for more details.

Graduate students in Spanish interested in applying for teaching assistantships should consult with the graduate coordinator.

Scholarships. Various scholarships are available for study in French, German, Latin, and Spanish, including Puebla, Mexico.

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
FREN 653. 19th Century French Literature (3). Prerequisite: FREN 300.

FREN 654. 20th Century French Literature: 1900-1945 (3). Analyzes and discusses major works of French fiction, poetry, and drama from the Belle Époque through World War II. Prerequisite: FREN 300.

FREN 655. Introduction to Romance Language Linguistics (3). Cross-listed as LING 655 and SPAN 655. An introduction to the historical phonology and morphology of the romance languages emphasizing French and Spanish. Prerequisite: FREN 300.

FREN 656. Contemporary French Literature (3). Analyzes and discusses major works of French fiction, poetry, and drama, 1945-present. Prerequisite: FREN 300.

FREN 726. French Composition and Stylistics (3). Offers background in rhetoric and stylistics as an approach to literary models, with a view to developing the creative use of style together with grammatical accuracy in writing. Practice in revision forms the basis of this course. Prerequisite: FREN 526 or departmental consent.

FREN 730. Workshop in French. (2-4). Repeatable for credit.

Course for Graduate Students Only

FREN 815. Special Studies in French (3). Prerequisite: departmental consent. Repeatable for credit.

Modern and Classical Languages and Literatures: German (GERM) Minor. A minor in German consists of 11 hours beyond the 210 level. Students are permitted to count no more than one of the following for minor credit: GERM 341 or 441.

Lower-Division Courses

GERM 111-112. Elementary German (5-5). An introductory course emphasizing speaking, reading, writing, listening, and grammar essentials. Requires daily classroom and laboratory work.

>GERM 220. 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 a C or better or departmental recommendation to transfer from GERM 220.

GERM 225. German Conversation (3). The development of oral fluency. Prerequisite: GERM 220, 223, or concurrent enrollment in 223.

Upper-Division Courses

GERM 324. Intermediate German 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 further study course. 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 344. 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 in German (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Prerequisite: departmental consent.

GERM 441. Culture of Contemporary Germany (3). Study of the culture and life in the Federal Republic of Germany and the German Democratic Republic from 1945 to 1989 and the new unified Germany. A knowledge of German is not required. Does not count toward fulfillment of language requirement.

Courses for Graduate/Undergraduate Credit

GERM 524. Advanced German Conversation and Composition (3). Prerequisite GERM 324 or instructor's consent.

GERM 650. Directed Studies in German (1-3). Enrollment in any of the areas listed takes place only upon consultation with the department and agreement with the instructor concerned: (a) introduction to the study of German literature; (b) survey I: from the medieval period through the Age of Goethe; (c) survey II: 19th century to 1945; (d) contemporary literature, including the Literatures of East and West Germany, 1949-1989; (e) special topics in literature, repeatable once for credit; (f) special topics in language, repeatable once for credit. Prerequisite GERM 344 or instructor's consent.

GERM 750. Workshop in German. (2-4). Repeatable once for credit.

Modern and Classical Languages and Literatures: Greek (Ancient Classical) (GREEK) Minor. A minor in Greek consists of 11 hours beyond the 111-112 level. GREEK 398 does not count toward the minor.

Lower-Division Courses

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). Studies the most important myths of the Greeks and Romans. Includes the stories of creation, the gods and goddesses, the major heroes and important sagas such as Achilles, Odysseus, and the Trojan War. Sources are mainly literary, e.g., Homer, Hesiod, 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 in Greek (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

GREEK 515. Special Studies in Greek (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 331.

Modern and Classical Languages and Literatures: Italian (ITAL) The following courses are offered in Italian.

Lower-Division Courses

ITAL 111. Elementary Italian I (5). Emphasizes the four fundamental skills in language learning: listening, speaking, reading, and writing. Requires daily classroom and language laboratory work.

ITAL 112. Elementary Italian II (5). A continuation of ITAL 111 further emphasizing the four fundamental skills in language learning and a complete presentation of elementary Italian grammar. Requires daily classroom and language laboratory work. Prerequisite: ITAL 111 or equivalent.
ITAL 223. Intermediate Italian (3). Grammar review, composition, conversation, and cultural readings. Prerequisite: ITAL 112 or instructor's consent.

Upper-Division Course
ITAL 398. Travel Seminar in Italian (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Prerequisite: departmental consent.

Modern and Classical Languages and Literatures: Japanese (JAPAN)
The following courses are offered in Japanese.

Lower-Division Courses
JAPAN 111. Elementary Japanese I (5). A continuation of Upper-Division Course
The following courses are offered in Japanese.

JAPAN 112. Elementary Japanese II (5). A continuation of JAPAN 111, completing the basic course in Japanese. Prerequisite: JAPAN 112 or equivalent.

JAPAN 223. Intermediate Japanese I (5). Includes fundamentals of pronunciation, vocabulary building, practice in understanding and speaking phrases, reading, and writing. Also includes cultural material. Prerequisite: JAPAN 112 or equivalent.

JAPAN 225. Japanese Conversation (2). Develops oral fluency. Prerequisite or corequisite: JAPAN 223.

Upper-Division Courses
JAPAN 300. Special Studies (1-3). Topic announced by instructor. Repeatable for credit. Prerequisite: instructor's consent.

JAPAN 398. Travel Seminar in Japanese (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Prerequisite: departmental consent.

Modern and Classical Languages and Literatures: Latin (LATIN)
Specialization. A specialization in Latin consists of a minimum of 24 semester hours beyond LATIN 112 or its equivalent. LATIN 398 does not count toward the specialization in Latin.

Student Teachers: Students who plan to teach Latin should consult with the department's professor in charge of teacher education early in their college careers. In addition to the requirements for specialization, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English, or philosophy.

Requirements for this program are:
1. Grade point average of 3.00 or higher in Latin
2. Special departmental approval based on demonstrated proficiency in the use of Latin (based on Certification and Teacher Education Regulations issued by the Kansas State Department of Education)
3. The professional foundation courses for education required by the Teacher Education Program (see College of Education).

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. LATIN 398 does not count toward the minor in Latin.

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 in Latin (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit
LATIN 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. Considers the place of the Aeneid in Augustan Rome and in the epic tradition.

LATIN 543. Roman Drama (3). A study of Roman comedy and tragedy, their Greek background, and their influence on European literature. Includes selected plays of Plautus, Terence, and Seneca, some in the original and some in translation.

LATIN 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 750. Workshop in Latin (2-4). Repeatable for credit.

Modern and Classical Languages and Literatures (MCLL)

Upper-Division Course
MCLL 351. Linguistics and Foreign Languages (3). Cross-listed as ANTH 351 and LING 351. Introduces general linguistic principles as they apply specifically to the study, acquisition, and analysis of foreign languages offered as major concentrations at WSU (French, German, Latin, and Spanish). Introduces acoustic phonetics (narrow transcriptions of foreign languages) and principles of phonology; morphology and principles of morphology; and syntax and semantics. Prerequisite: LING 151.

Course for Graduate/Undergraduate Credit
MCLL 651. Language and Culture (3). Cross-listed as ANTH 651 and LING 651. An introduction to the major themes in the interactions of language and society and language and culture, including ethnography of communication, linguistic relativism, and determinism; types of language contact; the linguistic repertoire; and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite: 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

Modern and Classical Languages and Literatures: Russian (RUSS)
Minor: A minor in Russian consists of a minimum of 11 hours beyond the RUSS 210 level and must include at least RUSS 300 or 325 and one 500-level course.
Native Speakers. Native speakers are those who have completed a substantial amount of their education in a Russian-speaking country. Native speakers of Russian normally are not permitted to receive credit for 100- or 200-level courses. These students are advised to consult with a Russian professor before enrolling in Russian courses.

Lower-Division Courses

RUSS 110. Russian Studies (3). Cross-listed as HIST 110 and POLS 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 RUSS 111 to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: RUSS 111 or equivalent.

> RUSS 210. Intermediate Russian (5). General education introductory course. Reading, grammar review, and audiovisual presentations in Russian to enhance listening comprehension, speaking, reading, and basic writing skills. Prerequisite: RUSS 112 or equivalent.

> RUSS 224. Intermediate Russian (3). General education further study course. A continuation of Russian 210, further enhancement of listening comprehension and speaking, reading, and writing skills. Prerequisite: RUSS 210 or instructor's consent.

RUSS 225. Russian Conversation and Composition (2). Development of oral and written skills. May be taken concurrently with RUSS 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: RUSS 224 or instructor's consent.

RUSS 325. Intermediate Russian Conversation and Composition (2). Continued development of speaking and listening skills, focusing on the vocabulary of everyday Russian life and idiomatic usage. Prerequisite: RUSS 224 or 225 or instructor's consent.

RUSS 398. Travel Seminar in Russian (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Prerequisite: departmental consent.

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 (intonationkonturistik). Prerequisite: any 200-level course or instructor's consent.

RUSS 515. Special Studies in Russian (1-3). Advanced reading and translation in Russian social sciences, literature, and civilization. Repeatable for credit. Prerequisite: departmental consent.

RUSS 540. 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.

Modern and Classical Languages and Literatures: Spanish (SPAN)

Specialization. A specialization in Spanish consists of a minimum of 30 semester hours beyond SPAN 210 or its equivalent and must include the following courses: SPAN 220, 223, 225, 300, 325, 525, and 526, or equivalents. In addition, 12 hours must be selected from courses numbered above 300. It is strongly recommended that students specializing in Spanish take courses in related fields such as other foreign languages, art history, English, history, and philosophy.

Student Teaching. Students who plan to teach Spanish should consult with the department's professor in charge of teacher education early in their college careers. In addition to the requirements for specialization, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, art history, English, history, and philosophy. It is also recommended that future Spanish teachers spend at least a summer in a Spanish-speaking country before student teaching.

Requirements for this program are:
1. Grade point average of 3.00 or higher in Spanish
2. Special departmental approval based on demonstrated proficiency in the use of both oral and written Spanish (based on certification and Teacher Education Regulations issued by the Kansas State Department of Education)
3. The professional foundation courses for education required by the Teacher Education Program (see College of Education).

Minor. A minor in Spanish consists of a minimum of 11 hours beyond the SPAN 210 level and must include SPAN 220, 223, 225, and 3 hours at the 300-level or above.

Native Speakers. Native speakers are those who have completed a substantial amount of their education in a Spanish-speaking country. Native speakers of Spanish are normally not permitted to receive credit for 100- and 200-level courses. To complete a specialization, SPAN 300 plus 12 hours of upper-division work are required. These students are advised to consult with a Spanish professor before enrolling in Spanish courses.

High School Spanish. Students who have completed more than two units of high school Spanish should consult with an advisor in the Spanish department before enrolling in Spanish courses.

Lower-Division Courses

SPAN 111-112. Elementary Spanish. (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 210. Intermediate Spanish (3). General education introductory course. Continues the four fundamental skills in language learning: understanding, speaking, reading, and writing. Emphasizes conversation and cultural 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 210 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 will satisfy the LAS literature requirement. Prerequisite: SPAN 210 or three units of high school Spanish or departmental consent.

SPAN 225. Spanish Conversation I (2). Prerequisite: SPAN 210 or three units of high school Spanish or departmental consent. Should be taken with SPAN 220.

Upper-Division Courses

> SPAN 300. Intermediate Spanish Readings (3). General education further study course. Intensive reading and analysis of Spanish literary works of all periods. Course will satisfy the LAS literature requirement. Prerequisite: SPAN 223 or departmental consent.

SPAN 325. Spanish Conversation II (2). Continuation of SPAN 225 with continued emphasis on fluency in Spanish and on vocabulary building. Prerequisite: SPAN 225 or departmental consent.

SPAN 398. Travel Seminar in Spanish (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Prerequisite: departmental consent.
SPAN 481. Cooperative Education: Spanish (1-4). Provides a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs formulated in consultation with and approved by appropriate faculty sponsors. Repeatable for credit. Offered C/W/O only. Prerequisite: SPAN 220 or 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. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectical and stylistic variations. Required for future Spanish teachers. Prerequisite: any 200-level course or departmental consent.

SPAN 515. Major Topics in Spanish (1-4). Special studies in (a) language, (b) literary reports, (c) commercial Spanish, (d) the language laboratory, (e) music, (f) composition, (g) problems in teaching Spanish, (h) advanced conversation. Repeatable for credit. Prerequisite: departmental consent.

SPAN 528. Spanish Conversation III (2). Increases proficiency in spoken Spanish. Assignments include oral reports and dialogues. Prerequisite: SPAN 525 or departmental consent.

SPAN 526. Advanced Spanish Grammar and Composition (3). Prerequisite: SPAN 220 or departmental consent.

SPAN 531. Survey of Spanish Literature (3). Main currents of Spanish literature from 1700 to the present. Prerequisite: SPAN 300 or departmental consent.

SPAN 532. Survey of Spanish Literature (3). Spanish literature from the beginning to 1700. Prerequisite: SPAN 300 or departmental consent.

SPAN 534. Contemporary Spanish Theater (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 536. Contemporary Spanish Novel (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 540. Contemporary Spanish Literature in English Translation (3). Content may vary from semester to semester, including Spanish and/or Latin-American literature. No knowledge of a foreign language is necessary. May be used to satisfy the general education literature requirement and may count toward a Spanish major or minor if readings and papers are done in Spanish and prerequisite of SPAN 300 is met. Repeatable for credit.

SPAN 552. Business Spanish (3). Provides the opportunity to learn and practice commercial correspondence, business vocabulary, translation, and interpretation of business texts. Prerequisite: SPAN 526.

SPAN 557. Literary and Technical Translating in Spanish (3). Extensive translation of literary works and technical and legal documents from Spanish to English and English to Spanish. Prerequisite: SPAN 526 or departmental consent.

SPAN 620. Survey of Latin-American Literature (3). Main currents of Latin-American literature, 1500-1800. Prerequisite: SPAN 300 or departmental consent.

SPAN 621. Survey of Latin-American Literature (3). Main currents of Latin-American literature, 1800-present. Prerequisite: SPAN 300 or departmental consent.

SPAN 622. Special Studies in Spanish (1-4). Topic for study chosen with aid of instructor. Repeatable for credit. Prerequisite: Instructor's consent.

SPAN 623. Seminar in Spanish (1-5). Seminar in Spanish literature, language, or civilization. Repeatable for credit. Prerequisite: SPAN 300.

SPAN 625. Contemporary Latin-American Novel (3). Prerequisite: SPAN 300 or departmental consent.

SPAN 626. Spanish Civilization (3). Intensive study of Spanish culture, including historical and geographical factors in its development and its contributions to world civilization. Prerequisite or corequisite: SPAN 300 or departmental consent.

SPAN 627. Latin-American Civilization (3). Intensive study of Latin-American culture, including historical and geographical factors in its development and its contributions to world civilization. Prerequisite or corequisite: SPAN 300 or departmental consent.

SPAN 628. Contemporary Latin-American Theater (3). A study of contemporary theater, 1900-present. Prerequisite: SPAN 300 or departmental consent.

SPAN 631. Latin-American Short Story (3). Study of the main writers in contemporary Latin-American literature. Prerequisite: SPAN 300 or departmental consent.

SPAN 635. Introduction to Romance Linguistics (3). Cross-listed as FREN 635 and LING 635. An introduction primarily to the historical phonology and morphology of the romance languages emphasizing French and Spanish. Prerequisite: departmental consent.

SPAN 640. Mexico: Its People and Culture (3). Study of the cultural development of Mexico, exploring the legacy of ancient cultures and the Spanish encounter in areas such as literature, the arts, music, and film industry. Prerequisite: SPAN 300 or departmental consent.

SPAN 650. South America: Its People and Cultures (3). Study of the cultural development of South America, exploring the legacy of Indian cultures and the Spanish encounter in areas such as literature, the arts, music, and film industry. Prerequisite: SPAN 300 or departmental consent.

SPAN 750. Workshop in Spanish. (2-4). Repeatable for credit.

Courses for Graduate Students Only

SPAN 801. Spanish Linguistics (3). Historical and structural study of the Spanish language.


SPAN 826. Spanish Grammar and Stylistics (3). Intensive study of advanced grammar and stylistic usage.

SPAN 827. Latin American Civilization and Culture (3). Introduction to historical and cultural development in Latin America, exploring the legacy of the Spanish Encounter/Conquest. Emphasizes Spanish colonization. Prerequisite: graduate standing.

SPAN 831. Seminar in Spanish Literature (3). (a) Middle Ages, (b) Renaissance, (c) Golden Age theater, (d) Cervantes, (e) modern novel, (f) Generation of '98, (g) romanticism, (h) 20th-century poetry, (i) criticism, (j) literature, (m) 20th-century theater, and (n) contemporary Spanish novel.

