Academic Calendar for 1986-87

Summer Session 1986

May 26, Monday ........................................ Memorial Day, holiday
May 27-June 13, Monday-Friday ...................... Presession and workshops
June 5-6, Thursday-Friday .............................. Summer Session registration
June 9, Monday ........................................ Classes begin
July 3, Friday ........................................ Final day of first four-week session, registration for second four-week session
July 4, Thursday ....................................... Independence Day, holiday
July 5, Tuesday ....................................... Second four-week term classes begin
August 1, Friday ..................................... Summer Session closes

Fall Semester 1986

August 18-23 ............................................. Fall semester registration
August 25, Monday ..................................... Classes begin
August 30-September 1, Saturday-Monday ......... Labor Day, holiday
October 17, Friday ..................................... Midterm point
October 31, Friday ..................................... Final date for withdrawal with nonpenalty grades
November 12-21 ....................................... Preregistration period for spring semester. Exact dates to be published in the Schedule of Classes

November 26-29 ....................................... Thanksgiving recess
December 11 ........................................... Last day of classes
December 12 ........................................... Study day
December 13-19, Saturday-Friday .................. Final examinations
December 20 ........................................... Semester ends

Spring Semester 1987

January 13-17, Tuesday-Saturday ................... Spring semester registration
January 19, Monday ................................... Classes begin
March 13, Friday ....................................... Midterm point
March 15-21 ............................................ Spring recess
March 23, Monday ..................................... Classes resume
April 3, Friday ......................................... Final date for withdrawal with nonpenalty grades
April 15-24 ............................................. Preregistration period for fall semester. Exact dates to be published in the Schedule of Classes

May 11 ..................................................... Last day of classes
May 12 .................................................... Study day
May 13-19, Wednesday-Tuesday .................... Final examinations
May 20 ................................................... Semester ends
May 23, Saturday ..................................... Commencement

Summer Session 1987 (Tentative)

May 25, Monday ....................................... Memorial Day, holiday
May 26-June 12 ....................................... Presession and workshops
June 4-5, Thursday-Friday ............................ Summer Session registration
June 8, Monday ....................................... Classes begin
July 2, Thursday ....................................... Final day of first four-week term; registration for second four-week term
July 3-4, Friday-Saturday ............................ Independence Day, holiday
July 6, Monday ....................................... Second four-week term classes begin
July 31, Friday ....................................... Summer Session closes
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General Information

1986-87
Administrative Officers

The Wichita State University

Warren B. Armstrong, President of the University
Frederick Sudermann, Executive Assistant and Director of Governmental Relations
Joyce A. Scott, Executive Vice President for Academic Affairs
Jacqueline J. Snyder, Dean of Continuing Education and Director of Summer Session
Douglas Sharp, Dean of the College of Business Administration
Leonard M. Chaffee, Dean of the College of Education
William J. Wilhelm, Dean of the College of Engineering
Rhoda-Gale Pollack, Dean of the College of Fine Arts
Sidney D. Rodenberg, Dean of the College of Health Professions
Philip D. Thomas, Dean of Fairmount College of Liberal Arts and Sciences
Barbara A. Mawhiney, Assistant Dean of Faculties for Personnel
C. Russell Wentworth, Dean of Admissions, Records and Financial Aids
Martin H. Bush, Vice President for Academic Resource Development
James J. Rhatigan, Vice President for Student Affairs and Dean of Students
William W. Harmon, Dean of University College
David L. Meabon, Dean of Student Life and Services
Deltha Q. Colvin, Assistant Dean of Students for Special Programs
Averett S. Tombes, Vice President for Research and Dean of Graduate Studies
George M. Platt, Associate Vice President and Director for Planning and Institutional Research
Jasper G. Schad, Dean of Libraries and Media Resources Center
Roger D. Lowe, Vice President for Administration and Finance
Armin L. Brandhorst, Director of Physical Plant
James R. Decker, Controller
Mary L. Herrin, Director of Budgets
Milton L. Myers, Chief of University Police
William H. Smith, Director of Campus Activities Center
Robert D. Warren, Director of Personnel and Administrative Services
Robert Hartsook, Vice President for Development, Alumni and University Relations and Executive Vice President for the Board of Trustees
Murray Blackwelder, Executive Director of Development and Executive Secretary for the WSU Endowment Association
James D. Moore, Executive Director of the Alumni Association
Myrne Roe, Executive Director of University Communications
Lew Perkins, Director of Athletics

Board of Regents, State of Kansas
Sandra L. McMullen, Chairman, Hutchinson
Frank J. Becker, El Dorado
Norman W. Brandeberry, Russell
Patricia W. Caruthers, Kansas City
Richard W. Dodderidge, Mission Woods
John G. Montgomery, Junction City
Richard R. Reinhardt, Junction City
William R. Roy, Topeka
Donald C. Slawson, Wichita
Stanley Z. Koplik, Executive Director, Topeka

Profile of The Wichita State University

The 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 nearly 17,000, Wichita State prides itself on specialized attention to each student. Although the University's students come from almost every state in the Union and 70 foreign countries, more than 90 percent are from Kansas, representing every county in the state.

Because of its urban setting, the Wichita State University has two sides: traditional and nontraditional. The average student age is 27; more than one-third are married and more than 84 percent are full-time. Although the nontraditional students are in the majority, there are 6,700 traditional students, ages 18 to 23, who devote themselves full-time to school and campus activities.

The Wichita State University offers 185 academic majors in six undergraduate degree-granting colleges: College of Business Administration, 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 programs leading to the specialist in education degree and to the PhD in communicative disorders and sciences and engineering. Master's degrees are offered in almost 40 areas. University College and the Division of Continuing Education meet the needs of students not yet admitted to a degree-granting college.

Committed to fulfilling the needs of each student, WSU offers the traditional fall and spring semesters, plus 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 three-week pre-sessional and two four-week sessions held concurrently with the regular eight-week session.

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 research and development through programs such as the Center for Productivity Enhancement. The corporate community utilizes programs offered by the University's Center for Management Development for continuing professional development. The Center for Entrepreneurship and Small Business Management encourages development of small businesses, while the Hugo Wall Center for Urban Studies supports local and state government activities.

The 320-acre campus is modern and accessible and at the same time retains the flavor of the University's 90-year heritage. Forty-six pieces of sculpture by internationally known artists adorn the campus. Personnages Oiseaux, a colorful mural created by the great Spanish artist Joan Miro, is displayed on the wall of the Edwin A. Ulrich Museum of Art. During the past 15 years, the campus has changed dramatically. Construction began last fall on a three-stage addition to Abrahm Library and Media Resources Center. The newly completed Wiedemann Hall houses a world-famous Marussenn organ. A new stadium was completed in 1983 for the nationally ranked WSU baseball team. The Heskett Center, a $10.6 million physical education facility, was completed in 1983.

More than 180 social and special interest clubs provide opportunities for students to meet and work with others who share their interests. Seven national sororities and 12 national fraternities are active on campus.

There are sports opportunities in tennis, cross-country, basketball, track, golf, crew, soccer and bowling for all students. Teams also are fielded in football and baseball for men and volleyball and softball for women.

History

In 1926, The Wichita State University became the first municipal university west of the Mississippi by a vote of the citizens of Wichita. With that vote, Wichita State changed from Fairmount College to the Municipal University of Wichita.