SPAN 832. Seminar in Latin-American Literature (3). (a) colonial period, (b) contemporary novel, (c) short story, (d) poetry, (e) modernism, (f) essay, (i) theater, (k) Latin-American literature.

Philosophy (PHIL)

The study of philosophy is relevant to all aspects of life and can be pursued fruitfully at many levels. Philosophical thought may direct itself to such diverse topics as the nature of reality, the conditions of knowledge, the justifications for political authority, the reality of subatomic particles, the existence of God, the criteria of aesthetic evaluation, the structure of logical reasoning, and the foundations (if any) of morality. Because of the breadth of the philosophical enterprise, the study of philosophy can be approached from many directions and need not involve a hierarchy of prerequisites. Philosophy majors pursue many careers—teaching, law, medicine, city management, and sales. The philosophy department reflects the breadth and diversity of the philosophical enterprise and offers a wide variety of courses.

Major. A major requires a minimum of 27 hours of philosophy courses, at least 15 of which must be in courses numbered 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 100. The Meaning of Philosophy (3). General education introductory course. An exploration of the meaning of philosophic activity. Through an examination of several basic interpretations of the distinguishing intentions, characteristic procedures, and essential functions of the philosophic endeavor, course introduces some of the fundamental problems and possible values of philosophy. Develops a broad understanding of the meaning of philosophy as a diverse and self-critical historical enterprise.

>PHIL 125. Introductory Logic (3). General education introductory course. Deals with the uses of logical concepts and techniques to evaluate and criticize reasoning. Studies some elementary systems of formal logic. Arguments evaluated are drawn from such diverse fields as law, science, politics, religion, and advertising.

PHIL 129. University Experience (3). An examination of the structure, process, and problems of university education in the contemporary setting. Attends especially to the personal, moral, and spiritual problems and opportunities presented by the modern university experience. Provides clarification and guidance in understanding the university and in choosing one's own future.

>PHIL 144. Moral Issues (3). General education introductory course. An introduction to 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 300. 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 creation of the pre-scientific world view and the development of science, and analytic with respect to understanding the goals, methods, and limits of contemporary science. No prerequisite but prior completion of general education requirements in science is desirable.

>PHIL 301. Language and Philosophy (3). General education further study course. Cross-listed as LING 301. Examines the relationships between philosophy and language. Focuses on questions such as: What is the relation between language and thought? Language and the world? What can the study of language contribute to the resolution of philosophical problems?

>PHIL 302. Values and the Modern World (3). General education issues and perspectives course. Examines the philosophical pressures on values wrought by rapid modern cultural and technological change. Explores the relations between social values and social institutions, provides a framework for critically and objectively thinking about moral values, and considers various standards proposed for resolving moral dilemmas.

>PHIL 303. Nineteenth Century Philosophy (3). General education further study course. A study of selected 19th century philosophers or systems of thought such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bradley, Kierkegaard, Peirce, Nietzsche, Comte, Dilthey, Schleiermacher, idealism, materialism, positivism, empiricism, and pragmatism.

>PHIL 305. Analytic Philosophy (3). General education further study course. Studies the rise of analytic philosophy in the 20th century, emphasizing the themes unifying philosophers who originated modern philosophical analysis. Includes the nature of analysis and the relationship between analysis and classical philosophical problems, such as the nature of reality, the nature of knowledge, the nature of language, the nature of morality.

>PHIL 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 311. Philosophy of Law (3). General education further study course. An introduction to philosophical problems arising in the theory and practice of law. Includes the objective basis of legal systems, the relationship between morality and legality, the justifiability of civil disobedience, the limits of legal constraints on the individual, and the nature and justification of punishment. Attention to classical and contemporary readings.

>PHIL 313. Political Philosophy (3). General education further study course. Examines various philosophical issues concerning political systems. Discusses issues such as the nature of political authority, the rights of individuals, 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, Hutton, Wollf, and Kant, and movements such as empiricism, rationalism, the Scottish common sense school, and idealism.

>PHIL 320. Philosophy of Science (3). General education further study course. A study of the methods, goals and world views of the sciences with attention to such topics as the structure and evaluation of scientific theories, the nature of explanation, the dynamics of scientific revolutions, and the impact of science on human society and values.

>PHIL 322. Early Modern Philosophy (3). General education further study course. Studies philosophical thought in the period from the Renaissance through the 17th century with selections from philosophers such as Pico, Vico, Galileo, Cusanus, Telesio, Erasmus, More, Hobbes, Bacon, Machiavelli, Descartes, Spinoza, Leibniz, Malebranche, and Locke.

PHIL 325. Formal Logic (3). Cross-listed as LING 325. Studies systems of formal logic including sentential and predicate logic. Emphasizes the uses these systems in the analysis of arguments.

>PHIL 327. Philosophy of Health Care (3). General education further study course. Examines 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 331. Ancient Greek Philosophy (3). General education further study course. Examines the development of Greek philosophy in its major phases, including an exploration of the Milesian and Eleatic traditions, Pythagoras, the Atomists, the Pluralists, the Sophists, Socrates, Plato, and Aristotle.

>PHIL 338. Philosophy of Feminism (3). General education further study course. Cross-listed as WOM S 338. Explores philosophical issues raised by the feminist movement emphasizing conceptual and ethical questions.

>PHIL 345. Philosophy of Sex and Love (3). Examines the ethical, metaphysical, and conceptual dimensions of sex and love. Includes the nature of sex, sexual perversion, homosexuality, pornography, sadomasochism, the nature and varieties of love, the features of love, and the relationship between love and sex. Uses selections from writings of both historical and recent authors.

>PHIL 346. Philosophy of Religion (3). General education further study course. Cross-listed as REL 346. Examines some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, human immortality, and the problem of evil.

PHIL 350. Ancient Chinese Philosophy (3). A survey of Chinese philosophy during the pre-Han period, roughly 500-200 BCE. Includes major figures Confucius, Mencius, Mo-Tzu, Hsu-Tzu, Chuang-Tzu, Lao-Tzu, and Han Fei-Tzu. Includes major positions Confucianism, Mohism, Legalism, Taoism, and Dialecticism.

>PHIL 354. Ethics and Computers (3). General education further study course. Ethics with application to the ethical issues which may arise from the use of computers, including the moral responsibility of computer professionals for the effect their work has on persons and society; the moral obligations of a computer professional to clients, employer, and society; the conceptual and ethical issues surrounding the control and ownership of software; and the justifiability of regulation of the design, use, and marketing of computer technology. Prerequisite: junior standing or departmental consent.
PHIL 360. Ethical Theory (3). General education further study course. A study of selected topics in ethics. Investigates issues such as the meaning and justification of moral judgments, the nature of morality, the relations between normative categories and the concept of justice; and the problem of revolution in moral schemas. Prerequisite: one course in philosophy.

PHIL 375. Philosophy of the Arts (3). General education further study course. Intensively examines one or more fundamental problems or themes in the philosophy of art or in the special aesthetics of painting, music, sculpture, literature, drama, movies, and so forth. Includes the problem of tragedy; the character of the aesthetic attitude, the function of the arts, the legitimacy of general art theory, the presuppositions of specialized art theory, the creative act, art and truth, art and life, and the nature and function of art criticism.

PHIL 385. Engineering Ethics (3). Examines representative ethical issues that are unique to engineering, including professional responsibility and integrity; whistle-blowing; conflict of interest; ethical issues in engineering consulting and research; engineering and environmental issues; and engineering in a global context.

PHIL 400. Honors Seminar (3). Cross-listed as HNRS 400. An honors course on a special topic, to be announced. Repeatable for credit up to 6 hours. Prerequisite: honors student or departmental consent.

PHIL 421. Philosophy of Mind (3). Critically examines recent developments in the philosophy of mind. Topics may include the nature of consciousness, mental representation, the mind/body problem, mental causation, psychological explanation, and the computational theory of mind.

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; universals; and necessary truths. Includes selections from both historical and recent writings. Prerequisite: one course in philosophy.

PHIL 546. Rationalism (3). A study of the philosophical views that emphasize reasoning rather than sensory experience as the source of knowledge with particular attention to the philosophies of Descartes, Spinoza, and Leibniz.

PHIL 549. Topics in Ancient Philosophy (3). Explores one decisive issue in philosophy from the time of Thales through the Stoa. The examination of an issue may confine itself to one period within the total span of ancient philosophy or it may trace the issue throughout the span, indicating its contemporary treatment. Some issues treated are: the nature of what is, the concept of the sacred, the meaning of truth, the relation of invariance and process, the existence of universal standards of thought and conduct, the problem of knowledge, skepticism, the nature of language, and the character of philosophical inquiry.

PHIL 550. Metaphysics (3). An exploration of some basic topics in the theory of reality. Includes such notions as space, time, substance, causality, particulars, universals, appearance, essence, and being. Prerequisite: one course in philosophy.

PHIL 555. Philosophy of the Social Sciences (3). Studies such topics as the relations of social science with natural science and philosophy; methodological problems peculiar to social science, the nature of sound explanation concepts, and constructs and the roles of mathematics and formal theories in social science.

PHIL 557. Contemporary European Philosophy (3). An exploration of a theme, issue, philosopher, or movement in contemporary European philosophy. Includes philosophers such as Husserl, Heidegger, Jaspers, Gadamer, Habermas, Marcuse, Adorno, Bergson, Sartre, Merleau-Ponty, Bachelard, Lacan, Derrida, Foucault, and Ricoeur. Examines philosophical movements such as phenomenology, idealism, existentialism, structuralism, process philosophy, hermeneutics, and Marxism.

PHIL 585. Studies in a Major Philosopher (3). A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: instructor's consent.

PHIL 590. Special Studies (3). Topic for study announced by instructor. Repeatable for credit. Prerequisite: instructor's consent.

PHIL 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 in different branches of philosophy. The analogy between minds and computers "cognition is a computation and the mind is a computer." It is contrasted with "there are mental features not accessible to computation." Discusses the relevance of Godel's theorems and of other results in the domain of computability in this context. Prerequisite: at least one 200-level course in computer science or philosophy, MATH 243 and 5 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 (2-3). For the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite: departmental consent.

Courses for Graduate Students Only

PHIL 805. Business and Morality (3). Critically examines moral issues particularly germane to business. Includes theories of distributive justice, theories of property rights, the role of business as a social institution, employment rights and obligations, environmental issues, and theories of socially responsible investment practices. Readings from classical and contemporary authors.

PHIL 850. Directed Reading (3). For the graduate student desiring independent study and research in an area of special interest. May be repeated for credit. Prerequisite: departmental consent.

Physics (PHYS)

Physics is the fundamental science—it is the study of matter and energy and their interactions. Physics is the basis for all science and for all applied science and engineering. Physicists study everything from elementary particles to galaxies, from semiconductors to chaos.

Because physics is the basic underpinning for all of science and technology, physics majors have many career alternatives. Many continue their education at graduate and professional schools—in physics or in chemistry, biology, geology, engineering, medicine, law, or business. Those who enter the job market directly find their knowledge and technical skills, particularly in problem solving, modeling, computers, and electronics, to be strong selling points.

Major. The following courses are required for a physics major: PHYS 213-214 or 313-314, 315-316, 551, 621, 631, 641, and 651; MATH 555 and 545, 547, or 757; and 5 hours in chemistry.

For the Bachelor of Arts (BA) degree, 2 additional hours of PHYS 516, 517, or 616 plus 6 hours of upper-division physics electives are required.

For the Bachelor of Science (BS) degree, three semesters chosen from PHYS 516, 517, and 616; 8 additional upper-division hours in physics; and 5 additional hours in chemistry are required. Two semesters of foreign language, or equivalent, are also required.

Chemical Physics Option. A student majoring in physics may select a chemical physics option. This option requires four courses in chemistry, beyond the 111-112 sequence, in place of upper-division physics electives. With department approval, the chemistry courses could substitute for required courses covering similar topics.

Engineering Physics Option. A student majoring in physics may select an engineering physics option. This option requires four courses approved by the physics department from a given engineering department in place of upper-division physics electives. With department approval, the engineering courses could substitute for required courses covering similar topics.

Other Options. Other programs are available which provide the student an opportunity to combine the study of physics with an interest in another area. On an individual basis, students have included interests in
mathematics, geology, computer science, biological sciences, business, and education.

Minor: A minor in physics consists of PHYS 213-214 or 313-314-315-316 and at least 6 additional hours of physics courses numbered above 500.

Lower-Division Courses

>PHYS 111. Introductory Physics (4). 3R; 3L. General education introductory course. A general physics course for liberal arts students and those who have not had physics in high school. Includes mechanics, heat, electricity and magnetism, wave phenomena, and modern physics. Not open to students who can meet prerequisites for PHYS 313. Prerequisite: two years of high school algebra or one each of algebra and geometry or equivalent.

>PHYS 131. Physics for the Health Sciences (3). General education introductory course. A background in basic physics for students in health-related professions. The choice of topics, the emphasis on problems, and the detailed applications are directed toward the special uses of physics in the health sciences. Prerequisites: two years of high school algebra or one year each of algebra and geometry or equivalent.

PHYS 151. Preparatory Physics (2). A general physics course for those who have not had adequate preparation for PHYS 313. Emphasizes problem solving using selected areas of physics, including vectors, one-dimensional motion, rotational motion, equilibrium, elasticity, hydrostatics, thermal effects, lenses, and mirrors. Prerequisite: MATH 112.

>PHYS 195. Introduction to Modern Astronomy (3). General education introductory course. A survey of astronomy for the student with little or no background in science or math. The nature and evolution of the universe and objects in it are considered from the perspective of the question: Why do things happen the way they do? May include comparison of the planets, stars and black holes, galaxies and quasars, and the expansion of the universe.

PHYS 196. Laboratory in Modern Astronomy (1). 3L. The application of the techniques and analysis of the data of modern astronomy for the student with some background in the physical sciences. When 196 is completed, 195 and 196 count as a laboratory science. Requires fee trips. Prerequisites: two semesters of high school algebra or the equivalent, or instructor's consent, and PHYS 195, which may be taken concurrently.

PHYS 198. Discovery in Astronomy (3). Discusses a selected topic in astronomy to develop an understanding of the discoveries and problems of modern astronomy. Primarily for general students with little or no background in a science or math. See course schedule for topic each semester.

>PHYS 213. 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 214. General College Physics II (5). 4R; 3L. General education further study course. A continuation of PHYS 213. Electricity, light, and modern physics. Prerequisite: PHYS 213 or 313.

PHYS 223. The Mechanical Universe. (4). Studies 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.

Upper-Division Courses

>PHYS 313. University Physics I (4). General education introductory course. The first semester of a calculus-based physics sequence. Studies mechanics, heat, and wave motion. High school physics or PHYS 151 is assumed as prerequisite for this course. Natural science majors are required to take the lab, PHYS 315, that accompanies this course. Credit is not given for both PHYS 213 and 313. Corequisite: MATH 243.

>PHYS 314. University Physics II (4). General education further study course. The second semester of a calculus-based physics sequence. Studies electricity, magnetism, and light. Natural science majors are required to take the lab, PHYS 316, that accompanies this course. Credit is not given for both PHYS 214 and 314. Prerequisites: Math 243 with a grade of C or better and PHYS 213 with a B or better or PHYS 313.


>PHYS 320. Scientific Thinking (3). General education and perspective course. How science, particularly physics, is done. How do we know what we know? What do we mean when we say, as scientists, that we understand a phenomenon? How do we approach a problem? Emphasizes the nature of science rather than particular theories. Gives an appreciation of science as a human intellectual activity and the picture that modern physics gives us of the universe. No prerequisites.

>PHYS 395. Solar System Astronomy (3). General education further study course. Studies the sun, major planets, and minor bodies of the solar system, particularly their nature and origin. Discusses classical ground-based observations and the results of satellite investigations. Primarily for students with little prior contact with science.

PHYS 481. Cooperative Education in Physics (1-4). Complements and enhances the student's academic program by providing an opportunity to apply knowledge gained through course work to job-related situations. No more than 4 hours earned in PHYS 481 may be applied toward satisfying the requirements for a major in physics. Offered Cr/NoCr only. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

*PHYS 501. Special Studies in Physics for Educators (1-3). 3L. A series of courses covering basic physical concepts which provide physical science background for teachers. Repeatable for a maximum of 5 hours. Prerequisite: in-service or pre-service teacher.

PHYS 516. Advanced Physics Laboratory (2). 4L. Experiments in classical and modern physics to stress scientific methods and experimental techniques. The experiments are open-ended projects requiring individual study. Repeatable up to a maximum of 8 credit hours. 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 use of vacuum tubes, transistors, IC, and digital circuits. Prerequisite: PHYS 514.

*PHYS 551. Topics in Modern Physics (3). An introduction to selected areas of modern physics emphasizing the features of atomic nuclear and solid state physics that require modifications of classical physics for their explanation. Prerequisite: PHYS 214 or 314 or departmental consent. Corequisite: MATH 344.

PHYS 555. Modern Optics (3). Geometrical and physical optics, coherence theory, and Fourier optics. Additional topics may include radiation, scattering, optical properties of solids, and optical data processing. Prerequisites: PHYS 214 or 314 and MATH 344.

PHYS 600. Individual Readings in Physics (1-3). Repeatable but total credit may not exceed 6 hours for physics majors. Prerequisite: departmental consent.

PHYS 601. Individual Readings in Astrophysics (1-3). Studies several topics in astronomy and astrophysics in depth. Lectures, independent readings, and student projects may be assigned. May be repeated up to 6 hours. Prerequisite: instructor's consent.

PHYS 616. Computational Physics Laboratory (2). 1R; 2L. Provides a working knowledge of computational techniques with applications in both theoretical and experimental physics, including a brief introduction to the FORTRAN language. Prerequisites: PHYS 551 and MATH 555.

*PHYS 621. Elementary Mechanics (3). Motion of a particle in one and several dimensions, central forces, the harmonic oscillator, and the Lagrangian formulation of mechanics. Prerequisites: PHYS 214 or 314 and MATH 344 with grades of C or better.

*PHYS 631. Electricity and Magnetism (3). Direct and alternating currents; electric and magnetic field theory, including an introduction to Maxwell's electromagnetic wave.
theory. Prerequisites: PHYS 214 or 314 and MATH 344 with grades of C or better.

**PHYS 641. Thermophysics (3)**. The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations, and an introduction to statistical mechanics. Prerequisites: PHYS 214 or 314 and MATH 344.

**PHYS 651. Quantum Mechanics (3)**. Introduction to quantum mechanics, the Schrödinger equation, elementary perturbation theory, and the hydrogen atom. Prerequisite: PHYS 551.

**PHYS 681. Solid State Physics (3)**. A one-semester introduction to solid state physics, which explores and explains—in terms of the microscopic processes that produce them—the thermal, mechanical, and electronic properties of solids. Discusses practical applications and interdisciplinary material. Prerequisite: PHYS 551.

**PHYS 714. Theoretical Physics (3)**. A study of mathematical techniques applicable to physics and other sciences. Instructor selects topics, such as power series, infinite products, asymptotic expansions, WKB method, contour integration and residue methods, integral transforms, Hilbert spaces, special functions, and integral equations. Prerequisites: MATH 555 or Instructor's consent.

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**Political Science (POL)**

Politics—a means of managing conflict and distributing the materials of society to its members—affords everyone because everyone lives in society and conflict exists in every society. This fact led the Greek philosopher Aristotle to observe centuries ago that “man by nature is a political animal.” While contemporary political scientists approach the study of politics in a variety of ways, all agree that politics is a central characteristic of human activity.

Political science students at Wichita State University take courses in at least four of five subject areas: (1) American politics and institutions, (2) comparative politics, (3) international politics, (4) political theory and philosophy, and (5) public administration. Most political science majors supplement their curriculum by taking elective hours in the humanities—history, philosophy, and literature, for example—and in other social sciences, such as economics, anthropology, sociology, and psychology. The department also recommends that students take courses in statistics and computer applications.

Students with political science degrees may become practicing politicians or they may pursue careers in public administration, government service, law, journalism, business, or teaching at the secondary or college level.

The political science degree program at Wichita State is designed to accommodate these career interests as well as others. The requirements for the major are flexible enough to permit students to concentrate in one or two areas.

**Major**. A major consists of POL S 121 and 30 additional hours, including at least one course in each of the five groups below.

- **Group 1**, Political Theory and Philosophy—POL S 232, 345, 444, or 547
- **Group 2**, American Politics—POL S 315, 316, 317, 318, 319, 358, 551, or 552
- **Group 3**, Comparative Politics—POL S 226, 320, 330, 523, 524, or 555
- **Group 4**, International Politics—POL S 335, 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 201-202, statistics, and computer science.

**Public Administration Emphasis in Political Science**. The goal of this emphasis is to provide students an educational foundation for jobs at basic levels of public service and for graduate study in public administration. Students should note that an undergraduate degree is usually not considered sufficient educational preparation for a professional career in this field.

Political Science (3 hours)—POL S 121, 232, 319, 321, and 500; students must also elect two of the following courses—POL S 315, 316, 317, and 551; elect one course from POL S 226, 320, 330, 523, and 524; elect one course from POL S, 335, 336, 337, 533, and 534; earn a minimum of 3 hours of internship, POL S 490; and complete the 30-hour requirement with political science electives.

Other social sciences (12 hours)—ECON 201 and 202; one course from among ANTH 102, a poli. S 100 or 210; either PSY 111 or SOC 111.

Other requirements (15-16 hours)—one of the following courses—ECON 231, SOC 501, STAT 370, or SUPA 301; one of the following courses—SOC 312 or SUPA 307; both ACCT 210 and 211 and one of the following courses—CS 105, DS 495, or PADM 625.

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**Lower-Division Courses**

**POL S 103. Games Nations Play: Problems in International Relations (3)**. Familiarizes students with a number of international problems to develop a sensitivity to international problems that will be a part of their lives and to create 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 RUSU 110 and HIST 110. Team-taught by faculty from history, political science, and modern and classical languages and literatures. Prepares students wishing to pursue additional courses and/or programs in Russian history, Russian language and literature, Russian government and politics, and/or international relations, including business. Covers medieval, czarist, Soviet, and present day (post-Soviet) Russia.

**POL S 121. American Politics (3)**. General education introductory course. An analysis of the basic patterns and structures of the American political system emphasizing policies and problems of American politics.

**POL S 150. Political Science Workshop (1-3).** Prerequisite: instructor’s consent.
Upper-Division Courses

>POL S 315. The Presidency (3). General education further study course. Focuses upon the evolution of the presidential office, the recruitment of presidents, and the nature of presidential power.

>POL S 316. 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. Analyzes politics in urban areas, including the nature and distribution of community power, influence and leadership, the nature of community conflict, the formation of policy, urban problems, and political solutions and trends in urban politics.

>POL S 318. Political Parties (3). General education further study course. The role of political parties in the American political decision-making process at the national, state, and local levels.

>POL S 319. State Government (3). General education further study course. Examines the role of the states in the federal system and compares state politics and their political institutions.

>POL S 320. Politics of Developing Areas (3). General education further study course. Surveys the political systems in Latin America, Africa, the Middle East, and south and southeastern Asia. Special attention to colonialism as a system, the effects of colonialism, and patterns of emerging nations.

>POL S 321. Introduction to Public Administration (3). A general survey of the scope and nature of public administration; policy and administration; administrative regulations and adjudication; organization and management; budgeting and fiscal management; public personnel administration; political, judicial, and other controls over the administration.

>POL S 322. East Asia (3). Cross-listed as HIST 222, REL 222, and LAS 122. 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 325. Women in the Political System (3). Cross-listed as WOM S 325. Examines the political process of policy making using policies of current interest concerning women. Explores the association of gender roles expectations with existing and proposed public policies that pertain to women's lives. Prerequisite: 6 hours of social science or instructor's consent.

>POL S 330. Post-Communist Europe (3). Systematically studies contemporary political developments in the former Soviet Union and East Europe. Examines major policy-making institutions and processes and considers the fundamental principles on which the political system is based. Includes selection of leaders and their roles in policy-making, legislative bodies; organization and representation of interest groups, political parties and elections; political aspects of the educational system, the media, religious institutions, and ethnicity.

>POL S 332. Internatinal Organizations (3). General education further study course. Focuses on the role of international organizations in the international system. Emphasizes the United Nations. Also covers some regional organizations. Either POL S 220 or 336, but not both, may be accepted toward a major in history.

>POL S 337. 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 the 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 States 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 358. American Political Thought (3). General education further study course. Considers selected topics in the development of political ideas in the United States.

>POL S 390. Special Topics in Political Science (1-3). General education further study course. An analysis of selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit.

>POL S 398. Directed Readings (1-4). 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 moved strongly in the direction of 20th century political philosophy. Philosophers of this period have collectively had a profound impact on political life in this century.

>POL S 481. Cooperative Education in Political Science (1-3). Provides practical experience to complement the student's more formal political science curriculum. Student programs must be approved by the department. Offered Cr/Nr only.

>POL S 490. Internship in Government/Politics. (3-6). (Washington, D.C. and Topeka, 3). Credit for an approved work experience in a public, quasi-public, or governmental agency, including an academic component. Washington interns participate in the program cosponsored 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 121 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 523. 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. Studies China's political system since 1949 in terms of non-Western goals and ideas of social organization. Uses themes of political integration and political development to minimize distortion or cultural bias. Emphasizes 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 communist and the ideological heritage; political culture; political leadership; leadership succession; political participation; the Chinese Communist Party; political communications and socialization; legal developments; policy choices; and major events, such as the Hundred Flowers Campaign, Great Leap Forward, and the Proletarian Cultural Revolution.

> **POL S 533. Policy Development in Foreign Relations (3).** General education further study course. The process of U.S. foreign policy making in the American structure of government, emphasizing institutional conflict.

> **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. Covers the importance of these new philosophies upon political structures and issues.

> **POL S 551. Public Law (3).** General education further study course. An analysis of the role of appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasizes judicial review of state and federal legislation, the separation of powers, federalism, the taxing power, and the commerce clause.

> **POL S 552. Civil Liberties (3).** General education further study course. An analysis of the role of the appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasizes the guarantees of the Bill of Rights and the 14th Amendment.

> **POL S 560. The Planning Process (3).** Cross-listed 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 systems 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.


> **POL S 587. Administrative Theory and Behavior (3).** Cross-listed as P ADM 587. A study of organization theory and the various approaches to the study of organization.

> **POL S 600. Senior Seminar (3).** Required of all political science majors. Includes segments on each of the four major fields of the discipline: American politics, comparative politics, international relations, and political theory, so students can integrate their prior learning experiences within the discipline. Prerequisites: senior status; 18 hours of POLS courses.

> **POL S 700. Advanced Directed Readings (3).** Repeatable for credit. Prerequisite: departmental consent.

> **POL S 701. Method and Scope of Political Science (3).** Emphasizes philosophy of science and methodology (as distinguished from method and technique) and exposes students to recent works of methodological 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. Emphasizes the laws governing public personnel management and the unique merit, equal employment opportunity, productivity, unionization, and collective bargaining problems found in the public sector.

> **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 government and politics 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, inter-local 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 865. State and Local Government Finance (3).** Cross-listed as ECON 865, HIST 865, and P ADM 865. An analysis of state and local government expenditure and revenue systems with an introduction to state and local financial administration. Prerequisite: P ADM 765 or instructor's consent.

> **POL S 867. State and Local Government Budgeting (3).** Cross-listed as P ADM 867. Analysis of the development and utilization of the budgetary process in government administration emphasizing the budget in relation to its role in policy formulation and management. Prerequisite: P ADM 865 or instructor's consent.

> **POL S 868. Seminar in Public Finance Systems (3).** Cross-listed as P ADM 868. An analytical study of selected topics in the politics and administration of revenue, expenditure, and borrowing of governmental organizations. Prerequisite: departmental consent.
POL S 873. Seminar Paper Option (3). Requires students to extensively revise a seminar paper they wrote within their area of emphasis. Paper is written under the direction of a faculty member and orally defended before a committee of three or more faculty, including a chairperson. Prerequisite: departmental approval.

POL S 874. Internship (3-6). SU 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). SU grade only. Requires the development of a research design for the thesis. The design must be submitted to a departmental committee for evaluation and approval. Prerequisite: departmental consent.

POL S 876. Thesis (1-3).

Psychology (PSY)

The course of study is designed to provide a breadth of knowledge in the field of psychology. Accordingly, the major requires students to choose courses from foundational areas (Group 1): traditional human oriented areas (Group 2); and applied areas (Group 3).

The program is designed to prepare students for postgraduate work in psychology but is flexible enough to accommodate the interests of students who do not intend to pursue graduate study in psychology. Such students may be career oriented (e.g., social work, management training) or simply have an interest in learning more about why we behave as we do.

Major. The major for the Bachelor of Arts (BA) degree consists of a minimum of 30 hours in psychology, at least nine of which are earned at Wichita State. PSY 111 is prerequisite for all higher number psychology courses. All BA majors are required to take PSY 111, 407, 411, and 601. In addition, 6 hours must be taken from each of the groups listed below.

Group 1: PSY 202, 322, 324, 327, 328, 352, 522, 532, or 522.

Group 2: PSY 304, 334, 344, 348, 414, 514, 524, 534, or 544.


Minor. The minor consists of a maximum of 15 hours selected in consultation with the student's major advisor.

毒性 Alcoholism and Drug Addiction Counselor: Association (KADA/CA) certification. KADA/CA certification requires PSY 118, 128, 138, 168, 178, 316, 326, 356, and 368 (to be taken last). PSY 118 is a prerequisite to PSY 316, 326, and 356. 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 WSC students to enroll in these courses. The certifying agency is KADA, not WSC.

Lower-Division Courses

PSY 108. Stress and Stress Management (3). 3R; 3L. Introduces the theories of stress and surveys major stress management techniques. Discussion emphasizes the conceptualization of stress and its social impact complemented by stress reduction techniques. Does not satisfy the University's social science requirement nor does it count for a psychology major.

PSY 111. General Psychology (3). General education introductory course. Introduces the general principles and areas of psychology. Includes learning, perceiving, thinking, behavioral development, intelligence, personality, and abnormalities of behavior. Course is a prerequisite for advanced and specialized courses in psychology.

PSY 118. Assessment Planning, Case and Records Management (2). Introduces diagnostic criteria for evaluating alcohol and other types of substance abuse and dependence in relation to other medical, health issues. Includes types of documentation, record keeping, and case management required of substance abuse counselors. Does not satisfy WSC's social science requirement nor does it count for a psychology major.

PSY 128. Pharmacology for Substance Abuse Counselors (3). Covers states of intoxication, withdrawal, and side effects associated with alcohol and substance abuse. Includes central nervous system and respiratory effects of brain function and control of the counter-associate medication. Does not satisfy WSC's social science requirement nor does it count for a psychology major.

PSY 138. Ethics and Confidentiality in Substance Abuse Counseling (3). Covers substance abuse client rights, state and federal regulatory concerns, client confidentiality, and professional code of ethics and confidentiality requirements of substance abuse counselors. Does not satisfy WSC'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 WSC's social science requirement nor does it count for a psychology major.

PSY 150. Workshop in Psychology (1-4).


PSY 168. Multicultural Issues in Substance Abuse (2). Covers how cultural, ethnic, racial, and other special population differences affect the use and abuse of addictive substances. Also includes adjusting counseling techniques to make them more culturally sensitive. Does not satisfy WSC's social science requirement nor does it count for a psychology major.

Upper-Division Courses

PSY 302. Psychology of Learning (3). General education further study course. Explores basic principles of how organisms learn. Highlights key concepts such as reinforcement, punishment, generalization of behavior across settings, and extinction of specific behaviors. Discusses important research, theoretical issues, and current trends. Prerequisite: PSY 111.

PSY 334. 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: PSY 111.

PSY 306. Introduction to Individual Counseling (3). Survey contemporary theories and techniques of individual counseling. Compares various theoretical approaches and includes practical applications of each theory studied. Introduces professional and ethical issues involved in individual counseling. Emphasizes the therapeutic relationship, effective listening, issues surrounding defense mechanisms, and crisis intervention. Prerequisite: PSY 111.

PSY 316. Industrial Psychology (3). General education further study course. Introduces the many roles of industrial 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: PSY 111.

PSY 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 understanding and organizing new and prior learned knowledge. Includes the study of attention, memory, thought, decision-making, and problem-solving processes. Prerequisite: PSY 111.

PSY 324. Psychology of Personality (3). General education further study course. An examination of psychodynamic, behavioral, trait, and other contemporary theories of personal. Personality. Gave consideration to major factors influencing personality, results of research in the areas of assessing personality, and some of the methods of treating personality disorders. Presents and discusses case studies. Prerequisite: PSY 111.

PSY 326. Introduction to Group Counseling (3). Survey contemporary theories and techniques of group counseling. Includes a comparison of varying group leader roles and styles and discussion of different types of counseling groups and their functions. Emphasizes therapeutic factors and processes in group counseling. Prerequisite: PSY 111.

PSY 332. Psychology of Perception (3). General education further study course. Explores current research and theory in perception and sensation. Emphasizes how organisms come...
to perceive and understand their environments with regard to perception of space, form, objects, and events. Also considers motivation and personality factors in perception. Prerequisite: PSY 111.

> PSY 334. 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: PSY 111.

> PSY 336. Alcohol Use and Abuse (3). General education further study course. Studies 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 psychosocial aspects of use of other than alcohol. Prerequisite: PSY 111.