Wichita State began as Fairmount College and was operated by the Congregational Church from 1895 until the City of Wichita assumed the college's financial support. 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, The Wichita State University is one of six state universities governed by the Kansas Board of Regents.


Accreditation and Associations

Wichita State is accredited by the North Central Association of Colleges and Schools. Specific programs are also accredited by professional organizations listed with information from each college. Women graduating from Wichita State with bachelor's degrees or higher are eligible for membership in the American Association of University Women.

Policies

Human Relations

It is the policy of The Wichita State University not to discriminate on the basis of race, color, religion, national origin, sex, age, disability or political affiliation in its education programs, activities or employment policies as required by the Civil Rights Act of 1964 and subsequent amendments (including Title IX of the Education Amendments of 1972), federal executive orders, federal regulations and guidelines and the State's Executive Order No. 75-9. The University is further committed to take affirmative action to assure that equality of opportunity
shall exist. Questions concerning discrimination should be directed to James J. Rhatigan, vice president for student affairs and dean of students, Grace Wilkie Hall.

Student Responsibility
Students at The Wichita State University have the following responsibilities:
1. To consult their advisers 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 advisers, faculty, deans and other University officers.
7. To file an Application for Degree card in the dean's office of the appropriate college at least two semesters before the expected date of graduation.
8. To enroll in only those courses for which the stated prerequisite(s) (if there are any) have been satisfactorily completed. Failure to comply with this procedure may result in administrative withdrawal.

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Academic Honesty
Opportunities for learning at The Wichita State University involve the student's rights to express their views and to take reasoned exception to the views of 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.

Students who compromise the integrity of the classroom are subject to disciplinary action on the part of the University. Violations of classroom standards include:
1. Cheating in any form, whether in formal examinations or elsewhere.
2. Plagiarism, using the work of others as one's own without assigning proper credit to the source.
3. Misrepresentation of any work done in the classroom or in preparation for class.
4. Falsification, forgery or alteration of any documents pertaining to academic records.
5. Disruptive behavior in a course of study or abusiveness toward faculty or fellow students.

Accident or Injury
The State of Kansas and The 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 dangers or injuries. Students are expected to act responsibly by taking necessary precautions to prevent accidents. Students are also advised to protect themselves from the financial burden of accident or injury through a personal insurance policy.

Admission to Wichita State
Wichita State admits degree-bound college freshmen and transfer students as well as nondegree students who have special interests in college credit work but no immediate degree objectives at The Wichita State University.

All students entering Wichita State for the first time must file an application for admission with the Admissions Center, 111 Jardine Hall, and all but special open admission students (discussed later) must have transcripts of all high school and/or college work sent to Wichita State. Failure to report all schools attended will result in dismissal.

Open Records
Students may inspect and review their educational records maintained by Wichita State. According to law, the University is allowed 45 days to respond to the requests, but typically less time is required.

Students wishing to challenge the accuracy of their records are entitled to a hearing, upon written request to the dean of the college in which they are enrolled. The hearing is arranged by the dean.

Students may also receive the names of persons from outside the University who request access to their records and the reason for such requests. Similarly, students may also be informed of requests for records from individuals within the University who normally do not review students' education records.

Information in a student's records will not be released without his or her written permission.

Exceptions to these statements are noted in Public Law 93-380. A copy of the law is available to all students in the Division of Student Affairs, Grace Wilkie Hall.

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Both the application and official transcripts of previous work should be received by the admissions office on or before August 1 for fall registration and January 1 for spring registration. Applications and transcripts from high school students will be accepted any time after their junior year and should be submitted during the first semester of their senior year.

Transcripts sent to the Admissions Center must be mailed directly from the recording institution and will not be returned to the applicant. College transcripts brought by students cannot be accepted.

New students may begin their college study during the Summer Session, the fall semester or the spring semester. Prospective students are encouraged to visit Wichita State to discuss their educational plans with an admissions officer and other University staff members.

Admission of a student to The Wichita State University is independent of sex, race, physical handicap, ethnic background or creed.

Degree-Bound Students

Freshmen

Students who will graduate from accredited Kansas high schools and who will not attend another college before coming to Wichita State will be admitted to the University as freshmen after submitting an application and a high school transcript. Scores from the test battery of the American College Testing Program (ACT) must also be submitted before enrollment. Application may be completed in one of two ways:

1. Students may apply by taking the American College Test (ACT) and having the results sent to Wichita State (college code 1472). Upon receipt of the ACT scores, the WSU admissions staff completes a copy of the application and sends the form to the students. The students must then verify the data on the application, sign it and give it to their high school counselor, who should attach a six-semester high school transcript and return the form to Wichita State. A Certificate of Admission will then be mailed to the students.

2. Students may also apply by completing a regular University application for admission and having a six-semester transcript and ACT scores sent to the University.

Students who have already graduated from accredited Kansas high schools and have not attended another college will also be admitted to the University after submitting an application and having their high school send an official transcript to Wichita State’s admissions center. ACT scores must also be submitted before enrollment. Graduates of nonaccredited Kansas high schools must submit acceptable ACT scores to be admitted to Wichita State.

Out-of-state students who will be or have been graduated from a non-Kansas high school must also submit application, transcript and ACT test scores. To be eligible for admission, out-of-state students must (1) rank in the upper one-half of their high school graduating class or (2) present acceptable ACT or SAT test scores or (3) have high school grades of 2.00 or better on a 4.00 system. Exceptions may be made under special circumstances when valid reasons prevail. Priority of admission among out-of-state students is given to sons and daughters of Wichita State alumni.

Students who have not graduated from high school but have an equivalency certificate may apply by submitting an application for admission, a transcript showing any high school work completed and official scores from the General Educational Development (GED) test. ACT scores are also required if the student is admitted. Admission is based on the GED scores.

All entering freshmen are enrolled in University College. The orientation program will send all freshmen complete information about orientation and enrollment. See the University College section of the Catalog for more information.

Students in University College must meet the admissions standards of the degree-granting colleges before transferring into them. The individual college admissions requirements are given at the beginning of each college’s section in the Catalog.

Transfers

Students who have been enrolled in another college or university may be admitted to undergraduate study at The Wichita State University if they are eligible to return to the college or university they last attended and are able to meet the required scholastic standards of Wichita State. Specific standards are given in each college’s section of the Catalog.

Transfer students should apply at least one semester before the semester in which they plan to enter Wichita State in order to receive maximum consideration for financial aid and registration programs.

Transfer students are divided into two categories: (1) those with fewer than 24 college semester hours of credit or an undeclared major and (2) those with declared majors and 24 or more college semester hours of credit.

1. Transfer students with fewer than 24 college semester hours of credit or an undeclared major will be considered for admission to University College. Students must submit to Wichita State’s admissions center an application and an official transcript from their last high school and each college attended. Before enrollment, students must also submit scores from the American College Test (ACT). Further details on transferring to a degree-granting college are given in the University College section of this Catalog.

2. Transfer students who have declared a major and have 24 or more college semester hours of credit are eligible to apply for admission to one of the six undergraduate degree-granting colleges. They must submit an application and official transcript from each college or university attended to Wichita State’s admissions center.

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. In no case will work done in a two-year college be credited as junior- or senior-level work at Wichita State. (See requirements for graduation given under the Academic Information section.)