PSY 386. Human Factors Psychology (3). The study of how people respond to the demands of complex machines and the varied environments of workplace, home, and other settings. Course introduces the tools and methods of machine, task, and environment design to achieve the matching of human capabilities and the demands of machines and environments so as to enhance human performance and well being. Prerequisite: PSY 111.

PSY 401. Psychological Statistics (3). Introduces basic quantitative techniques for the description and measurement of behavior, as well as tests for making decisions regarding the compatibility of data to scientific hypotheses. Covers probability models, t, chi square and F. Prerequisites: PSY III Q and MATH III or II.

> PSY 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-brained and dissociated personalities from the second perspective. Prerequisite: PSY 111.

> PSY 404. Psychology of Aging (3). General education further study course. Cross-listed as GERN 404. An examination of the issues surrounding the adult aging process. Includes personality and intellectual change, mental health of the elderly, and the psychological issues of extending human life. Special emphasis on the strengths of the elderly and prevention of psychological problems of the elderly. Prerequisite: PSY 111.

> PSY 405. Introduction to Community Psychology (3). General education further study course. Reviews 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: PSY 111.

PSY 411. Research Methods in Psychology (3). General education further study course. Covers the philosophy of research methods, experimental designs, appropriate data analysis techniques, and historical trends and developments in experimental psychology. The laboratory exposes students to representative experimental lab techniques in the major subdivisions of psychology. Actively involves all students in research project(s). Prerequisite: PSY 401.

> PSY 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: PSY 111.

> PSY 416. Psychology and Problems of Society (3). General education issues and perspectives course. Spotlights 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/separation, child abuse, juvenile delinquency, aggression, behavioral control, aging, and technology. Prerequisite: PSY 111.

PSY 426. Psychology of Work (3). Selects from standard topics of industrial psychology, examines in greater depth the seriousness of job satisfaction problems, effects of technological change, membership in unions, control of productive workers, facts and myths about the working woman, and similar topics. Prerequisite: PSY 111.

PSY 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 6 credit hours, but only 3 hours may be earned per semester. Offered Cr/NC only. Prerequisites: PSY 111 and departmental consent.

PSY 481. Cooperative Education (1-3). Provides practical experience, under academic supervision, that complements the student's academic program. Consultation with and approval by an appropriate faculty sponsor are necessary. Offered Cr/NC only.

Courses for Graduate/Undergraduate Credit

PSY 502. 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 1.

PSY 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: PSY 111.

PSY 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: PSY 111.

PSY 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-patient relationships, hospitalization, and prevention. May include a self-study of life style and behavior in relation to health and illness. Prerequisite: PSY 111.

> PSY 516. Drugs and Human Behavior (3). General education further study course. A survey of the actions and effects of use of legal and illegal psychoactive drugs and of the use of prescription drugs in the treatment of psychological disorders. Details social-cultural, personal, and situational determinants and consequences of drug use and abuse. Prerequisite: PSY 111.

> PSY 522. Biological Psychology (3). General education further study course. A review of the biological foundations of behavior. Includes the evolutionary basis of behavior, behavior genetics, a critical analysis of brain-behavior relationships, the role of hormones in behavior, and neurochemical correlates of behavior. Prerequisite: PSY 111.

PSY 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: PSY 324.

PSY 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: PSY 401.

> PSY 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: PSY 111.

> PSY 534. Psychology of Women (3). General education issues and perspectives course. Cross-listed as WOM 534. Psychological assumptions, research, and theories of the roles, behavior, and potential of women in contemporary society. Prerequisite: PSY 111.

> PSY 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: PSY 111 and instructor's consent.


PSY 546. Practicum in Applied Behavior Analysis and Social Learning (1). Ek. 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: PSY 536 and instructor's consent.

PSY 556. Introduction to Clinical Psychology (3). A survey of current ethical, conceptual, and research issues involved in the assessment and treatment of psychopathology. Reviews contemporary psychotherapies emphasizing the relative efficacy of each and the therapeutic mechanisms through which they initiate behavioral change. Prerequisite: PSY 324.

PSY 556. Perspectives on Self-Help Groups (3). Co-requisite: NURS 560 and SC WR 560. 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, exploring 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.

PSY 566. Computer Applications to the Behavioral Sciences (3; 2R; 2L). Introduces computer applications to the behavioral sciences including 1) techniques of analyzing experimental data, 3) statistical applications, 3) interactive computing, 3) "canned" statistical programs, 3) word processing, and 5 other current computer applications. Prerequisite: 9 hours in the social sciences.

PSY 60C. Systems and Theories in Psychology (3). Includes behaviorism, Gestalt psychology and structuralism. Attempts to develop the logical relations of these theories to each other as well as to common historical themes and current issues. Prerequisite: 15 hours of psychology including PSY 451 or instructor's consent.

PSY 608. Special Investigation (1-5). 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: 8 hours in psychology and instructor's consent.

PSY 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 nativist assumptions and research methods on 20th century psychology. Prerequisite: 9 hours of psychology or instructor's consent.

PSY 720. Aerospace Psychology (3). Exploration of the many roles of scientific psychology in aviation and aerospace science. Surveys the research and literature in areas such as psychophysiological aspects of flight, environmental effects on human performance in aviation, stress, skill requirements and training, pilot workload, cockpit control and display systems, and aviation safety. Prerequisite: 15 hours of psychology or instructor's consent.

PSY 750. Psychology Workshop (1-3). Specialized instruction, using various formats in selected topics and areas of psychology. Graded S/U.

Courses for Graduate Students Only

PSY 810. Advanced Research Methods I (4). 3R. 3L. Part one of a two-course sequence aimed at advanced treatment of statistical and research design issues. Statistical methods include analysis of variance, analysis of covariance, multiple comparisons, and multiple regression. Design issues include research planning, validity, quasi-experimental designs, prediction vs. explanation, and modeling. The associated lab provides basic computer skills for access to the mainframe and some basic training in SPSS-X, SAS, and BIOMED statistical packages. Prerequisite: Instructor's consent.

PSY 811. Advanced Research Methods II (4). 3R. 3L. Continuation of PSY 810. Statistical techniques emphasized are a combination of multiple regression, structural analyses including Path Analysis and LISREL, factor analysis, canonical correlation, and discriminant analysis. Includes advanced design issues. Students carry out research projects as part of the course requirements. The associated lab provides additional computer skills for access to the mainframe and some basic training in SPSS-X, SAS, and BIOMED statistical packages. Prerequisites: PSY 810 and instructor's consent.

PSY 812. Biological and Philosophical Foundations of Psychology (3). Develops the idea that psychology is a biological science. Accordingly, course examines the philosophical foundations of science itself before exploring the biological foundations and contextual nature of psychological science. Readings cover biological factors as they pertain to psychology: evolution, genetics, motivation, functional neuroanatomy, and physiology. Includes critical reviews of genetic determinism, neural localization, and hemispheric specialization. Prerequisite: Instructor's consent.

PSY 813. Cognitive/Learning Foundations of Behavior (3). Focuses on how human beings learn, maintain, and modify behavior and how cognitive knowledge is acquired, maintained, represented, and used. Serves as an integrated resource of the major issues and theoretical questions investigated in the psychology of learning and cognition. Provides a basic understanding of classical and instrumental conditioning, and the cognitive processes of memory, language, speech, thought, decision making, and problem solving. Prerequisite: Instructor's consent.

PSY 814. Personality and Individual Differences (3). Provides an advanced understanding of the theories and measurement of personality and individual differences. Also discusses the utilization of this information in an applied psychological setting. Prerequisite: Instructor's consent.

PSY 815. Social and Developmental Foundations of Behavior (3). Examines basic assumptions, theories, and methods in social and developmental psychology. Describes and analyzes research concerning the functional significance of social relationships for development and the embeddedness of behavior in social, ecological, and cultural contexts, focusing on a number of substantive issues such as person perception and social cognition, affiliation and attachment, socialization and interpersonal interaction, social support, and social roles, and contexts over the life span. Considers applications of theories and research in social development psychology to the solution of individual and social problems. Prerequisite: Instructor's consent.

PSY 820. Seminar in Human Factors (3). Focuses on a sample of contemporary human factors problems through review of current literature and theory. Content changes as new problems attain prominence internationally but a typical sample might be human factors in the aging population; human factors in empty space and navigation; and human factors in third-world industrialization. Prerequisite: completion of 9 hours of Foundations of Psychology doctoral coursework; for doctoral students from other disciplines, instructor's consent after an interview.

PSY 830. Seminar in Community-Clinical Psychology (3). Introduction to basic historical, conceptual, research, methodological, and ethical issues in community-clinical psychology. Examines the responsibilities and roles of psychologists in the promotion of human functioning. Reviews models and determinants of human behavior from individual, developmental, and ecological/contexual perspectives. Details the reciprocal relationship between research and practical applications of psychological knowledge and the application of that knowledge to human psychosocial problems. Prerequisite: Instructor's consent.

PSY 840. Seminar in Environmental Psychology (3). Explores historical, theoretical, and empirical bases of environmental psychology. Presents contemporary models of environmental psychology including the ecological, social, community, and human factors perspectives along with a historical overview 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 857.

PSY 841. Seminar in Motivation and Emotion (3). Interactive 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 302 and instructor’s consent.

PSY 843. Seminar in Psychotherapy (3). Provides an in-depth description and critical analysis of various theories and methods of psychotherapy; an examination of the efficacy of these therapeutic approaches, and a survey of common issues, in psychotherapy, such as process and outcome, and client and therapist variables in the therapeutic process. Prerequisites: PSY 111 and instructor’s consent.

PSY 910. Doctoral Dissertation (1-3). Graded SU only. Repeatable for credit. Prerequisite: admission to candidacy and instructor’s consent.

PSY 911. Graduate Research (1-3). Individual research. Graded SU. 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 apply the principles of human factors psychology. Prerequisite: advisor’s consent.

PSY 921. Psychological Principles of Human Factors (3). Focuses on the interaction of people with machines and technology in a variety of environments. Provides depth to the topics surveyed in PSY 386 and serves as a means of integrating cognitive, biological, and perceptual psychology in applied settings. Prerequisites: completion of undergraduate course in cognitive psychology or PSY 813; and Instructor’s consent after interview for doctoral students from other disciplines.

PSY 922. Seminar in Software Psychology (3). Intensive study of principles and methods of engineering psychology (human factors) applies to the design and evaluation of computer software. Includes research methods, programming as human performance, programming style, software quality evaluation, organizing the programming team, interactive interface issues, and the design of interactive computer systems. Prerequisite: Instructor’s consent.

PSY 930. Advanced Psychopathology (3). An overview of major categories of psychopathology consistent with the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders. Reviews descriptive features of each diagnostic category and information on the clinical course and etiology. Examines differing definitions of psychopathology and paradigmatic approaches to the study of psychopathology. Prerequisite: instructor’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-Clinical Psychology (1-3). Graded SU 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 Clinical Psychology (1-3). Gives the student further experience in developing clinical skills. Students are supervised in their clinical work with individual clients seen through the department clinic, and/or other appropriate sites. Graded SU only. Prerequisite: instructor’s consent.

PSY 934. Practicum in Community Psychology (1-3). Provides supervised practice working in community-based organizations on such tasks as needs assessment, program development, and program evaluation. Organizational settings may be in the areas of mental health, health, and education. Services may be prevention-oriented. Repeatable for credit. Graded SU only. Prerequisite: instructor’s consent.

PSY 935. Seminar in Cognitive-Behavioral Assessment (4). Surveys issues of reliability and validity; provides description, critical analysis, and practice in clinical use of such psychological assessment methods as interviewing, observation, self-report, and standardized intelligence and personality tests. Focuses upon comprehensive clinical assessment, including integration and reporting of assessment data for treatment planning. Prerequisite: instructor’s consent.

PSY 936. Seminar in Cognitive-Behavior Therapy (4). 3R; 3L. Reviews the theoretical and empirical support for specific behavior therapeutic practices. Approaches may include systematic desensitization, flooding, contingency management techniques, and 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; 3L. Focuses on the development and/or change of community-based programs and organizations and the implementation and funding of community-based programs. Explores theoretical and conceptual basis of these interventions, drawing on material from community psychology, clinical psychology, public health, health psychology, and applied social psychology. Helps prepare students to become involved as professionals in community-based health or mental health interventions in a variety of roles: as program developers, proposal writers, program implementers, and program managers. Prerequisite: instructor’s consent.

PSY 938. Seminar in Prevention (3). Reviews the historical, theoretical, and empirical bases of prevention psychology. Presents contemporary models of prevention psychology including the ecological, social, and community mental health perspectives. Could include primary prevention, empowerment, community-based prevention, self-help, social policy, and the prevention of psychosocial problems through environmental intervention. Prerequisite: instructor’s consent.

PSY 940. Development of Abnormal Behavior (3). Considers the descriptive characteristics of abnormal behavior; a developmental perspective. Considers the ecological, social/behavioral, 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). Develops the logic of fundamental measurement and applies it to human performance from detection to decision. Covers Signal Detection Theory (SDT) and compares it with threshold theory. Demonstrates procedures for assessing both detection and discrimination under both SDT and threshold theory. Develops information measurement and utility theory and applies it to the transmission and coding of information and to decision making respectively. Examines measures of work reliability and well-being. Prerequisite: instructor’s consent.

PSY 942. Seminar in Behavioral Development (3). A critical analysis of the concept of development and of theories of behavioral development. 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 302 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 inform themselves about the major religious traditions of the world and to think critically and constructively about religion as a dimension of human experience and a mode of human expression. The curriculum includes courses on major religious traditions, significant issues in religion, and methods of studying religion.

There is no major in religion but an emphasis in religion is available through the general studies program and a minor in religion is also possible.

Students contemplating an emphasis or minor in religion should discuss their academic program with a member of the department. A Bachelor of Arts degree major provides an additional option.

Minor. A minor in religion requires a minimum of 15 hours. A maximum of 6 may be taken at the 100 level.

Lower-Division Courses


REL 120. 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 those ideas and molded them in various forms and combinations. Course is historical and analytic not confessed; culminates in 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 polythetic world of the ancient Near East and Mediterranean civilizations of Babylon, Assyria, Egypt, Persia, Greece, and Rome from the period 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 130. 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 131. Traditional Religion and the Modern World (3). A study of some of the traditional religious systems (Buddhist, Hindu, Confucian, Taoist, Judeo, and Christian) and of several of the important modern criticisms of religion with a view to presenting 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). Focuses on Jewish customs and practices as well as Jewish religious thought.

REL 222. East Asia (3). Cross-listed as LAS 222, HIST 222, POL 222. 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 historical 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 meditation techniques, a type of religion for which India 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 traditions.

REL 224. 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 in 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 major 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 250. 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 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.

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 323. 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 ANTH 327. An examination of various concepts concerning the realm of the supernatural as held by various peoples around the world. Relates such religious beliefs and the resultant practices to the larger patterns of cultural beliefs and behaviors.

REL 333. Women and Religion (3). Cross-listed as WOM 333. Examines 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 its consequences for change.

REL 339. Religion in America (3). Cross-listed as HIST 339. Surveys various religious traditions in American history from colonial times to the present. Discusses how religious groups, beliefs, and issues have changed over time and how they interact with each other. Includes the different branches of Christianity and Judaism; the study of awakenings and revivals; the stories of prominent religious thinkers and leaders; immigrant religious traditions; the tensions between liberal and traditional religious forms; the prophetic and apocalyptic traditions in America; and the impact of Native American, Asian, and African beliefs and practices on the religious landscape.

REL 346. Philosophy of Religion (3). Cross-listed as PHIL 346.

REL 380. Special Studies (3). A concentrated intermediate study of a particular component of religious studies. Repeatable for credit.
REL 410. 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's religious
life as it has expressed itself throughout history.

REL 442. Greek and Roman Religion (3). The trans­formations
in the religions of the Mediterranean world and the
Near East between the conquests of Alexander the Great
and the Triumph of Christianity under Constantine. Covers
the traditional forms of Greek and Roman religion, the
impact of Greek culture and religion on the East after
Alexander, the mystery religions, the spread of oriental
cults in the Roman Empire, Gnosticism, astrology, and
the development of Christianity within the Roman Empire. At
its most inclusive level, course deals with the particular
religious synthesis lying at the basis of Western civilization: the
fusion of Jewish, Greek, and Roman patterns of thought in
the Christian world of antiquity.

REL 476. The Reformation (3). Cross-listed as HIST 576.

REL 480. Special Studies (3). A concentrated study of a
religious issue or text announced by the instructor when
course is scheduled. Repeatable for credit. Prerequisite:
Instructor’s consent.

REL 490. Independent Work (1-3). Designed for the student
capable of doing advanced independent work in a
specialized area of the study of religion that is not formally
offered by the department. Repeatable for credit. Prerequisite:
departmental consent.

Courses for Graduate/Undergraduate Credit

REL 750. Workshop in Religion (2-4).

REL 790. Independent Study (1-3). For the student who
is capable of doing graduate work in a specialized area
of the study of religion not formally offered by the
department. Repeatable for credit. Prerequisite: Departmental
consent.