Wichita State participates in the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Colleges and Universities. The agreement stipulates that:

A student who completes an associate degree based on a baccalaureate oriented sequence at a state and regionally accredited Kansas public community college and whose program of studies has met the requirements of the Kansas Public Community College and State College and University Transfer and Articulation Agreement will be accepted with junior standing and will have satisfied the lower division general education requirements of all Regents’ institutions of the state (subject to points of clarification agreed to by community colleges and state schools).

In accepting college-level courses from other recognized colleges and universities for transfer credit, Wichita State relies on practices outlined in Transfer Credit Practices of Selected Educational Institutions, published by the American Association of Collegiate Registrars and Admissions Officers. While the credit practices publication does not constitute accreditation, it does provide helpful information for credit acceptance. Course equivalencies for selected institutions and other credit transfer information may be obtained from Wichita State’s admissions center.
Courses completed at other institutions but not acceptable for credit toward a degree at Wichita State are excluded from credit and grade point average evaluation.

Credit hours and credit points accepted toward a Wichita State degree are computed with credit hours and credit points earned at Wichita State in calculating the student's total grade point average.

The distribution of transfer courses that may fulfill either a major or minor requirement must be approved by the chairperson of the department concerned. Department chairpersons may require additional work for a major, regardless of the credit granted to the student.

International Students

Recognizing the beliefs-cultural, economic, intellectual and social—that may arise from the interaction of American and foreign students and scholars, the Wichita State University demonstrates a commitment to international education through an admissions procedure designed for overseas applicants, the provision of a foreign-U.S. student advisor office, the expansion of cross-cultural exchanges, the availability of intensive English, special courses within departments and international community services such as host family programs.

International students applying as undergraduates may be admitted to Wichita State according to the following guidelines:

1. They must be graduated from an accredited secondary school or have attended college with an acceptable record.
2. They must submit an international student application form and a non-refundable $25 international student application processing fee.
3. They must present proof of proficiency in English. If the student has not taken the Test of English as a Foreign Language (TOEFL) or if the score is below 530, the student must take a proficiency examination upon arrival on campus. Students who do not meet the required proficiency level will be required to enroll in the intensive English program before enrolling in any academic classes. Instruction in intensive English does not carry academic credit.

After one semester of intensive English, students may take another proficiency test. Those who pass may enroll in their academic program. Those who do not pass will continue enrollment in intensive English.

4. They must have a statement of financial responsibility in an amount of $39,900 or more to cover expenses for 12 months, including Summer Session tuition. All international students are considered nonresidents for tuition and fee purposes.
5. They must submit a University health form which has been completed by a physician.
6. They must enroll in at least 12 hours at the undergraduate level or at least nine hours at the graduate level.

Admission decisions for students with international secondary school or college records are made with reliance upon the resources available through the American Association of Collegiate Registrars and Admissions Officers and the National Association for Foreign Student Affairs. International students with transfer work from American colleges must present at least 12 hours with at least a 2.25 grade point average (4.00 scale).

The University is committed to the maintenance of balance in the admission of international students and will seek an international student body which reflects the broad range of cultures and national backgrounds in the international community.

The University will not assume financial responsibility or guarantee monetary assistance for any student, including international students. It is the University's expectation that prospective and enrolled students have sufficient financial support immediately available to adequately meet the expenses of tuition, fees, books, room and board, etc.

The maintenance of adequate financial support is a condition for admission and continued enrollment of international students. Students who do not have financial support as specified on the I-20 form shall be subject to loss of student status.

No scholarships or grants are available to newly entering undergraduate international students, and it is imperative that they have sufficient funds to cover expenses while in the United States. International students who qualify for admission to the Graduate School may apply to their department chairperson or the dean of their college for information on graduate fellowships and assistantships.

International undergraduate students applying from outside the country must submit all credentials by November 1 for the spring semester, April 1 for Summer Session and June 1 for the fall semester. Students already in the United States must submit all credentials by December 1 for the spring semester, May 1 for Summer Session and July 1 for the fall semester.

For further information or to obtain an application form, write:

The Laura McMullen Cross Admissions Center
111 Jardine Hall
The Wichita State University
Wichita, KS 67208-1595

Graduate Students

A number of categories of admission to The Wichita State University Graduate School are available. Students seeking a graduate degree must have at least a baccalaureate degree from an accredited institution based on credits comparable to those allowed toward a degree by Wichita State, a minimum grade point average of 2.75 (on a 4.00 scale) in their last 60 hours of academic work and similar performance in their major field of study, and no more than nine hours of background deficiencies in the major field of study. Individual departments and programs may require higher admission standards and additional supporting information. Students desiring to take work for graduate credit but not necessarily desiring to pursue a graduate degree may apply for admission in one or more of these categories depending upon their previous academic performance and goals. Specific requirements for all admission categories and for all programs are listed in The Wichita State University Graduate School Bulletin.

Application for admission to graduate standing must be filed with the Graduate School three weeks before registration and must be supported by two complete and official transcripts of all college work (and other credentials required by the specific program desired) unless the student is a graduate of The Wichita State University, in which case the Graduate School Personnel will obtain transcripts of the student's work completed at Wichita State.

Only students formally admitted to the Graduate School are permitted to enroll in courses numbered 800 through 999, and no official status is given by the Graduate School until a student's application and transcripts are on file and the transcripts have been evaluated by the major department and the Graduate School. Students who wish to receive graduate credit for work taken must be admitted to the Graduate School prior to the time of enrollment.

Complete information about graduate programs and requirements is available in the Graduate School office, 107 Jardine Hall.
Double-lining
Students who have accumulated a grade point average of less than 2.00 may petition the dean of University College and the University Committee on Admissions and 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, a double line is drawn and the notation "admitted without credits or grades by committee action" is made.

The policy may be applied to The Wichita State University enrollments 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.

Nondegree-bound Students
Wichita State encourages students to pursue their educational goals. Persons wishing to continue their education with no immediate degree plans should apply and send copies of all college transcripts, or high school transcript if no college has been attended, to Wichita State's admissions center. Students seeking graduate credit should write or call the Graduate School.

Open Admission Students
To expedite admission for adult students who have not participated in formal education for some time, the admissions center provides a simplified admission procedure. Students will be admitted to the nondegree program as special open admission students:

1. If they have been graduated from high school, or have completed a GED, and have not attended any school for two years or
2. If they have not graduated from high school or completed a GED, are at least 21 years of age and have not attended any school for at least two years or
3. If they are currently on active military duty or
4. If they hold a baccalaureate or higher degree.

Students admitted under the open admission policy need only submit an application for admission. Test scores and transcripts are not required.

Students admitted as open admission students will be considered nondegree bound for their first 15 semester hours. In order to pursue work beyond the semester in which the 15th hour is completed, students may be required to submit transcripts and/or test scores to be accepted as degree-bound students in University College or in one of the degree-granting colleges of the University. Students may also elect to continue as regular nondegree students in University College.

Guest Students
Students attending another college or university who wish to attend Wichita State on a temporary basis in the Summer Session should submit an application to the admissions center. Students applying for guest admission in the fall or spring semester must also submit an official transcript showing a 2.0 grade point average from their home institution.

Guest admission is granted for a total of 15 semester hours and students who plan to continue at Wichita State beyond that limit must submit complete credentials. Students from other universities are usually enrolled as nondegree students in University College. Guest students are not eligible to participate in preregistration or advance registration.

High school seniors who attend Wichita State before graduation from high school are also considered guest students. To be considered for admission as a high school guest student, students who have completed their junior year should submit an application and an official high school transcript and obtain their principal's permission to take college courses while still in high school.

Younger students who wish to enroll for college work will be considered on an individual basis. School principal's strong recommendation and a carefully prepared justification for enrollment would be necessary before consideration could be given.

International students on a student visa issued for another institution may be admitted as guest students at Wichita State providing they meet all criteria for admission outlined under the International Students section.

Residence Defined
The Kansas legislature, rather than University policy, determines the residence of students entering Wichita State. The legislature has also granted the Kansas Board of Regents certain authority to adopt regulations and guidelines for the determination of residence, within the broader state law. The law and regulations are different than those that govern residency for any other purpose.

According to the law and regulations, a resident, for tuition purposes, is someone who has resided (been physically present) in Kansas for 12 consecutive months prior to enrollment/reenrollment and who has demonstrated, during those 12 months, the intent to make Kansas their permanent home. Intent is evaluated in light of: 1) the person's statement about why they came to Kansas in the first place and 2) what the person has done since coming to Kansas (objective, verifiable facts). Many factors are considered when evaluating intent. The Kansas Board of Regents guidelines list nonconclusive factors or circumstances that could help support a claim for resident classification. The guidelines also specify a qualifier: "Any such factor, to be given weight, must be of at least one year's duration prior to enrollment/reenrollment."

A person who comes to Kansas to go to school, and who enrolls full-time every semester after arriving, may not be able to demonstrate the intent to remain in Kansas permanently, as long as that pattern continues. In contrast, certain "exceptions" are authorized by state law to pay the equivalent of resident fees: (a) employees of the University and their dependents, (b) persons on full-time active military duty, stationed in Kansas, and their dependents and (c) persons who have lost their Kansas resident status within six months of their enrollment.

Residency for new students enrolling for the first time at Wichita State is determined by the admissions center according to the above law/regulations. Such students should address questions concerning residency to the admissions center. Continuing students should follow the procedure outlined below.

The responsibility of registering under proper residence is placed on the student. If there is any possible question of residence classification, it is the duty of a student when registering and paying fees to raise the question with the Registrar's Office. Students who disagree with their residency classification are entitled to 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 Faculty 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.

**Academic Information**

**Registration**

Specific information regarding registration is given in The Wichita State University Schedule of Courses published each semester and Summer Session. Students may not register after the second week of classes.

Falsification of information or withholding information pertinent to the records of the University is grounds for dismissal.

**Classification of Students**

Students are classified according to the following scheme:

- **Freshmen:** under 30 semester hours earned
- **Sophomores:** 30 to 59 semester hours earned
- **Juniors:** 60 to 89 semester hours earned
- **Seniors:** 90 semester hours or more earned.

As a general rule, a student taking 12 hours during the Fall or Spring semester is considered a full-time student. For graduate students, nine hours is considered a full load. (Graduate students who are half-time teaching assistants are considered full-time if they take six or more hours.)

During the Summer Session, six hours is full time for both undergraduate and graduate students, with graduate teaching assistants full time with three hours.

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

**Meaning of Course Numbers**

Courses numbered 99 or below do not count toward a baccalaureate 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 may also 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.)

The 11-digit number following each course description in the Catalog is for administrative use only.

**Credit/No Credit Courses**

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

In addition, certain credit courses are graded only Cr/NCr. Any department in the University may offer its courses on a Cr/NCr basis. This designation is included in the course description of such courses in The Wichita State University Catalog. If students withdraw from a Cr/NCr course before the end of the tenth week of the semester (or the fifth week of the eight-week Summer Session), they receive a grade of W: Students withdrawing from such a course after the end of the tenth week (fifth week of the eight-week Summer Session) receive a grade of F, subject to the right of petition to the University's Committee on Admissions and Exceptions. If students withdraw from an A/P/F course, the course will still count as one of the three allowable A/P/F option courses.

A course being repeated may not be taken under the A/P/F option and must be taken for a letter grade.

**Transfer of Credits Within the University**

From University College. Students are normally expected to transfer from University College to one of the six undergraduate degree-granting colleges at the end of the semester in which they earn their 24th credit hour. For a complete explanation of the transfer process, see the University College section of the Catalog.

Other Transfers Within the University. Students may transfer from any undergraduate degree-granting college to another provided they meet, as a minimum, the probation standards of the second college. Since some departments have space problems, they are forced to impose some limitations on the number of transfer students they accept. Such limitations must be approved by the dean of the college concerned and the vice president for academic affairs.

For specific information about probation standards and admission requirements of individual degree-granting colleges, refer to the individual college sections of the Catalog.
Examinations
The examination policy in each course is established by the department and the faculty of record and will be outlined with the course requirements. Reexaminations shall be permitted only with the consent of the faculty when reexamination 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 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.

Auditor
Students are permitted in credit courses on a noncredit basis with appropriate approval under an auditor classification. To be enrolled as auditors, students must enroll in the same manner and pay the same fees as for credit courses at the University. Auditors may take advantage of the same privileges of class participation and instructor evaluation that students enrolled for credit have. Auditors are expected to attend class regularly. The audited course will appear on the transcript with the grade notation of Au.

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

A: Distinguished achievement. Credit given; four credit points per semester hour.
B: Superior achievement. Credit given; three credit points per semester hour.
C: Average achievement. Credit given; two credit points per semester hour.
D: Below average achievement. Credit given; one credit point per semester hour.
P: Passing work (with a B, C, or D). Credit given; no credit points assigned.
F: Failing work. No credit hours earned toward graduation; zero credit points per semester hour. Counted as a course attempted and completed and included in computation of grade point average.
W: Withdrawal from course. No credit given; no credit points. Does not affect grade point average but counts as an attempt in repeat policy.
Cr: Credit (A, B or C). Used only in the transition semester and for courses defined as Cr/NCr in the Catalog; no credit points. See the Catalog section on credit/no credit courses.
NCR: No Credit (D or F). Used only in the transition semester and for courses defined as Cr/NCr in the Catalog; no credit given; no credit points. See the Catalog section on credit/no credit courses.
S: Satisfactory (A, B or C). Credit given; credit points assigned.
U: Unsatisfactory (D or F). No credit given; no credit points assigned.
I: Incomplete. Temporarily recorded as a grade when a student is granted an extension of time to complete course work. Credit is postponed and the course is not included in the student's grade point average until it is completed and a regular letter grade is assigned. An incomplete course must be satisfactorily completed by the end of the next semester in which the student enrolls, summer excluded, or the I reverts automatically to an F. Students may not enroll in the course in which they received the I unless they do not enroll at WSU for one calendar year.

The following conditions govern incompletes:
1. If students do not enroll at Wichita State within one calendar year following an incomplete and if their work is not completed within that calendar year, they must enroll in that course as a repeat during their next semester of enrollment or the grade will be changed to F. If they do enroll in the course again, the I is changed to W and the grade earned during the repeat semester becomes the grade of record. (If the course is not offered when they resume academic work, they must request that an exception be made by the chairperson of the department offering the course. The department chairperson may authorize a substitute course, postpone action for a semester or authorize a grade of W.)
2. If students receive an incomplete on the third enrollment in the same course, they may not enroll in the course again (enrollment becomes subject to the regulations concerning the repeating of courses).
3. Incompletes are not counted when computing grade point average.
4. When students receive a grade of incomplete, they are informed of the policies and procedures governing the removal of incompletes.