Russian
See Modern and Classical Languages and Literatures.

Social Work (SC WK)
The undergraduate social work program, housed in
WSU’s School of Social Work, offers courses leading
to a Bachelor of Social Work (BSW) degree. The principal
objective of the BSW program is to prepare students
for beginning-level professional social work practice. The undergraduate social work program is
accredited by the Council on Social Work Education (CSWE). Students graduating from an accredited
BSW program are eligible for professional social work
licensure in Kansas.

Progression in the social work program has two
different phases: initial admission into the program and
application and acceptance into the practicum.

Requirements include a 2.500 overall GPA, com­pletion of foundation, and satisfactory completion of
the 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 practicum. Information and applica­tion materials for admission into the major and to the
field practicum are available from the social work office.

Lower-Division Courses

Aspects of social work practice relating primarily to
paraprofessional work with practitioners regarding basic
human needs and the fundamentals of helping. May be
offered with SC WK 750.

SC WK 201. Introduction to Social Work Practice and
Social Welfare (3). Introduction to the profession of
social work. Includes history of social work and social
welfare; introduction to the helping process; examination of
social problems, policies, and services; and current trends in
social services and programs. Community service activities
are required. Prerequisites: SOC 111 and PSY 111.

Upper-Division Courses

SC WK 300. 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. Prerequisites: SC WK 201.

SC WK 340. Human Sexuality (3). Cross-listed as WM
340. Provides a forum for information and discussion on
topics relating to physical, psycho-social, and cultural
components of human sexuality. Includes female and male
sexual attributes and roles, sexual problems, alternate life
styles, birth control, values, and sexuality and cultural
components of sexuality.

A practical experience with public and private sector
agencies which address a broad range of individual needs
and community problems. Topical journals focus upon
individual knowledge and skill development through field
experiences while engaged in the major social work cur­riculum. Repeatable as elective credit not to exceed 12
hours. Graded CR/NC.

Courses for Graduate/Undergraduate Credit

SC WK 500. Social Welfare Development and Policy
Analysis (3). Provides development of analytical frame­works for understanding the processes of policy formation,
factors shaping policy decisions, the content of program
designs, and the performances of social welfare policy and
service programs. Examines voluntary and proprietary sys­tem in the development of knowledge and skills for the
engagement of complex community resources, the prom­otion of service innovations, and the shaping of decisions in
the areas of public policy. Emphasizes diverse populations
in metropolitan environments. Prerequisites: POL S 121 or
HIST 132, SC WK 300.

SC WK 502. Social Work Interviewing: Strategies and
Techniques (4). Introduces the study and practice of inter­personal professional interaction skills within the frame­work of a social work helping process. Focuses on develop­
ing skills in professional observation, communication,
interviewing, recording, and reporting. Course is didactic
as well as interactive and includes an integrated laboratory
component focusing experiential learning. Required for
social work majors.

SC WK 512. Social Work Research (3). Provides an
introduction to methods of social work research. Examines
both qualitative and quantitative methodologies. Students
apply these methods to social work practice, providing the
foundation for advanced social work research.

SC WK 541. Women, Children, and Poverty (3). Cross­
listed as WOM S 541. Addresses the problem of poverty
among women in the U.S. today and examines existing and
proposed public policies designed to alleviate the problem.
Explores theoretical models of poverty policy analysis and
the role of values in their formulation and implementation.
Discusses issues of age, race, and family; special attention
to poverty among women in Kansas. Prerequisites: 6 hours of
social science preferably in women’s studies, including
WOM S 287, 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 6 hours. Prerequisite: instructor’s
consent.

SC WK 560. Person in Society I (3). Provides a begin­
ing theoretical framework within which the integration of
prior knowledge can be made regarding physical, mental,
and social development of the human being, perspectives
on American culture and subcultural variations and their
effect on human adaptability in the social environment, and
the relationship of those entities to beginning professional
social work practice. Prerequisites: 6 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 interac­
tion theories, group and family dynamics, majority/minor­ity
relations, organizational dynamics, community struc­tures,
and the effects of discriminatory structures and prac
SC WK 566. Perspectives on Self-Help Groups (3). Cross-listed as NURS 566 and PSY 566. Provides an interactive format that constitutes a community resource for health and human service professionals and promotes an interdisciplinary understanding of the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and research, explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experience with self-help groups on such topics as addiction, cancer and other illnesses, eating disorders, bereavement, mental illness, and parenting.


SC WK 602. Practicum I (4). Placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing performance of basic practice skills and understanding of the social welfare agency and its role in the community service network. To be taken concurrently with SC WK 601 except by program consent. Prerequisites: SC WK 502 and program consent.

SC WK 603. Generalist Practice II (3). Focuses on developing generalist social work practice knowledge and skills at the group, organizational, and community levels. Presents macro practice roles and skills and links to group and individual practice skills for beginning-level social work interventions with systems of all sizes. Must be taken concurrently with SCWK 605. Prerequisite: SC WK 601.

SC WK 604. Advanced Social Work Research (3). A critical look at practice, services, and professional issues, using social work research. Analyzes current social work practice as well as future directions. Prerequisite: SC WK 312 and an approved research methods course.

SC WK 605. Practicum II (5). Placement in community social welfare agencies for supervised direct service assignments emphasizing formulation of appropriate goals. Includes the selection of various social work roles and in-depth development of techniques and skills common to practice in the social welfare field. Prerequisite: SC WK 602.

SC WK 610. Topics in Social Work (1-3). Selected topics in practice, policy, research, and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area services institutions. Repeatable. Prerequisite: Instructor or program consent.

SC WK 700. Foundations of Generalist Practice I (3). Provides foundation content in the knowledge and skills for empowerment-based generalist social work practice with individuals, families, groups, organizations, and communities. Includes professional role development, communication and interviewing theory, skill development in social work assessment, intervention, and evaluation methods. Corequisite: SC WK 710.

SC WK 702. Foundations of Generalist Practice II (3). Provides continued social work practice foundation content emphasizing developing generalist knowledge and skill at the group, organizational, community, and societal levels. Emphasizes material on group process and organizational and community leadership in the development of a problem-solving model for work with systems of all sizes. Prerequisite: SC WK 700 or instructor's consent.

SC WK 710. Micro Human Behavior and the Social Environment (3). Provides theories and knowledge of human bio-psycho-social development and functioning of individuals and families, and of the interaction 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 theoretical base for the contextualization of social work practice within diverse environments and macro systems. Emphasizes understanding the needs of minority communities and on understanding change and empowerment strategies which further social justice in communities and organizations. Prerequisite: SC WK 710 or instructor's consent.

SC WK 716. Social Welfare Development (3). Critical examination of the history of American social welfare institutions, policies, and the social work profession as a context for understanding contemporary social policy issues. Provides the knowledge and skills needed to effectively analyze policy in practice with clients, and develop social policy both within their agencies and in the larger political arena. Students develop an appreciation for the profession's ethical commitment to promote social justice and the general welfare of society and to improve social institutions to meet basic human needs. Prerequisite: program approval.

SC WK 717. Social Welfare Policy and Analysis (3). Surveys social welfare institutions, emphasizing the strengths and weaknesses of programs within the context of the social problems they address. The 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 upon policy. Content on the effects of policy and social work practice includes the uses of professional roles in shaping the processes of policy formulation in agency and governmental arenas. Prerequisite: SC WK 716.

SC WK 720. Field Practicum I (3). Placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Includes developing understanding of the social welfare agency and its role in the community service network. 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 730. Graduate Topics in Social Work (1-3). Specialized instruction using a variable format in a social welfare relevant subject. Course may be offered together with SC WK 150. Prerequisite: Instructor's consent.

SC WK 750. Social Work Workshops (1-5). Selected topics in practice, policy, research, and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Repeatable for a total of 6 hours of credit.

SC WK 751. Fundamentals of Social Work Research (3). Provides an introduction to the components of quantitative research design and how research is designed to conduct studies which seek to improve social work practice. Introduces the basic concepts of the social work research process as well as the methods that are employed. Students develop a framework for critically evaluating methods employed in current social work research and the potential benefits of applying these research findings to social work practice. Prerequisite: program approval.

SC WK 760. Advanced Standing Seminar (3). Builds upon the advanced standing student's knowledge, experience, and skills by integrating social work theory, values, ethics, methodology, and literature. Based in the generalist perspective. Prepares students for the advanced generalist practice course work in the MSW program.

Courses for Graduate Students Only

SC WK 810. Cultural Competency for Advanced Generalist Practice (3). Examines the impact of culture, race, and ethnicity on client-worker interactions. Presents practice theories and interventions for culturally competent advanced generalist practice with different populations. Emphasize experiential learning of cultural competence skills to provide services cross-culturally. Prerequisite: Program consent.
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.

SC WK 860. Integrative Seminar for Advanced Generalist Practice (5). Integrates social work theories, knowledge, and skills to develop each student's framework for advanced generalist practice. Emphasizes applying social work theories in practice with populations at risk of violence. Develops skills in applying a wide array of social work roles within a multi-level practice environment. Prerequisite: SC WK 816.

SC WK 870. Clinical Assessment for Advanced Generalist Practice (3). Uses a biopsychosocial perspective to understand problematic patterns of functioning identified as diagnoses in the DSM-IV. Students critically examine the DSM-IV as a basis for social work assessment and learn its use within an advanced generalist practice perspective. Prerequisite: program consent.

Sociology (SOC)
Sociology—the scientific study of society and human interaction—is an opportunity to learn a great deal about yourself and the society around you. A major in sociology provides students with an understanding of human behavior in personal relations such as the family and friendships and how human behavior is affected by larger societal influences such as the economy, bureaucracies, and social problems. This understanding is useful in such fields as human services, business, and law.

Major: The study of society mandates specific skills for interpreting information and observations. Therefore, students majoring in sociology are required to enroll in the following courses:

### Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>SOC 111, Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 312, Introduction to Social Research</td>
<td>3</td>
</tr>
<tr>
<td>SOC 501, Sociological Statistics</td>
<td>3</td>
</tr>
<tr>
<td>SOC 512, Measurement and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>SOC 545, Sociological Theory</td>
<td>3</td>
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</tbody>
</table>

In addition to the five courses listed above, majors also must enroll in 15 hours of electives to complete the 30-hour major. With this flexibility, students can select specific areas of concentration such as deviant behavior, family, gender, gerontology, social organization, intimate relations, and urban sociology—or some combination of these specialties. Depending on your interests and goals, certain courses in related departments that meet your particular needs and are approved by your advisors may be counted toward a sociology major. No more than 6 hours of such courses may be included.

Minor: A minor in sociology consists of at least 15 hours, including SOC 111, Introduction to Sociology (3 hours) and at least 6 hours of courses, 300+.

**Lower-Division Course**

> SOC 111. Introduction to Sociology (3). General education introductory course. Introduces basic concepts, propositions, and theoretical approaches of sociology, including elementary methods of studying social phenomena. The basic course for students who intend to take additional courses in sociology.

**Upper-Division Courses**

> SOC 301. Computers and Society (3). General education further study course. Examines the interactions between humans and microcomputers and studies the effect of microcomputers upon social interaction and stratification within society. Focuses upon the work setting and the family. Includes new social roles (programmer, hacker, the cyberphobic, the cyberophile); 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 major research techniques found in sociology and related fields. Stresses conceptual understanding of all phases of the research process. Prerequisite: SOC 111.

> SOC 315. Marriage and Families (3). General education further study course. Emphasizes dating and marriage processes as they exist in the United States today. Examines the different family forms that exist in the U.S. and around the world and considers historical change. Aids students in the acquisition of a sociological perspective of the marriage process through an examination of social class, ethnicity, sex roles, dating cohabitation, and human sexuality. Emphasizes marital interaction, parenthood, family violence, marital dissolution, and the future of marriage.

> SOC 316. The American Male (3). General education issues and perspectives course. Cross-listed as WCM S 316. Examines the male role in America from a variety of sociological perspectives and within particular settings, for example, work, family, and leisure. Other relevant topics: socialization, intimacy, and adult developmental stages and crises. Discusses changing male roles produced by strains and conflicts in contemporary America.


> SOC 320. Contemporary Social Problems (3). General education further study course. Examines the theoretical frameworks and research methods used to examine contemporary social problems and applies these frameworks and methods to issues of concern within contemporary society. Includes deviance, social inequality, and discrimination. Prerequisite: SOC 111.
SOC 322. Deviant Behavior (3). General education further study course. The structure, dynamics, and etiology of those behavior systems that are integrated around systematic violations of the control norms. Presents and evaluates competing theories with the context of the assumption that humans are a social product. Prerequisite: SOC 111.

SOC 325. Parenting (3). General education further study course. Examines the role of parenting in American society from a number of different perspectives. Focuses on the major developmental changes facing couples as they move through the family life cycle. Covers the decision to have children, remaining childless, the transition into parenthood, parent-infant relationships, parents and school-age children, and the transition from active parenthood. Also includes single parents, divorce, step-parenting, and dual-career parents. Discusses several different parenting techniques and styles as well.

SOC 330. Social Inequality (3). General education further study course. An analysis of status, class, and caste in various societies, especially in American society. Also includes the relationship of social inequality to various social institutions. Prerequisite: SOC 111.

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 111.

SOC 336. Work in Modern Society (3). General education further study course. A broad overview of work in the modern economy. Emphasizes the historical development of industrial-based capitalism, both the organizational-level changes and relations between management and labor. Also examines from a sociological perspective the industrial and occupational level data focusing on changes in work environments, occupational and industrial opportunities, demographics of work occupations, and changes in compensation and work status.

SOC 338. Health and Lifestyle (3). General education further study course. Views health as a social characteristic which is defined and influenced by social processes. Studies the social resources for health which exist in social norms, relationships, and networks. Identifies variations in personal health practices according to characteristics such as social class and marital status. Considers changing social standards for health and the stigma given to poor health. Examines socially created risks to health and organized efforts to change unhealthy environments. Investigates the medicalization of society. Prerequisite: SOC 111 or departmental consent.

SOC 350. Social Interaction (3). General education further study course. Studies the effect groups have on individuals. Focus is on the symbolic interactional perspective in sociology. The goal is for students to understand how social interaction influences their daily activities. Includes the meaning and importance of the symbol; the nature and development of self-social roles and their influence on individuals and the social construction of society. Prerequisite: SOC 111.

SOC 398. Travel Seminar (1-4). An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science, and economics while visiting historic places of interest. Prerequisite: departmental consent.

SOC 481. Cooperative Education in Sociology (1-4). Provides the student with practical experience under academic supervision, that complements the student's academic program. Consultation with and approval by an appropriate faculty sponsor are necessary. CR/NC only. Prerequisite: instructor's consent.

Courses for Graduate/Undergraduate Credit

SOC 501. Sociological Statistics (3). Generally offered fall semester only. Application of descriptive and inferential statistics to sociological problems. Includes measures of central tendency, dispersion and association, simple linear regression, hypothesis testing, and analysis of variance. Prerequisites: SOC 111, SOC 312, MATH 111 or 331 or equivalent.

SOC 512. Measurement and Analysis (4). Generally offered spring semester only. An applied study of the concepts tools and methodological skills needed to conduct quantitative sociological research. Prerequisites: SOC 111, 312, 510.

SOC 513. Sociology of Aging (3). General education further study course. Cross-listed as GERN 513. Analyzes the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: SOC 111.

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 111.

SOC 516. Sociology of Gender Roles (3). General education further study course. Cross-listed as WOM 516. Analyzes the institutional sources of male and female roles, the source of changes in these roles, the consequent ambiguities and conflicts. Prerequisite: SOC 111.

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, and family. Reviews theory and research in the area with a special focus on the place of intimacy in social interaction. Prerequisite: SOC 111.

SOC 520. Family and Aging (3). Cross-listed as GERN 520. Analyzes the families and family systems of older people. Emphasizes demographic and historical changes, caregiving, and intergenerational exchanges and relationships. Prerequisite: SOC 111 or GERN 160 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 111.

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 111.

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 111.

SOC 537. The Social Consequences of Disability (3). Cross-listed as GERN 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 111.

SOC 538. Medical Sociology (3). Analyzes social and cultural factors related to physical and mental illness. Also includes the dynamics of communication and role relationships among patients and medical personnel and social research and theory related to the health professions. Prerequisite: SOC 111.

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 111.

SOC 540. Criminology (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: SOC 111.

SOC 541. Contemporary Corrections (3). Historical and contemporary programs for the treatment of offenders viewed as societal reactions to criminal behavior. Prerequisite: SOC 539 or 540.

SOC 545. Sociological Theory (3). Generally offered fall semester only. A comprehensive survey of sociological theory, spanning both classical and contemporary theorists relevant to the development of sociology. Prerequisite: 9 hours of sociology.