R: 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, RW 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 previously completed course may be repeated. In the computation of the grade point average the grades students receive in repeated courses will replace previous grades up to a maximum total of five such repeats beginning on June 1, 1976. Only two of these five repeats can be used on any one course, since a single course may not be repeated more than twice. The grade W does not replace the previous grade and it does not count as one of these five repeats. Beginning with the sixth repeat, all grades are included in the computation of the grade point average except for the grades that have been previously replaced. The semester in which students complete the fifth repeat may include additional repeats. In this case, the repeats (within the total of five) are selected so that the grade point average is maximized.

Transfer students are also eligible to repeat courses and replace the previous grades five times, beginning with the first repeat course taken at any college or university after June 1, 1976.
3. A course being repeated may not be taken under the A/P/F option but must be taken for a letter grade. (See Catalog section on A/P/F option.)
4. Students may audit the same course any number of times.

CrE: Credit by examination or by credentials in lieu of formal enrollment in college course work. The symbol CrE is used for College Board Ad-
Change of Grades

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 Committee on Admissions and Exceptions.

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

Grade Point Average (GPA). The grade point average (also called grade point index) is computed by dividing the total number of credit points by the total number of semester hours completed for which regular letter grades (A, B, C, D, and F) are assigned. The grades A, W, P, I, Cr, NCr, S, U, and CrE are always excluded from grade point average computations.

Credit Points. For each hour of work the student takes, credit points are assigned to 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 officially enrolled in the course and that the student may have completed the course, been granted an incomplete or withdrawn. Attempts include courses receiving the grades A, B, C, D, P, F, W, Cr, NCr, S, U and I but exclude Au and CrE.

Course Completed. A completed course is a course in which a lettergrade of A, B, C, D, P, F, Cr, NCr, S, or U has been assigned.

Credit Hours Earned. Credit hours earned means that credit is given (A, B, C, D, P, Cr, S, or CrE). No student may earn hours of credit for a course which he/she has failed to meet the requirements for the subsequent semester (lack of appropriate number of hours or less than a 2.00 GPA) or less during their next enrollment period (excluding Summer Session). A student’s request for transition semester will be processed if he/she fulfills the requirements (appropriate hours completed with a GPA of at least 2.00). Students who fail to meet the requirements of the subsequent semester (lack of appropriate number of hours or less than a 2.00 GPA) will not be allowed to take the transition semester and will become subject to the appropriate probation or dismissal standards.

Transition Semester

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

When students receive their graded reports (A, B, C, D, or F) and if they have below a 2.00 GPA, they may file a request with the dean of University College that all work in the transition semester be translated into Credit/No Credit (Cr/NCr) on their official records, with Cr applying to letter grades A, B and C, and NCr applying to letter grades D and F.

A written request to have letter grades translated into Cr/NCr must be filed by the student with the dean of University College between the posting of the semester grades and the student’s next enrollment, including Summer Session. The request for transition semester will be filed by the dean’s office and will be implemented if the student fulfills the following criteria for the next period for which he/she is enrolled:

1. Students who took 12 or more hours during the semester they wish to have placed on transition must complete at least six graded hours during following enrollment periods (excluding Summer Session) and achieve at least a 2.00 GPA before the transition semester can be awarded.

2. Students who took fewer than 12 hours during the semester they wish to have placed on transition must complete at least six graded hours during following enrollment periods (excluding Summer Session) and achieve at least a 2.00 GPA before the transition semester can be awarded.

Students who file for the transition semester will be placed on probation and will be limited to a maximum of 12 semester hours (or a proportional enrollment during a Summer Session) or less during their next enrollment period. A student’s request for transition semester will be processed if he/she has fulfilled the requirements (appropriate hours completed with a GPA of at least 2.00). Students who fail to meet the requirements of the subsequent semester (lack of appropriate number of hours or less than a 2.00 GPA) will not be allowed to take the transition semester and will become subject to the appropriate probation or dismissal standards.

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. There are four means by which such credit may be earned:

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

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 Testing and Evaluation Center. Students who pass CLEP examinations with 65th percentile scores or better will be given three hours of credit in the respective general education area for which the test is presented. Information about the dates and times at which CLEP examinations are given is available from the Testing and Evaluation Center.

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

4. Credit may be earned by departmental examination. In general, students may also earn credit by examination for any course not covered in the areas given above. Students should apply directly to the chairperson of the department offering the course and register with the Testing and Evaluation Center before taking the exam. The chairperson will make the examination available, unless the course has been exempted from credit by examination by the University's Academic Standards and Practices Committee. The chairperson will be responsible for ensuring that students are informed of the scope of the course, the text used and other relevant information.

Except for special departmental exams discussed in the next paragraph, the grade recorded for credit earned by examination is C/E 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.). It is possible to show letter grades on the transcript for departmental credit by examination if approval for letter grades is granted by the University's Committee on Academic Standards and Practices. Approval is granted if the department demonstrates to the committee that the testing procedure for credit by examination is equivalent to the testing procedure in the corresponding credit class. The Committee on Academic Standards and Practices asks for periodic review of this testing procedure. For example, the number of hours of testing through both the credit class and the credit examination should be approximately the same and laboratory courses need to include laboratory experiences as a part of the credit examination. When letter grades are awarded for credit by examination, a notation identifying the credit as credit by examination will be included on the transcript along with a statement explaining that credit earned by examination represents equivalency with the examination experience and performance for the regularly graded course. When students take credit by examination for letter grades, the following additional policies apply:

a. Students are allowed to withdraw from any credit-by-examination test at any time prior to its evaluation. Prior to taking the exam, students must be informed of the option to submit the exam for the recording of a grade. Once the exam is graded by the instructor, the grade earned is recorded on the transcript.

b. If the department has received approval of the University's Committee on Academic Standards and Practices to assign letter grades for departmental examinations and if the department has prepared separate tests for C/E and graded credit, students must select which test they want to take. If the department has prepared only the examination for graded credit, students have the option to have their test evaluated either for graded credit or C/E credit, provided that the choice is declared to the department before the test is taken.

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 Testing and Evaluation Center.

Credit awarded by examination is determined by the department offering the course in consultation with the University's Committee on Academic Standards and Practices. In the case of credit earned by departmental examination, the department 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.

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 3.25 and a grade point average of at least 3.00 the previous semester may be granted several privileges:

1. They may be exempt from regulations governing the maximum number of hours allowed students during a semester.

2. They may also be exempt from college regulations, if any, governing the maximum number of hours students may take during a semester in one department.

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.

Graduate Credit for Seniors (Senior Rule)

Seniors at The Wichita State University or neighboring baccalaureate degree-granting institutions who have an overall grade point average of 3.00 or above in their major field and in upper-division courses and who are within ten 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 must also 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 adviser, 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.
Emory Lindquist Honors Program

The Emory Lindquist Honors Program helps outstanding students enrich and stimulate their college lives. The program offers honors sections of regular classes and specially designed courses, each limited to 25 students. It offers seminars, independent study and undergraduate research fellowships, and an honors option allows students to enroll in certain nonhonors upper division courses and receive honors credit. The philosophical intent of the honors program is to foster excellence in students by providing opportunities for them to develop and achieve their greatest potential, whether in general education or in advanced specialized education leading to life's goals.