SOC 598. Internship (1-6). Supervises persons involved in internships or placements in the community where credit can be 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, and the family. Repeatable for a maximum of 6 hours credit. Prerequisites: SOC 111, 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 is necessary. Graded Cr/No Cr only.

*Prerequisite may be waived with departmental consent.

Courses for Graduate Students Only

SOC 801. Application of Advanced Statistical Techniques (3). Usually offered fall semester only. Seminar demonstrates the application of statistical packages via mainframe and personal computers to 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 thereof. Prerequisite: SOC 515 or departmental consent.

SOC 820. Seminar in Social Movements (3). Analyzes the elements in social movements as factors in social and cultural change. Prerequisite: departmental consent.

SOC 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 845. Seminar in Sociological Theory (3). Usually offered spring semester only. Examines classical and contemporary sociological theories and focuses on including the application of such theories in students' thesis and non-thesis projects. Prerequisite: SOC 545 or departmental consent.

SOC 847. Seminar in Recent Developments in Sociology (3). Major issues, new theories, new techniques of research, new areas of research, and new applications. Repeatable for credit but not to exceed 6 hours. Prerequisites: 15 hours of sociology and departmental consent.

SOC 851. Directed 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 fall semester only. Examines the academic roles of sociologists. Prerequisite: departmental consent.

SOC 870. Independent Reading (2-3). Advanced systematic reading in a topical area under the tutelage of a member of the graduate faculty. Repeatable for credit not to exceed 6 hours. Prerequisite: departmental consent.

SOC 875-876. Thesis. (3-6).

Spanish

See Modern and Classical Languages and Literatures.

Urban and Public Affairs, Hugo Wall School of

The Hugo Wall School of Urban and Public Affairs is committed to enhancing the quality of public life through high-quality graduate instruction, excellence in applied research, and responsive community service. This focus results not only in an excellent graduate education for students, but also allows a special connection with the community’s needs through research and service. By integrating teaching, research, and service, the school makes a distinctive contribution to Wichita State University’s long-standing commitment to service to Wichita, the surrounding communities, and the region.

The school serves as the academic home for the Master of Public Administration degree, the Center for Urban Studies, and the Kansas Public Finance Center. Through these units, faculty, staff, and students blend teaching, research, and service in the interdisciplinary field of urban and public affairs. The Hugo Wall School offers special opportunities for students interested in urban and public affairs. Students completing the Master of Public Administration degree gain experience through hands-on research and network with practitioners in the field of public administration.

The Hugo Wall School is committed to enhancing the quality of public life through high-quality graduate instruction, excellence in applied research, and responsive community service. This focus results not only in an excellent graduate education for students, but also allows a special connection with the community’s needs through research and service.

Financial Assistance

The school has two forms of financial aid available to provide students with financial assistance, as well as an opportunity to be directly involved with research and service projects. Financial aid in the form of graduate assistantships and fellowships is awarded competitively on the recommendation of the faculty in the Hugo Wall School of Urban and Public Affairs.

Graduate assistantship in the Hugo Wall School in instruction, as well as work directly with faculty and professional staff on research and community service projects through the Center for Urban Studies and the Kansas Public Finance Center. Graduate assistants work 20 hours per week with faculty and staff in the school’s teaching, research, and public service activities.

The Hugo Wall School has four endowed fellowships available for financial assistance to qualifying graduate students enrolled in the Master of Public Administration degree. These fellowships—the Hugo Wall, George Pyle, Mike Hill, and George Van Riper—are awarded on a competitive basis to students with exemplary records and specific career interests in the field of public administration.

Master of Public Administration

The Master of Public Administration (MPA) degree program, with instruction in public management, public finance, and public policy, prepares students for positions of leadership in public and nonprofit organizations. The degree is structured to respond to the unique student body of an urban university.

The Master of Public Administration (MPA) degree draws upon the methods and perspectives of the social and behavioral sciences, economics, and the humanities. The link between these disciplines and the challenges of public management are emphasized through the use of practitioners in the class-
Internships

Internships are an important part of the MPA program. Pre-service students are encouraged to take an internship which must last at least nine months. Internship (P ADM 890) carries 3 hours of credit and includes attendance at periodic seminars. Intern positions are remunerative and are awarded on a competitive basis. Although placement cannot be guaranteed, the public administration program has an excellent placement record.

Upper-Division Courses

>P ADM 400. Issues and Perspectives on the City (3). General education issues and perspectives course. An interdisciplinary introduction to issues facing the city. Includes trends in urbanization, market forces and the development of cities, the social context of the city, governing the city, financing local government, urban planning and public infrastructure, urban service delivery, and urban problems such as poverty, unemployment, crime, and pollution.

P ADM 402. Computer and Statistical Applications (3). Cross-listed as CJ 402, ETH S 402, and GERON 402. Introduces computer and statistical applications used in public agencies. Emphasizes availability and use of data sources, quantitative decision-making techniques, and interpretation of statistical analyses. Prerequisite: MATH 111 or equivalent.


Courses for Graduate/Undergraduate Credit

P ADM 501. Integrity in Public Service (3). Cross-listed as CJ 506, GERON 502, and ETH S 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. Emphasizes 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.

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 566. Management in the Nonprofit Sector (3). Examines the management and governance of nonprofit organizations. Includes strategic planning, marketing and fund-raising, management of financial and human resources (including volunteers), governing structures, and the role of boards.

P ADM 578. Administrative Theory and Behavior (1). Cross-listed as POL S 578. A study of organization theory and the various approaches to the study of organization.


P ADM 621. Environmental Law (3). Cross-listed as CJ 621 and ETH S 621. An indepth analysis of emerging federal, state, and local legislation; judicial decisions; and administrative policies in environmental protection. Explores the roles of a variety of governmental agencies and nongovernmental organizations as related to prevention and enforcement processes of environmental protection. Includes issues in the development and implementation of environmental policy. Prerequisite: an approved methods class.

P ADM 625. Computer Applications for Public Policy (3). Cross-listed as CJ 625, ETH S 625, and GERON 625. Familiarizes students with major types of software applications for microcomputers and their use in public policy analysis.

P ADM 651. Dispute Resolution (3). Cross-listed as CJ 651, ETH S 651, and GERON 651. Examines a range of topics including arbitration, negotiation, communications, mediation, arbitration, and other dispute resolution techniques. Includes criminal and victim mediation and both intergroup and inter-organization relations and dispute resolution techniques. Analyzes 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.
P ADM 700. Urban Affairs (3). A study of the policy issues faced by local government in an urban setting from a multidisciplinary point of view.

P ADM 702. Research Methods (3). Cross-listed as CJ 702, ETH S 702, GERON 702. Acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising, and utilizing both primary and secondary sources of data of the type used in policy, planning, and administrative research. Students must complete several short research projects.

P ADM 710. Public Sector Organizational Theory and Behavior (3). Cross-listed as POL S 710. Reviews the scope of the field of public administration, including a survey of key concepts and schools of thought underlying the field, and examines issues shaping the future development of the field.

P ADM 725. Management of Human Resources (3). Cross-listed as POL S 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation, and pay promotion policies. Emphasizes the laws governing public personnel management and on the unique merit, equal employment opportunity, productivity, unionization, and collective bargaining problems found in the public sector.

P ADM 745. The Environment of Public Administration (3). Surveys the political and governmental institutions that underlie the practice of public administration. Includes political systems, constitutional authority, legislative process, intergovernmental relations, and government regulation.

P ADM 750. Public Administration Workshops (1-3). Specialized instruction using variable format in a public administration or urban affairs relevant subject. Repeatable for credit.

P ADM 755. Special Topics in Urban and Public Affairs (3). Provides students with an opportunity to engage in advanced study in topics that are of immediate concern and arise only occasionally. Content varies with issues that arise, student needs, and faculty expertise. Directed to Master of Public Administration students. May be repeated if topics are different. Prerequisite: instructor’s consent.

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

P ADM 775. State and Local Government Law (3). Exposes students to the legal principles which underlie the foundation of governmental operation and administration.

P ADM 785. Public Works Administration (3). Introduces public works administration and management. Includes discussion of public works professionals; public works organizations and institutions; infrastructure planning, policy, and project analysis; procurement, purchasing, and contract administration; geographic information systems; and transportation, water, waste water, and surface water system construction, maintenance, and replacement.

P ADM 798. Independent Study (1-3). For graduate students to pursue research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Courses for Graduate Students Only

P ADM 802. Quantitative Methods for Public Sector Professionals (3). Cross-listed as CJ 802 and GERON 802. Uses standard 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 842. Administration in Local Government (3). Cross-listed as POL S 842. Examines administrative processes and problems in local government, including the role of the professional chief executive. Examines problems from the following: labor-management relations, program evaluation, county government reform, governmental decentralization, citizen participation, grant-in-aid programs, interlocal cooperation, affirmative action requirements, and service contracting. Prerequisite: POL S 317.

P ADM 845. Public Policy Analysis and Program Evaluation (3). Cross-listed as CJ 797. An overview of approaches to public policy analysis and program evaluation. Examines the roles of participants in public policy development, implementation, and evaluation. Explores policy and program functions and their intended and unintended effects. Focuses on methodologies for collection of data and their use in the assessment of programs and program impacts. Prerequisites: an approved statistics class and an approved methods class.

P ADM 865. State and Local Government Finance (3). Cross-listed as ECON 865, HIST 865, and POL S 865. Analyzes state and local government expenditure and revenue systems; introduces state and local financial administration. Prerequisites: P ADM 765 or instructor’s consent.

P ADM 866. 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 867. State and Local Government Budgeting (3). Cross-listed as POL S 867. Analyzes the development and utilization of the budgetary process in government administration emphasizing the budget in relation to its role in policy formulation and management. Prerequisite: P ADM 865 or instructor’s consent.


P ADM 890. Internship (3). Integrates academic pursuits and practical experience. Students admitted to the internship are assigned to work in an approved government, community, or private organization for a minimum of nine months. Prerequisites: completion of all P ADM core courses and 6 hours of additional graduate-credit courses.

P ADM 895. Public Decision Making (3). Focuses on decision making by public managers through case study method. Reviews models of public decision making. Explores public management from the perspective of public purposes, politics, organizational 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, ETH S 597, P ADM 597, or equivalent, and P ADM 702 and 802.

P ADM 898. Applied Research Paper (3). Original research project under a faculty member's direction. Project requires conceptualization, execution, preparation of a written report, and defense of that report before a faculty committee. Intended to be a major project or capstone activity completed at the end of a student's program of study. It must be an individual effort, not a group project. Prerequisite: graduate-level research methods class.

Women's Studies (WOM S)

The Center for Women's Studies is a resource and research center for scholarship concerning women. The center offers courses and administers a major and a minor in women's studies, a discipline which presents an analysis of gender in society through the use of a variety of approaches, including feminist theory. Students investigate such areas as changing gender role expectations, American and global social and cultural concerns, and the professional and
domestic contributions of women to the culture, especially concerning the role of women in the arts and sciences. Women’s studies may also be pursued as 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 3 hours for courses numbered 140 to 149. Other 100-level courses and workshps may not be counted for the major, except for 190, which may be counted.

In addition to women’s studies courses, appropriate cross-listed courses for the major may be selected from such fields as philosophy, sociology, social work, history, English, anthropology, religion, ethnic studies, psychology, communication, political science, and criminal justice. Students considering the major in women’s studies should be advised by a women’s studies faculty member regarding their academic programs, their vocational goals, and the selection of a humanities or social science track in the women’s studies major.

To pursue the Humanities focus, the following combinations of courses are possible:

12 hours of required courses, WOM S 287, 297, 387, and one of the following:
- WOM S 391, 482, or 586
15 hours of Humanities women’s studies courses (group 2 below) or combination of Humanities and Interdisciplinary courses (group 1 below)
3 hours of Social Science women’s studies courses (group 3 below)

To pursue the Social Science focus, the following combinations of courses are possible:

12 hours of required courses, WOM S 287, 297, 387 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 190, 287, 380K, 397, 391, 481, 482, 570, 586, 587

Group 2: Humanities women’s studies courses:
- WOM S 140, 330, 331, 332, 333, 338, 511, 512, 521, 522, 523, 533, 536, 537

Group 3: Social Science women’s studies courses:
- WOM S 141, 142, 240, 316, 325, 340, 342, 345, 361, 516, 533, 534, 541, 542, 543

Minor. The minor in women’s studies consists of a minimum of 15 hours of women’s studies courses, including WOM S 287 and 387. Restrictions on 100-level courses in the major (see above) also apply to the minor.

Certificate in Women’s Studies. The Certificate in Women’s Studies requires 12 hours of courses in women’s studies, including either WOM S 287 or 387. At least 6 credit hours must be at the 300-level or above, and may include 387.

Lower-Division Courses

WOM S 140. Journal Writing (1). Workshop acquaints students with the concept and practice of journal writing. Readings deal with specific themes (work, family, relationships and students are required to keep a daily journal. Course provides an intense journal writing experience for 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. Graded S/U.

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 190. 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 287. 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 S 316.

WOM S 325. Women in the Political System (3). Cross-listed as POL S 325. Examines the political process as policy making, using policies of current interest concerning women. Examines the roles of women involved in the making of public policies that concern women’s lives. Prerequisites: 6 hours of social science or instructor’s consent.

WOM S 330. Women’s Personal Narratives (3). Cross-listed as ENGL 336. Examines the literary genre of the journal as practiced by both modern 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 331. Women’s Biographies and Autobiographies (3). Examines women’s lives as constructed in the literary genre of biographical writing. Because women’s lives have been lived in the private rather than the public sphere, the importance of their lives has often been attributed to their domestic accomplishments, personal influence, and moral character. Reoding biographies of ordinary and extraordinary women in a historical framework reveals ways in which the expression of power has been transformed by social change. Prerequisites: ENGL 101, 102, and one course in literature.

WOM S 332. Goddesses in Myth (3). Traces the development of the characteristics, powers, and ideas about classical Greek and Roman as well as ancient Northern European goddesses from a prehistoric world-wide worship of female deities. Examines the female-dominated cultures and religions of the paleolithic and neolithic and then follows the transition from this ancient worship to the classical and Northern European concept of goddesses.
WOM S 333. Women and Religion (3). Cross-listed as REL 333.

WOM S 338. Philosophy of Feminism (3). Cross-listed as PHIL 338.


WOM S 342. Women in Management (3). Considers women in all phases of business with an in-depth examination of women in management. Includes sexual discrimination, sexual harassment, career development, dual career relationships, and women in international management. Promotes awareness on the part of both men and women of the role that women now play in business and the professions and their future potential in those institutions.

WOM S 345. Women and Dependencies (3). Provides information about women's dependencies and their relationship to constructions of gender. Examines dependencies on substances and processes (alcohol, street and prescription drugs, eating disorders, and dysfunctional relationships) in their social and personal context. Examines theories of treatment and recovery in relation to feminist theory and women's roles in co-dependency.

WOM S 346. 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 policies on occupations, wages, and family life.

WOM S 380. Special Topics (1-3). Focuses on intermediate topics of interest to women's studies.

WOM S 380K. Women and Peace (3). Explores women's issues from a global perspective in relation to policiess approved by the International Women's Decade conferences of the United Nations. Emphasizes understanding the impact of nationalism, race, class, and cultural values in creating obstacles to women's full participation in society. Explores strategies for achieving full human rights for women. Prerequisite: one course in women's studies and one course in history or political science.

WOM S 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.

WOM S 400. Special Topics (1-3). Provides an introduction to the exploration of various women's studies' themes.

WOM S 481. Cooperative Education (1-4). Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Offered On/Off only.

WOM S 482. Latina in Culture and Society (3). Examines what it means to be a Latina and a feminist in U.S. culture, confronting racism and sexism as well as being empowered through Latina identity. The exploration of Latina identity results in creative transformation and a new understanding of the relationship of self to community. Materials drawn from Chicana feminist studies in prose, poetry, criticism, and film, and from presentations by guest speakers.

Courses for Graduate/Undergraduate Credit

WOM S 511. Women in Early America, 1600-1830 (3). General education further study course. Traces women's contributions and experiences in building the U.S., 1600-1830. Includes both conventional and newly developed methodologies in women's history research.

WOM S 512. Women and Reform in America, 1830-Present (3). General education further study course. Examines the history of women in the U.S., 1830-present. Focuses especially on women's involvement in various social reform activities, efforts which eventually led to work toward equal rights and improved conditions for women.

WOM S 516. Sociology of Gender Roles (3). General education further study course. Cross-listed as SOC 516. Analyzes the institutional sources of male and female roles, the source of changes in these roles, the consequent ambiguities and conflicts. Prerequisite: SOC 111.

WOM S 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. Emphasizes the impact of the women's movement on the creative energies and on the career directions and opportunities of these women in the arts.