General program policies are established by the honors director with consultation and advice from the Senate Honors Committee and the Honors Executive Committee. The honors director, chief administrative officer for the program, is accountable to the vice president for academic affairs.

Entering freshman students must have a 3.5 grade point average, as certified by Wichita State, to enter the honors program. Other students may enter the program at any time they and the honors director decide they may profit from such work. Prospective Wichita State students or those already enrolled should contact the honors director for program information. Students without honors designation who have completed 30 semester hours at Wichita State with a grade point average of 3.25 may enroll in any honors course or section if they desire and seek admission to the program.

In order to remain in the program, students must enroll in a minimum of five honors courses in at least two disciplines before graduating for a total of at least 15 credit hours and must maintain an overall cumulative grade point average of 3.25 or higher.

Students whose average falls below the 3.25 level can expect to be dropped from the program. In special circumstances, exceptions may be made. No student will be dropped without being given an opportunity to consult with the honors director.

Graduating seniors who have completed the aforementioned 15 hours of honors courses and are members in good standing of the honors program will have the words "Honors Program Graduate" placed on their transcripts.

The following courses are designed for use by students in the Emory Lindquist Honors Program. Content of each of these courses is approved by the Honors Committee and a student may not take a course more than twice and receive academic credit for it.

Lower-Division Courses

101. Special Studies in Humanities and the Fine Arts. (1-4). P 11 101 0 4905
103. Special Studies in Natural Sciences and Mathematics. (1-4). P 11 103 0 1599
104. Special Studies in Professional Studies. (1-4). P 11 104 0 2201
201. Proseminar in Humanities and the Fine Arts. (1-4). P 11 201 5 4905
203. Proseminar in Natural Sciences and Mathematics. (1-4). P 11 203 5 1599
204. Proseminar in Professional Studies. (1-4). P 11 204 5 2201

Upper-Division Courses

301. Colloquium in Humanities and the Fine Arts. (1-4). P 11 301 5 4905
303. Colloquium in Natural Sciences and Mathematics. (1-4). P 11 303 5 1599
304. Colloquium in Professional Studies. (1-4). P 11 304 5 2201
400. Honors Seminar. (1-4). P 11 400 5 4906
410. Independent Study. (1-4). Repeatable to a maximum of six hours of credit. P 11 410 4 4906

Independent Study Leading to a Degree with 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 3.25 are eligible to conduct a project in their major area of study. Students considering such projects are encouraged to begin planning their work in advance of the semester during which the work is to be done. In order to enroll, students must consult with the honors director and obtain the approval of the instructor in their major department who will be their adviser. Applications must then be approved by the chairperson of the student's major department and by the dean of the student's college. The completed application must be filed with the honors director no later than the close of the preregistration period for the student's last semester at Wichita State or the semester during which the student desires credit for the work, whichever comes earlier.

An independent study project should consist of original research or creative work. To be graduated with departmental honors, students must complete their independent study project and write the results according to specifications established by the honors director. Students must be examined on their project and other aspects of their major field of study. A three-member faculty committee, appointed by the honors director in consultation with a student's instructor, 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 hours completed, with the grade determined by the instructor under whom the work was performed. In no case may any student receive more than six hours of credit for independent study.

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 3.25 or higher for a semester.

Degrees are conferred with distinction upon students who have shown excellence in scholarship. The minimum standard for graduating summa cum laude is both an overall grade point average of 3.90 and a grade point average of 3.90 on Wichita State course work. The minimum standard for graduating magna cum laude is both an overall grade point average of 3.55 and a grade point average of 3.55 on Wichita State course work. The minimum standard for graduating cum laude is both an overall grade point average of 3.25 and a grade point average of 3.25 on Wichita State course work.

Withdrawal

Voluntary Withdrawal

Students encountering special problems during a semester may protect their record through voluntary academic withdrawal by following the procedures outlined.

Students may withdraw voluntarily from any or all courses during the tenth week of a semester or the fifth week of the eight-week Summer Session and have a W recorded for the course(s).
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 adviser as an indication that their grades need to be improved. Students should meet with their instructor or college adviser to discuss the problem.

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

Informal Warning. Students with an overall grade point average above the level required by their college for graduation (or above 2.00 for University College) 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 Probation and Dismissal Standards

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 and the University College sections of the Catalog. Students should consult the appropriate section of the Catalog for these standards.

Since 2.00 (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 grade point average falls below 2.00, 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 overall grade point average falls below the college's specified level.

Students admitted in good standing will be placed on probation when they have attempted six hours and their grade point average falls below 2.00. Attempted hours are defined as all hours appearing on the transcript with a grade of A, B, C, D, F, P, W, CR, NC, I, S or U. Transfer students admitted on probation must complete at least 12 semester hours at Wichita State with a 2.00 average before probation may be removed. In addition, for transfer students, the Wichita State probation standards apply to both their Wichita State grade point average and their overall grade point average.

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 and by University College of Wichita State in conformance with the following policy.

Students will not be dismissed if either their overall 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 overall 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 overall 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.

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 feel 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.

Any student may use the appeal procedure. Forms are available in the Division of Student Affairs, 103 Grace Wilkie Hall. The general procedure is explained to students when they pick up the form.
Requirements for Graduation

The University's minimum graduation requirements are given below. Students should consult the appropriate section of the Catalog for additional graduation requirements imposed by the department and college of their major.

Seniors 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. This should include no more than three courses taken under the A/Pass/Fail option. Hours of credit earned toward a degree do not include courses with grades of F, W, Au, NCR or I.

Students must maintain an overall grade point average of 2.00 (transfer work included) and a grade point average of 2.00 on all work taken toward a degree at Wichita State. Furthermore, students must maintain a grade point average of 2.00 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.

At least 30 semester hours of course credit (A, B, C, D, P or Cr) must be earned at Wichita State. Also, at least 24 of the last 30 semester hours must be completed at Wichita State. Exception to this regulation may be made by the University Committee on Admissions and Exceptions.

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 baccalaureate degree and no more than six hours of such credit may be among the last 30 semester hours.

General Education Program

The General Education Program seeks to provide each student with a body of knowledge that is both a broad foundation for his or her major field of study, and also the beginning of what is necessary to become a genuinely educated man or woman. To achieve these purposes, the program combines required courses in composition, speech and mathematics with distribution courses in the various major areas of knowledge. These distribution courses are identified in the course catalog and schedule of courses as "G" courses. There are also some special distribution courses designed specifically for students who might have no further encounters with a certain field of study. These General Studies Courses are designated in the catalog as "G" courses and students are required to take a minimum of nine hours of "G" courses. To assure the breadth of studies that is characteristic of an educated human being, the faculty requires students to select their distribution courses according to certain rules, which are stated below. The General Education Program is an opportunity for all students to grow in their knowledge and appreciation for the rich variety of human achievements in the arts, sciences and humanities.

The program consists of 42 hours-12 hours of basic skills courses and 30 hours of distribution courses.

Students entering The Wichita State University during or after the fall semester of 1983 must fulfill the General Education Program requirements in partial fulfillment of the requirements for the bachelor's degree. Students entering the University prior to the fall semester 1983 who receive a bachelor's degree from The Wichita State University under the catalog requirements of 1983 or later must fulfill the General Education Program requirements. (See Date of Catalog Requirements.)