WOM S 523. Feminist Film Criticism (3). Applies critical methods of analysis from the field of feminist film studies (such as psychoanalysis, ideology critique, close textual analysis, narrative, and genre criticism) to the representation of women in film. Emphasizes historical development of feminist film theory and criticism as it relates to classical Hollywood narrative, film genres, and avant-garde film. Prerequisite: 3 hours of upper-level humanities or 3 hours of upper-level women's studies.

WOM S 530. The American Woman in History (3). Cross-listed as HIST 530.

WOM S 532. Women in Ethnic America (3). Cross-listed as ETH S 532 and HIST 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender, and sexuality in women's lives.

WOM S 533. Women and the Law (3). Introduces the legal aspects of women's rights, including the equal rights amendment to the U.S. Constitution; right to choose a name; sex discrimination in employment, education, and credit; welfare; and criminal justice. Also considers women in the field of law, such as lawyers and legislators.

WOM S 534. Psychology of Women (3). Cross-listed as PSY 534.

WOM S 535. Literary Images of Women: Diverse Voices (3). Cross-listed as ENGL 535. Explores literature written in English by women of diverse ethnic, racial, class, and other backgrounds as well as of varying sexual orientations, ages, and degrees of physical ability. Analyzes materials as literary works and as expressions of women's differences from one another. Works are selected based on their specific attention to the question of gender as it intersects with other elements of culture. Prerequisites: ENGL 101, 102, and one course in literature.

WOM S 536. Writing by Women (3). Cross-listed as ENGL 536. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored, and specific authors studied vary in different semesters.

WOM S 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 pro-
posed 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 287.

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 woman'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 contributions of women's studies to various academic disciplines. Prerequisites: WOM S 287 and 387, or 6 hours of women's studies courses, or instructor's consent.

WOM S 635. Leadership Techniques for Women (3). Cross-listed as COMM 635. Provides the female student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

Courses for Graduate Students Only

WOM S 870. Directed Readings. (2-3). For graduate students to pursue research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: Instructor's consent.

WOM S 880. Seminar in Women's Studies (3). Intensive study of selected women's studies topics. Seminar discussion, reports, and research project. Previous topics include Advanced Theories of Feminism and Contemporary Women's Fiction. Repeatable for credit with departmental consent. Prerequisite: Instructor's consent.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L means 4 hours of lecture and 2 hours of lab.
University Faculty—2002-2003 (as of April 15, 2002)

Note: Date(s) following title refers to time of initial (and successive) appointments. Faculty listed have academic rank.


Abdinnou-Helm, Sue, Associate Professor and Chairperson, Finance, Real Estate, and Decision Sciences (1998). BS, Birzeit University, 1983; MS, Southampton University, 1988; PhD, Indiana University, 1994.

Ackerman, Paul D., Associate Professor and Assistant Chairperson, Psychology (1968). BA, University of Kansas, 1964; MA, 1966; PhD, 1968.


Ahmed, Ikramuddin, Assistant Professor, Mechanical Engineering (2000). BSME, Bangladesh University of Engineering and Technology, 1988; MSME, University of Texas-Austin, 1993; PhD, 1997.

Alagic, Mara, Assistant Professor, Curriculum and Instruction (1999). BA/MA, University of Belgrade, Yugoslavia, 1975; PhD, 1985.

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.

Alexander, Gwen, Assistant Professor and Associate Dean for Administration, University Libraries (2001). BA, Regis University, 1995; MA, University of Arizona, 1997; PhD, 2001.


Anderson, Peggy J., Associate Professor, Curriculum and Instruction, and Associate Dean, College of Education (1993). BS, Emporia State University, 1967; MA, University of Kansas, 1979; PhD, Wichita State University, 1993.

Apel, Kenn, Professor and Chairperson, Communicative Disorders and Sciences (2001). BA, San Diego State University, 1981; MA, 1983; PhD, University of Memphis, 1983.

Armstrong, Richard N., Associate Professor, Associate Director, and Director of Basic Oral Communication Program, Elliott School of Communication (1987). BA, Southern Utah University, 1972; MA, Brigham Young University, 1974; PhD, Bowling Green State University, 1978.


Babich, Judith, Associate Professor, School of Performing Arts (1984). BA, Edgell College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.

Baddett, Barry T., Associate Professor, School of Art and Design (1993). BFA, Virginia Commonwealth University-Richmond, 1983; MFA, Syracuse University, 1990.

Bagai, Rajiv, Associate Professor, Computer Science (1990). MS, Birla Institute of Technology and Science, 1983; MS, University of Victoria, 1987; PhD, 1991.

Bahr, Behnam, Associate Professor and Graduate Coordinator, Mechanical Engineering (1988). BS, University of Wisconsin, 1980; MS, 1983; PhD, 1988.

Bair, Sue F., Assistant Professor, Kinesiology and Sport Studies (1966). BA, Wichita State University, 1961; ME, 1967.


Bakken, Linda, Professor, Administration, Counseling, Educational, and School Psychology (1985). BA, Northern Michigan University, 1960; MS, Utah State University, 1979; EdD, Boston University, 1983.


Bannister, Andrea, Associate Professor, School of Community Affairs, Criminal Justice Program, and Director, Regional Community Policing Training Institute (1995). BS, University of Illinois, Champaign-Urbana, 1983; MA, Indiana University, Bloomington, 1996; PhD, Michigan State University, 1985.


Barut, Mehmet, Assistant Professor, Finance, Real Estate, and Decision Sciences (2000). BS, Istanbul Technical University, 1988; MS, 1991; PhD, Clemson University, 1999.

Bates, Rodney, Assistant Professor and Graduate Coordinator, Computer Science (2000). BS, Kansas State University, 1967; MS, 1968; PhD, 1971.


Beehler, John M., Professor, School of Accounting, and Dean, W. Frank Barton School of Business (2000). BS, Pennsylvania State University, 1977; MBA, Indiana University, 1982; PhD, 1985.

Beehler, Pamela, Associate Professor, Kinesiology and Sport Studies (2000). BS, Pennsylvania State University, 1977; MS, East Stroudsburg University, 1980; PhD, Indiana University 1986.

Beeves, Julie L., Professor, School of Music (1986). BM, Peabody Conservatory, 1974; DMA, University of Colorado-Boulder, 1982.

Beggs, Donald L., President and Professor of Education (1999). BSE, Southern Illinois University, 1963; MEd, 1964; PhD, University of Iowa, 1966.


Belk, Sriram (Sam), Assistant Professor, Management, and Assistant Director, Center for International Business (2001). BS, Karnataka University, 1983; MBA, 1985; MS, Temple University, 1992; PhD, 1994.


Bereman, Nancy, Associate Professor, Management, and Associate Dean, W. Frank Barton School of Business (1980). BA, Wichita State University, 1969; MBA, 1974; PhD, University of Minnesota, 1983.

Bergen, Wesley, Visiting Assistant Professor, Religion (1997). BA, University of Manitoba, 1983; MDiv, Lutheran Theological Seminary, 1985; STM, St. Andrew's College, 1989; PhD, Emmanuel College, University of Toronto, 1996.

Birnstorf, Elaine D., Associate Professor, School of Music, and Acting Associate Dean, College of Fine Arts (1992). BME, Wichita State University, 1976; MME, 1976; PhD, 1993.

Bevis, Laura, Assistant Professor, School of Nursing (2001). BS, University of New Hampshire, 1984; MSN, Catholic University of America, 1992.


Bieberly, Clifford, Assistant Professor, Elliott School of Communication (1995). BA, Wichita State University, 1972; MAC, 1981.

Billings, Dorothy K., Associate Professor, Anthropology (1968). BA, University of Wisconsin, 1959; PhD, University of Sydney, 1972.

Bischoff, William, Professor, Geology, and Dean, Liberal Arts and Sciences (1984). BA, DePauw University, 1979; MS, Northwestern University, 1982; PhD, 1983.

Black, Phillip C., Assistant Professor, School of Music (1986). BM, Ball State University, 1977; MM, University of New Mexico, 1980.


Blocher, Larry R., Professor, School of Music
Clark, Frances L., Associate Professor, Curriculum and Instruction (1992). BA, Southwestern College, 1966; MSEd, University of Kansas, 1971; PhD, 1981.

Clark, James E., Associate Professor, Economics, and Director, Center for Economic Education (1976). BA, Michigan State University, 1969; MA, Northwestern University, 1971; PhD, 1976.


Claycomb, Vincentia (Cindy) A., Associate Professor, Marketing and Entrepreneurship (1994). BBA, Wichita State University, 1979; MBA, 1991; PhD, Oklahoma State University, 1995.

Close, Dan E., Associate Professor, Elliott School of Communication (1990). BA, Wichita State University, 1981; MA, 1993.


Cocharan-Bland, Diana L., Assistant Professor, Medical Technology (1987). BS, Emporia State University, 1979; MHS, Wichita State University, 1986; DPH, University of Oklahoma, 1998.

Cohen, Peter A., Professor, Psychology, and Dean, College of Health Professions (1999). AB, University of California-Berkeley, 1973; MA, San Diego State University, 1976; PhD, University of Michigan, 1980.


Colvin, Deltha Q. Assistant Instructor and Assistant Vice President for Student Affairs (1980). BA, Wichita State University, 1972.


Conlee, John T., Assistant Professor, Finance, Real Estate, and Decision Sciences, and Director, Legal Assistant Program (1994). AB, Bates College, 1962; JD, University of Chicago Law School, 1965; MA, University of Colorado, 1989.

Conrad, Mary E., Associate Professor and Chairperson, Medical Technology (1980). BS, Kansas Newman College, 1957; MS, Kansas State University, 1974; PhD, 1991.

Consiglio, Catherine A., Associate Professor, School of Music (1990). BA, Wichita State University, 1979; MA, New England Conservatory, 1983.

Cook, Robin A., Assistant Professor, Curriculum and Instruction (1990). BS, North Georgia College, 1993; MEd, 1994; PhD, Auburn University, 1998.

Corrigan, Mary C., Instructor, School of Community Affairs, Gerontology Program (1993). BS, Kansas State University, 1973; MA, Wichita State University, 1978.


Craig-Moreland, Delores E., Associate Professor, School of Community Affairs, Criminal Justice Program (1992). BA, California State University-Northridge, 1972; MA, 1973; PhD, University of Washington, 1988.

Cromwell, Paul, Professor, Criminal Justice Program, and Director, School of Community Studies (1996). BS, Sam Houston State University, 1967; MA, 1968; MPA, Texas Christian University, 1979; PhD, Florida State University, 1986.

Crum, Dorothy E., Professor, School of Music (1973). BA, Barrington College, 1966; MM, Western Kentucky University, 1969; DMA, University of Colorado, 1977.

D'Souza, Francis, Associate Professor, Chemistry (1994). BS, University of Mysore, India, 1982; MS, 1984; PhD, Indian Institute of Science, India, 1991.

Dassadzadeh, Mohammad, Professor, Finance, Real Estate, and Decision Sciences, and Barton Endowed Chair in Management Information Systems (1999). MS, Massachusetts Institute of Technology, 1978; MBA, American International College, 1979; PhD, University of Massachusetts-Amherst, 1985.


Datari, Darcey, Assistant Professor, Psychology (2000). BS, St. Ambrose University, 1985; MS, Texas Christian University, 1998; PhD, 2000.


Davis, Gayle R., Associate Professor, Women's Studies, and Associate Vice President, Academic Affairs (1982). BA, Muskingum College, 1966; MA, Michigan State University, 1975; PhD, 1981.


Daw, Margaret, Associate Professor and Chairperson, English (1993). BA, University of Virginia, 1979; MS, Northwestern University, Evanston, 1980; MFA, City University of New York, Brooklyn College, 1989.

Day, David, Assistant Professor and Assistant Director, Physician Assistant Program (1997). AAS, Seward County Community College, 1987; BS, Wichita State University, 1995; MPAS, University of Nebraska, 1999.


DeSantis, Durnna, Professor, International Business and Management, and Director, Center for International Business (1976). BSBA, University of Evansville, 1957; MS, Southern Illinois University, 1958; PhD, Indiana University, 1966.


Deyoe, Nancy, Associate Professor, Library, and Principal, Catalog, 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.

Dooley, Patricia, Associate Professor, Elliott School of Communication (1997). BA, University of Minnesota, 1975; MA, 1993; PhD, 1994.


Dowkes, Kathy A., Associate Professor and Associate Dean for Information Services, Library (1979). BS, Mississippi University for Women, 1978; MSLS, University of Kentucky, 1979; MPA, Wichita State University, 1985.


Dreifort, John E., Professor, History (1970). BS, Bowling Green State University, 1965; MA, 1966; PhD, Kent State University, 1970.

Dudte, M. John, Assistant Professor, Director of Emergency Services Education, Physician Assistant Program (2000). BS, Friends University, 1994; MPA, Wichita State University, 2000.

Duell, Orpha K., Professor, Administration, Counseling, Educational, and School Psychology (1967). BS, Kansas State University, 1963; MS, University of Illinois, 1965; PhD, 1967.

Duram, James G., Professor, History (1968). BA, Western Michigan University, 1961; MA, 1963; PhD, Wayne State University, 1968.


Eichhorn, David, Associate Professor, Chemistry (1996). BA, Harvard University, 1986; PhD, University of California, Berkeley, 1992.


Emery, Sandra L., Associate Professor, Curriculum and Instruction (1999). BSEd, State University of New York, 1980; MSEd, University of Kansas, 1987; PhD, 1997.


Erickson, David F., Associate Professor, Political Science (1992). BA, Wayne State University, 1972; MA, University of Michigan, 1976; PhD, University of Chicago, 1987.


Evans-Fletcher, Colleen, Associate Professor,


Hiltner, David, Assistant Professor, School of Art and Design (1999). BFA, Wichita State University, 1993; MFA, Syracuse University, 1997.

Hind, Emily, Assistant Professor, Modern and Classical Languages and Literatures (2001). BA, University of Kansas, 1995; MA, Pennsylvania State University, 1997; PhD, University of Virginia, 2001.


Ho, James C., Distinguished Trustees Professor, Physics, and Senior Fellow, National Institute for Aviation Research (1971). BS, National Taiwan University 1959; MS, University of California-Berkeley, 1963; PhD, 1966.

Ho, Lop-Hing, Associate Professor, Mathematics and Statistics (1989). BA, Chinese University of Hong Kong, 1979; MA, Princeton University, 1982; PhD, 1984.


Hoffmann, Klaus A., Professor and Doctoral Graduate Coordinator, Aerospace Engineering (1990). BS, University of Texas-Austin, 1972; MS, 1975; PhD, 1983.


Hogan, Linda, Assistant Professor, Medical Technology (1972). BS, Emporia State University, 1965; MT (ASCP), 1965; BB (ASCP), 1972; Med, Wichita State University, 1977.


Hrycak, Tomasz, Assistant Professor, Mathematics and Statistics (1999). MS, Technical University of Wroclaw, Poland, 1988; PhD, Yale University, 1995.

Hu, Xiaoming, Associate Professor, Mathematics and Statistics (1994). BS, Jiangxi Polytechnic University, China, 1982; PhD, University of Missouri-Columbia, 1993.

Huber, Tonya, Associate Professor, Curriculum and Instruction (1990). BS, Pennsylvania State University, 1982; MED, 1985; PhD, 1990.

Huckstadt, Alicia A., Associate Professor and Director, Graduate Program, School of Nursing (1975). BSN, Wichita State University, 1975; MN, 1978; PhD, Kansas State University, 1981; PhD, University of Colorado, 1990.


Hunter, Ann F., Assistant Professor, Dental Hygiene (1980). BS, Iowa State University, 1954; MS, 1955; PhD, Kansas State University, 1991.

Huntley, Diane E., Associate Professor, Dental Hygiene (1976). BA, University of Bridgeport, 1968; MA, State University of New York at Buffalo, 1971; PhD, Kansas State University, 1985.


Iacovetta, Ronald G., Associate Professor, School of Community Affairs, Criminal Justice Program (1973). BS, Colorado State University, 1965; MS, 1967; PhD, University of Connecticut, 1972.

Im, Kyung So, Assistant Professor, Economics (1989). BA, Sung Kyun Kwan University, 1981; MA, Michigan State University, 1993; PhD, 1994.

Iorio, Sharon H., Associate Professor, Elliott School of Communication, and Associate Dean, Liberal Arts and Sciences (1990). BA, University of Oklahoma, 1965; MS, Oklahoma State University, 1984; PhD, 1991.


Jackson, Ruth M., Professor and Dean, University Libraries (1999). BS, Hampton University, 1960; MSLS, Atlanta University, 1965; PhD, Indiana University, 1976.

Jacobs, Phyllis, Assistant Professor and Director, Undergraduate Program, School of Nursing (1990). BSN, University of Wisconsin, 1965; MSN, Washington University, 1967.


Jarman, Jeffrey, Assistant Professor, Elliott School of Communication, and Director of Debate and Forensics (1996). BS, Southwest Missouri State University, 1993; MA, University of Kansas, 1995; PhD, 1996.

Jarnagin, Bill D., Professor; Allen, Gibbs, & Houliak Faculty Fellow in Accountancy; and Director, School of Accountancy (1987). BSBA, Arkansas Polytechnic University, 1969; MBA, University of


Muma, Richard D., Associate Professor and Acting Chairperson, Physician Assistant (1994). BS, University of Texas Medical Branch-Galveston, 1987; MPH, University of Texas Health Science Center-Houston, 1993.

Murdoch, Katherine, Professor, School of Music (1985). BA, Humboldt State University, 1971; BA, 1977; MA, San Francisco State University, 1980; PhD, Eastman School of Music, University of Rochester, 1986.

Murphy, Dwight D., Professor, Finance, Real Estate, and Decision Sciences (1967). BS, University of Denver, 1957; JD, 1967.

Mathithacharoen, Achita (M), Assistant Professor, Finance, Real Estate, and Decision Sciences (2002). BusAdm, Thammasat University, Thailand, 1991; MBA, University of Memphis, 1997; ABD.


Myers, Walter J., Professor, School of Music, and Dean, College of Fine Arts (1965). BS, Ohio State University, 1936; MME, University of Colorado, 1961; MS, Performance, 1966; DMA, University of Missouri-Kansas City, 1975.

Myres, Yang Y., Associate Professor, Aerospace Engineering (1992). BSAE, University of Southern California, 1983; MS, California Institute of Technology, 1984; PhD, University of Southern California, 1991.

Nagati, M. Gawad, Associate Professor, Aerospace Engineering (1984). BS, Cairo University, Egypt, 1966; MS, Wichita State University, 1973; PhD, Iowa State University, 1984.

Nance, Donald W., Associate Professor and Director, Counseling Service (1968). BA, University of Redlands, 1964; MA, University of Iowa, 1967; PhD, 1968.


Nie, Xumin, Assistant Professor, Computer Science (1994). BS, Harbin Institute of Technology, China, 1982; MS, Temple University, 1986; PhD, University of North Carolina, 1989.


O'Hallerty Perez, Kathleen M., Associate Professor, Sociology (1985). BA, Clarke College, 1979; MA, Miami University, 1980; PhD, Purdue University, 1984.


Palmer, Michael, Assistant Professor and Director of Orchestras, School of Music (1999). BM, Indiana University, 1966; MM, 1967.

Palnirotto, Michael, Professor, School of Community Affairs, Criminal Justice Program (1994). BS, Mercy College, 1971; MS, City University of New York, 1974; PhD, University of Pittsburgh, 1980.


Parcell, William C., Assistant Professor, Geology (2001). BS, University of the South, 1994; MS, University of Delaware, 1997; PhD, University of Alabama, 2000.


Pendye, Ravindra, Associate Professor, Electrical and Computer Engineering (1994). BSEE, Osmania University, India, 1982; MSEE, Wichita State University, 1985; PhD, 1994.


Petersen, Dixie, Instructor and Clinical Supervisor, Curriculum and Instruction (1986). BA, University of Nebraska, 1970; MA, Wichita State University, 1978.

Pett, Timothy L., Assistant Professor, Management (1996). BA, Saint Leo College, 1989; MBA, University of Miami, 1992; PhD, 1996.

Phanesi, Maurice, Associate Professor, Economics (1966). BA, Fort Hays State University, 1968; MS, Oklahoma State University, 1966; PhD, 1967.


Phillips, Robert, Assistant Instructor, Modern and Classical Languages and Literatures, and Language Laboratory Director (1940). BA, Wichita State University, 1983; MA, 1990.

Pickard, Ruth B., Assistant Professor, Public Health Sciences (1942). BA, Kent State University, 1976; PhD, 1982.

Pikus, Keith, Associate Professor, History (1955). BA, University of California, 1953; MA, University of Washington, 1958; PhD, 1953.


Pitetti, Kenneth H., Professor, Physical Therapy (1987). BS, University of San Francisco, 1968; MS, Fort Hays State University, 1980; PhD, University of Texas Health Science Center-Dallas, 1988.


Popp, Harold A., Professor, School of Music (1967). BM, Ottawa University, 1959; MME, Indiana University, 1960; MFA, University of Iowa, 1967; PhD, 1969; MHIL (Honorary Degree), Ottawa University, 1979.

Porter, Stephen S., Associate Professor, Marketing (1995). BS, Friends University, 1976; MBA, Wichita State University, 1982; PhD, Oklahoma State University, 1994.

Price, Jay M., Assistant Professor, History (1999). BA, University of Mexico, 1991; MA, College of William and Mary, 1992; PhD, Arizona State University, 1997.

Quantic, Diane D., Associate Professor, English (1973). BA, Kansas State University, 1962; MA, 1966; PhD, 1971.


Quirin, Jeffrey J., Assistant Professor, School of Accountancy (2003). BS, Pittsburg State University, 1954; MBA, 1955; PhD, University of Nebraska-Lincoln, 1958.


Ravigururajan, Tiruvadi S., Associate Professor, Mechanical Engineering (1997). BE, University of Madras, 1978; ME, Howard University, 1981; PhD, Iowa State University, 1986; Licensed Professional Engineer-Iowa.


Reed, Paul E., Associate Professor, School of Music (1986). BM, Drake University, 1956; MM, 1957.

Reissig, Bradford D., Assistant Professor, School of Performing Arts (1999). BS, Kansas State University, 1991; MFA, Illinois State University, 1996.

Rhatigan, James J., Professor, Education, and
Senior Vice President (1965). BA, Coe College, 1957; MA, Syracuse University, 1959; PhD, University of Iowa, 1968.

Rhine, John, Assistant Professor, School of Music (1964). BA, Eastern University, 1964; MA, University of Michigan, 1969; PhD, University of Iowa, 1973.

Riessman, William. Associate Professor and Chairperson, English and Literature (1972). AB, California State University, Chico, 1959; MS, Iowa State University, 1961.


Rimmer, Glyn M. Boeing Professor of Global Learning (2001). BS, University of Queensland, 1980; PhD, 1986.

Riordan, Janice, Associate Professor, School of Nursing (1993). Diploma in School of Nursing, Evangelical Deaconess Hospital, 1955; BS, Kansas Newman College, 1970; MN, Wichita State University, 1973; PhD, Oklahoma State University, 1977.

Robarack, Clayton A., Professor, Anthropology (1985). BA, University of Nebraska, 1970; PhD, University of California, 1977.


Rogers, Ben F., Associate Professor, Philosophy (1969). BA, University of Tennessee, 1958; MAT, Vanderbilt University, 1961; MA, Indiana University, 1966; PhD, 1970.

Rogers, Christopher M., Assistant Professor, Biological Sciences (2000). BS, University of Wisconsin-Milwaukee, 1978; MS, Michigan State University, 1982; PhD, Indiana University-Bloomington, 1988.

Rogers, Michael A., Assistant Professor, Kinesiology and Sport Studies (1999). BS, Mount Union College, 1991; PhD, Kent State University, 1996.

Rokhsaz, Kamran, Associate Professor, Business Administration, Counseling, and School Psychology (1985). BA, University of Illinois, 1977; MA, Trinity Evangelical Divinity School, 1979; PhD, Purdue University, 1982.

Romig, Charles A., Professor and Chairperson, Administration, Counseling, Educational, and School Psychology (1985). BA, University of Illinois, 1977; MA, Trinity Evangelical Divinity School, 1979; PhD, Purdue University, 1982.


Roush, Dean, Associate Professor, School of Music (1985). BFA, Ohio University, 1973; MM, Bowling Green State University, 1975; DMA, Ohio State University, 1985.

Rousell, Brijette, Associate Professor and Coordinator of Undergraduate Teaching, Modern and Classical Languages and Literatures (1990). BA, University of La Sorbonne, 1976; MA, 1981; PhD, University of Kansas, 1991.


Rozelle, Robert W., Assistant Professor and Director, University Advising Center (1978). BA, University of New York, Cortland, 1966; MEd, Ohio State University, 1967.


Saalmann, Dieter, Professor and Chairperson, Modern and Classical Languages and Literature (1971). BA, Northwestern State University, 1963; MA, Johns Hopkins University, 1965; PhD, Washington University, 1970.


Sanders, Kathleen J., Assistant Professor, Curriculum and Instruction (2000). BA, Stephens College, 1972; MS, Kansas State University, 1976; PhD, 1991.


Schier, Julie, Associate Professor, Communication Disorders and Sciences (1998). BA, Wichita State University, 1999; MA, 1971; PhD, 1989.

Schneider, Philip A., Professor and Director of Creative Writing, English (1973). BS, State University of New York-College-Oswego, 1965; MFA, University of Iowa, 1967.


Schneegurt, Mark A., Associate Professor, Biological Sciences (2001). BS, Rensselaer Polytechnic Institute, 1984; MS, 1985; PhD, Brown University, 1989.

Schneider, Philip A., Professor and Director of Creative Writing, English (1977). BA, State University of New York-College-Oswego, 1965; MFA, University of Iowa, 1967.

Smith, Robert A., Professor, School of Music (1985). BA, Bowling Green State University, 1975; DMA, Ohio State University, 1985.

Scully, Rosalind R., Professor, Communicative Disorders and Sciences, and Director, Center for Teaching and Research Excellence (1972). BA, Wichita State University, 1964; MA, 1972; PhD, 1978.


Shaw, Carolyn M., Assistant Professor, Political Science (2001). BA, Dickinson College, 1991; PhD, University of Texas-Austin, 2000.


Shawver, Martha M., Assistant Professor, School of Nursing, and Associate Vice President, Academic Affairs and Research (1974). BSN, Eastern Menomonee College, 1965; MA, School of Nursing, University of Iowa, 1974; PhD, University of Kansas, 1985.

Sheffield, James F., Associate Professor and Chairperson, Political Science (1974). BA, Mississippi State University, 1969; MS, Florida State University, 1970; PhD, 1973.


Singhal, Ram P., Professor, Chemistry (1974). BS, University of Lucknow, India, 1958; MS, 1960; DEA, Universite de Lille, France 1964; PhD, 1967.


Smith, Larry D., Assistant Instructor and Associate Director, Research Administration (1978). BBA, Wichita State University, 1970.

Smith, Martha J., Associate Professor, School of Community Affairs, Criminal Justice Program (2002). BA, Brown University, 1978; JD, New York School of Law, 1981; MA, Rutgers University, 1995; PhD, 1996.

Smith, Nicholas E., Professor, School of Music (1975). BM, Cleveland State University, 1970; MM, Eastman School of Music, 1972; DMA, 1980.

Smith-Campbell, Betty, Assistant Professor, School of Nursing (1999). Nursing Diploma, Hurley Medical Center School of Nursing, 1975; BSN, Uni-


Wine, Thomas R., Associate Professor, School of Music (1995). BAME, Alderson-Broadus College, Philippines, 1980; MME, Duquesne University, 1982; PhD, Florida State University, 1984.


Withrow, Brian, Assistant Professor, School of Community Affairs, Criminal Justice Program, and Director, Midwest Criminal Justice Institute (1999). BA, Stephen F. Austin State University, 1981; MFA, Southwest Texas State University, 1993; PhD, Sam Houston State University, 1999.


Wong, John D., Associate 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; MFA, Auburn University, 1972; DFA, University of Georgia, 1976.

Wood, Michael A., Assistant Professor, Elliott School of Communication, and Executive Director, Media Resources Center (1985). BS, Kansas State University, 1969; MS, 1973; MFA, University of Southern California, 1979.


Wright, David W., Associate Professor, Sociology (1993). BA, Indiana University-Purdue University at Indianapolis, 1967; MA, Purdue University, 1989; PhD, 1992.


Wynn, Tor, Assistant Professor, Sociology (2000). BA, University of California, 1993; MA, University of Iowa, 1996; PhD, 2001.


Yang, C. Charles, Assistant Professor, Mechanical Engineering (1997). BS, National Taiwan University, 1985; MS, 1987; PhD, Louisiana State University, 1993. Licensed Professional Engineer (Texas, Louisiana).

Yang, Wan, Instructor, Physics (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; MFA, 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.

Yildirim, Mehmet B., Assistant Professor, Industrial and Manufacturing Engineering (2002). BS, Bogazici University, 1994; MS, Elkins University, 1996; PhD, University of Florida, 2001.

York, Paul K., Professor, Electrical and Computer Engineering (1989). BSEE, Texas A&M University, 1961; MSEE, University of New Mexico, 1963; PhD, Texas A&M University, 1967.


Youngman, Arthur L., Assistant Professor, Biological Sciences (1965). BA, Montana State University, 1959; MS, Case Western Reserve University, 1961; PhD, University of Texas, 1965.

Zandler, Melvin E., Professor, Chemistry (1966). BA, Friends University, 1960; MS, Wichita State University, 1963; PhD, Arizona State University, 1965.


Zoller, Peter T., Associate Professor, English, and Associate Vice President, Academic Affairs (1973). BA, University of San Francisco, 1963; MA, Claremont Graduate School, 1966; PhD, 1970.
Key to Course Descriptions

Symbols

When two course numbers are joined by a hyphen (-), the first semester is prerequisite to the second; when the numbers have an ampersand (&) between them, the two semesters may be taken in either order. Unless specifically noted otherwise, the first course listed is offered in the fall semester and the second in the spring.

The number of hours of credit for each course is indicated in parentheses following the course title. The number of class meetings per week is normally the same as the number of credit hours. Two hours of laboratory work usually are required for 1 hour of credit. In courses involving meetings other than lectures, the following symbols are used: R, lecture; L, laboratory; C, conference; D, demonstration; and P, practicum/clinical, with the hours of practicum/clinical per week given in front of the letter (6-8P means six to eight hours of practicum/clinical per week).

Abbreviations

The following abbreviations of academic departments and areas are used in references to courses offered by those departments:

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<td>Accounting</td>
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<tr>
<td>AE</td>
<td>Aerospace engineering</td>
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<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>
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<td>Studio arts</td>
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<tr>
<td>BA</td>
<td>Business administration</td>
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<td>B LAW</td>
<td>Business law</td>
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<td>BIOL</td>
<td>Biological sciences</td>
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<tr>
<td>CTS</td>
<td>Communicative disorders and sciences</td>
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<tr>
<td>CESP</td>
<td>Counseling, educational, and school psychology</td>
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<td>Chemistry</td>
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<tr>
<td>CJ</td>
<td>Curriculum and instruction</td>
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<td>Criminal justice</td>
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<td>COMM</td>
<td>Communication</td>
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<tr>
<td>CS</td>
<td>Computer science</td>
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<td>Dance</td>
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<td>Dental hygiene</td>
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<td>Decision sciences</td>
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<td>EAS</td>
<td>Educational administration</td>
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<td>Economics</td>
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<tr>
<td>ECE</td>
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<td>Executive master of business administration</td>
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<tr>
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<td>English language and literature</td>
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<td>General engineering</td>
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<td>German</td>
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<td>Gerontology</td>
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<td>History</td>
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<tr>
<td>HNR S</td>
<td>Honors Program</td>
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<td>HP</td>
<td>Health professions—general</td>
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<td>HRM</td>
<td>Human resource management</td>
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<td>HS</td>
<td>Health sciences</td>
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<td>KSS</td>
<td>Kinesiology and sport studies</td>
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<td>Liberal arts interdisciplinary</td>
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<td>Management</td>
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<td>Mobile intensive care technician</td>
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<td>Marketing</td>
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<td>MUS A</td>
<td>Applied music</td>
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<tr>
<td>MUS C</td>
<td>Musicology—composition</td>
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<tr>
<td>MUS E</td>
<td>Music education</td>
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<tr>
<td>MUS P</td>
<td>Music performance</td>
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<td>NURS</td>
<td>Nursing</td>
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<tr>
<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>
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<td>PHHS</td>
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<td>Real estate and land use economics</td>
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<td>Religion</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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<td>WOM S</td>
<td>Women's studies</td>
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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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Bachelor of Arts...
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Print journalism

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K

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Lincoln Scholar Program, Emory

Linguistics

Literature, English language and

Loans

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Management Development, Center for

Management information systems

Management major

Manufacturing engineering

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Marketing, integrated communications

Marketing major

Math lab

Mathematics

Mathematics, statistics

McNair Scholars Program

Meaning of course numbers

Mechanical engineering

Media Resource Center

Medical technology

Metropolitan Complex, Hughes

Mexico, summer program in Puebla

Midterm down reports

Midwest Criminal Justice Institute

Midwest Student Program

Mission statement

Mobile intensive care technicians

Modern and classical languages and literatures

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German

Greek

Italian

Japanese

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modern and classical languages and literatures

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<tr>
<td>Accounting</td>
<td>B M</td>
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<td>Gerontology</td>
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A = Associate  
B = Bachelor  
M = Master  
S = Specialist  
D = Doctorate  

* Master of Fine Arts, a terminal degree