Students transferring to The 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 The Wichita State University General Education Program. Community college graduates and transfer students not covered by the agreement are required to enroll in the prorated number of hours necessary to complete The Wichita State University General Education Program as determined by transcript evaluation. Included in these hours are a number of General Studies courses prorated on the proportion of the 30-hour distribution requirement yet to be fulfilled, as shown in column three of the table below.

This table refers only to students with previous college credit and is not applicable to entering freshmen.

<table>
<thead>
<tr>
<th>No. of transfer hours accepted for distribution</th>
<th>No. of &quot;G&quot; hours yet required</th>
<th>Minimum No. of &quot;G&quot; hours to be included in column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6</td>
<td>29-24</td>
<td>9</td>
</tr>
<tr>
<td>7-15</td>
<td>23-15</td>
<td>6</td>
</tr>
<tr>
<td>16-21</td>
<td>14-9</td>
<td>3</td>
</tr>
<tr>
<td>22-29</td>
<td>8-1</td>
<td>0</td>
</tr>
</tbody>
</table>

To complete the General Education Program each student must take:

I. Basic Skills (12 hours)
   - A. English 101 and 102
   - B. Speech 111 or 112
   - C. Math. 109, 110, 111, 112 or 211

   Students with deficiencies in the Basic Skills may be required to take background work or refresher courses.

II. Distribution Courses (30 hours)
   - A. Distribution requirements may be satisfied only by courses designated by the letters "Q" or "G" following the course number in the Schedule of Courses. For a course to be considered a distribution course, it must have been designated by a "Q" or "G" during the semester in which the student was enrolled.
   - B. Rules for Distribution Courses
      1. At least nine hours must be completed in three different departments in Division A. This excludes performance and studio courses, as well as basic language courses.
      2. At least six hours must be completed in two different departments in Division B.
      3. At least six hours must be completed in two different departments in Division C.
      4. No more than six hours of work taken in any one department may be used to satisfy the distribution requirement.
      5. The remaining nine hours may be taken in any division, if the course has a "Q" or "G" designation during the semester in which the course is taken. Performance and studio courses with the "Q" or "G" designation may be taken to complete this portion of the distribution requirement.
      6. At least nine of the 30-hour distribution requirement must be taken in General Studies courses. These courses are offered only at The Wichita State University and are designated by the letter "G" following the course number. These courses are explained in the section titled General Studies Courses.
      7. No course with either a "Q" or "G" designation may be used to fulfill both the requirements of the General Education Program and requirements in the department(s) of the student's declared major(s).

All distribution courses are assigned to one of three divisions-Humanities and Fine Arts, Social and Behavioral Sciences and Mathematics and Natural Sciences. These courses are listed in a special section of the Schedule of Courses each semester. In most cases,
courses from a given department will satisfy distribution requirements for the division in which the department is listed below. However, the divisional assignment of specific distribution courses should always be verified in the Schedule of Courses for the semester in which the course is taken.

1. Division A—Humanities and Fine Arts (excluding performance and studio arts courses): American studies; art education; art history; dance; English; graphic design; history; interdisciplinary liberal arts and science program; linguistics; music education; music performance; musicology—composition; philosophy; religion; Modern and Classical Languages and Literatures (excluding basic first-year language courses); speech communication; studio arts; and women's studies.

2. Division B—Social and Behavioral Sciences: accounting; administration of justice; anthropology; business education; economics; finance/real estate; decision sciences; geography; gerontology; health administration and education; industrial health; journalism; management; marketing and small business; military science; minority studies; personnel services; physical education; political science; psychology; social work; sociology; and urban studies.

3. Division C—Mathematics and Natural Sciences: aeronautics and astronautics; basic emergency medical care; biological sciences; chemistry; communicative disorders and sciences; computer science; dental hygiene; electrical engineering; engineering; engineering technology; geology; health sciences; industrial education; industrial engineering; mathematics; mechanical engineering; medical technology; nursing; physical therapy; physician assistant; physics; and respiratory therapy.

General Studies Courses

General Studies courses are designated by the letter "G" following the course number. They have been designed to provide students the knowledge necessary to develop informed understanding of areas outside of their own fields of specialization. The courses attempt to provide students information and concepts that promote awareness of both the achievement and the limits of knowledge in a given area.

Students transferring to The Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities should see paragraph four under General Education Program.

General Studies courses, taken to fulfill this specific portion of the General Education Program, also count as distribution courses. No course with a "G" designation may be used to fulfill both the requirements of the General Education Program and the student's declared major(s).

The following courses have been approved as General Studies courses. A complete list of General Studies and "Q" courses are listed in each semester's publication of the Schedule of Courses. Course descriptions may be found in the appropriate departmental listings in the Catalog.

Division A, Humanities and Fine Arts

Amer. Stud. 201G, The American Hero
Art. Hist. 121G, Survey of Western Art:
Paleolithic through Early Christian
Art. Hist. 122G, Survey of Western Art:
Renaissance and Baroque
Eng. 220G, The Literary Heritage: English
Masterpieces
Eng. 230G, Exploring Literature
Eng. 232G, Themes in American Literature
Eng. 307G, Narrative in Literature and Film
Eng. 400G, The Literary Imagination:
Epic, Romance, Tragedy, Comedy
Hist. 101G, History of Western Civilization
Hist. 102G, History of Western Civilization
Hist. 108G, A History of Lost Civilizations
Ling. 110G, Learning Another Language
Ling. 151G, The Nature of Language
Mus.-Comp. 160G, The Heritage of Western Music
Mus.-Comp. 493G, American Music
Phil. 100G, The Meaning of Philosophy
Phil. 300G, Science and the Modern World
Rel. 120G, The Biblical Heritage
Rel. 131G, Traditional Religion and the Modern World
Speech 143G, The Art of the Theater
Speech 190G, Crises in Communication

Division B, Social and Behavioral Sciences

Anthro. 100G, Anthropology of Modern Life
Anthro. 126G, Popular Archaeology
Econ. 101G, The American Economy
Mgmt. 101G, Introduction to Business
PE 250G, Fitness for Life
Rel. 120G, Religious Studies
Rel. 131G, Traditional Religion and the Modern World
Speech 143G, The Art of the Theater
Speech 190G, Crises in Communication

Division C, Mathematics and Natural Sciences

Engr. 300G, Technology and Society
Geol. 300G, Energy, Resources and Environment
Math. 300G, The Evolution of Mathematics
Phys. 195G, Introduction to Modern Astronomy

Date of Catalog Requirements

Students who have not been out of college for more than two consecutive calendar years may graduate under the requirements in effect at Wichita State when they first entered any college or university. They may also graduate under the requirements of any subsequent Wichita State University Catalog.

If students have had their college program interrupted by more than two consecutive years, they will be subject to the requirements in effect when they reenter, or, if they elect, the requirements of a later Catalog.

A Second Bachelor's Degree from Wichita State

Students with a bachelor's degree from another institution may receive a second bachelor's degree from The 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 The Wichita State University college and department graduation requirements are met.

Students who have received one bachelor's degree from The 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.

Commencement

Wichita State holds one commencement a year. All summer, fall and spring graduates are invited to participate in the May commencement exercises.

Special Academic Areas

Cooperative Education Program

Cooperative Education is an academic program for undergraduate and graduate students who wish to combine classroom studies with academically related employment by being placed in paid internships closely related to their academic majors. Cooperative Education places students both locally and nationally.

By utilizing off-campus resources and expertise, cooperative education places
students in business, government, industry, health 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 placed in cooperative programs must enroll in specially designated co-op courses and work with a faculty adviser from within the appropriate departments. Each placement is assessed by the faculty adviser 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 adviser. During the internship, students are expected to meet project requirements assigned by their adviser. Academic credit generally counts toward University degree requirements.

Cooperative Education offers both full-time and part-time placements. Students who select the full-time internship option must alternate a semester of full-time enrollment in course work before entering a second full-time position. Full-time interns also carry the status of full-time students and enjoy the accompanying privileges.

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

Requirements for co-op participation vary within the different colleges and departments. Requirements for admission to the co-op program generally include completion of 24 credit hours and satisfactory academic standing. Interested students should contact the Cooperative Education Office in 107 Morrison Hall or phone (316) 689-3688. Students are required to complete an application for admission and schedule an interview with the appropriate co-op coordinator.

Division of Continuing Education

One of the four basic objectives of Wichita State is to provide continuing education opportunities for adults. The Division of Continuing Education's programs and activities are directed toward meeting the higher education needs of adults throughout the Wichita area and the state. The primary functions of the division are to:

1. Provide, in cooperation with degree-granting colleges, courses, programs and support services for faculty and students in off-campus locations
2. Develop and provide alternative information sources, registration procedures and orientation programs for adult part-time students
3. Cooperate with business, industry and the professions in providing specialized credit and noncredit classes
4. Provide planning and support services to the continuing education centers within the individual academic colleges
5. Organize and administer courses for nontraditional students designed to meet their unique time and location needs. The instructional services of the University are extended through courses presented over WSU Cable 13, KMUW Radio and commercial television stations; in outreach locations; and through Weekend University
6. Assist in the development of original presentations and coordinate the reception of teleconferences provided by the National University Teleconference Network and other educational teleconference producers
7. Coordinate adult scholarships and senior citizen services
8. Provide centralization of the records and reporting functions to the Kansas Board of Regents for University-wide, off-campus credit activities and all noncredit programs

Graduate School

More than 3,500 students at Wichita State are enrolled in the Graduate School. The Graduate School offers programs leading to master's, specialist and doctoral degrees. Master's programs are offered in administration of justice, accounting, aeronautical engineering, anthropology, art, art education, biological sciences, business administration, chemistry, communications, computer science, communicative disorders and sciences, counseling and school psychology, creative writing, economics, education administration and supervision, educational psychology, electrical engineering, elementary education, engineering management, science, English, geology, gerontology, health science, history, liberal studies, mathematics, mechanical engineering, music, music education, nursing, physical education, physics, political science, psychology, public administration, secondary education, sociology and Spanish.

Summer Session

Wichita State's Summer Session features a flexible time format. A three-week pre-session precedes two four-week sessions which are concurrent with the regular eight-week session. Evening classes are offered during the regular session. Dates for the various sessions are announced in the Summer Session Schedule of Courses, available by April 1.

All colleges and divisions of the University function during the Summer Session and credit toward both undergraduate and graduate degrees may be earned. More than 200 faculty teach more than 650 regular and short courses and the standards of achievement are identical with those of the academic year. Credits earned in the Summer Session are accepted by all colleges accredited by or belonging to the associations that accredit the University.

For information regarding dates of enrollment, fees, course offerings and the availability of cultural and recreational opportunities, write to:

Director of the Summer Session

The Wichita State University

Wichita, KS 67208-1595

Admission and Enrollment

The rules governing admission to the Summer Session are the same as those for the regular academic year. (See the Admission to Wichita State section of the Catalog.)

A general registration enrolls students just before the eight-week and first four-week sessions. Separate registrations are also held for each of the short sessions. Detailed information on registration is available in the Summer Session Schedule of Courses.

The fees for the Summer Session are the same as those for the regular academic year. (See the Financial Information section of the Catalog.)
Special Summer Programs

Workshops. Workshops are offered throughout the summer. These courses, which are devoted to current topics, carry the course number 150 or 750. Specific topics are not given in the Catalog, but a list of the workshops being offered each summer is included in the Summer Session 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.

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 live in the Hotel Colonial in Puebla for three weeks and in private homes for three weeks.

Six hours of undergraduate or graduate credit may be earned by those who complete the six-week course. For more information, contact the Department of Modern and Classical Languages and Literatures, 305 Jardine Hall.

Field Geology. Wichita State and Kansas State universities present a joint summer field course in geology. The base camp is Beulah, Colorado, on the east flank of the Wet Mountains. The summer course consists of five weeks in the field, for which students receive six hours of credit.

Applicants should have completed course work in physical and historical geology and at least 12 hours of advanced geology preferably including a field methods mapping course. Inquiries should be directed to the Department of Geology, 228 McKinley Hall.

Financial Information

Tuition and fees cover only about one-fourth of the cost of a university education. The remaining expenses are paid out of donations made to The Wichita State University Endowment Association and from appropriations from the State of Kansas.

Comprehensive Fee Schedule

Fees given in this Catalog were proposed for 1986-87 and may be changed by the Kansas Board of Regents or the Kansas Legislature.

Basic Fees

Basic fees for on-campus (City of Wichita and McConnell AFB) regular enrollment and continuing education credit courses are:

<table>
<thead>
<tr>
<th>Session</th>
<th>Undergraduate fees ($)</th>
<th>Graduate fees ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>1 through 14 hours</td>
<td>15 hours and above</td>
</tr>
<tr>
<td></td>
<td>per credit hour</td>
<td>flat fee</td>
</tr>
<tr>
<td>Summer</td>
<td>34.65</td>
<td>520.00</td>
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<tr>
<td></td>
<td>500.00</td>
<td>1,475.00</td>
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<td></td>
<td>85.00</td>
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<tr>
<td>Summer</td>
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<td></td>
<td>250.00</td>
<td>5,600.00</td>
</tr>
<tr>
<td></td>
<td>375.00</td>
<td>7,300.00</td>
</tr>
</tbody>
</table>

Workshop Fees—On Campus

A workshop fee of $51.35 per credit hour, including $41.50 for tuition and $9.85 for student fee, is assessed. Fees for noncredit workshops are based on actual operating costs.

Auditing Course Fees

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

Departmental Fees

Special departmental fees are charged as summarized below:

1. Students are required to reimburse the University for the cost of excess breakage, wastage of materials and materials used in excess of those required to complete a course.

2. Geology Field School—actual costs per semester.

3. Military science—$5.00 per semester.

4. Physical education (bowling) —$25.00 per semester.

5. Physical education (bowling), PE $265—$75.00 per course.

6. Physical education (horseanship) —$75.00 per semester.

7. Physical education (motorcycling) —$35.00 per semester.

Free Music Courses

During the academic school year, undergraduates enrolled in six or more hours will not be charged tuition and fees for the following ensembles:

Wind Ensemble, Mus. Perf. 210B, 410B and 710B

Orchestra, Mus. Perf. 211A, 411A and 711A

Band (Symphony), Mus. Perf. 211B, 411B and 711B

Band (Concert), Mus. Perf. 212B, 412B and 712B

Band (Marching), Mus. Perf. 213B and 713B

University Singers, Mus. Perf. 211F, 411F and 711F

Jazz Arts Ensemble, Mus. Perf. 211T and 411T and 711T and 712T

A Capella Choir, Mus. Perf. 212F, 412F and 712F

Concert Chorale, Mus. Perf. 213F, 413F and 713F

Students enrolled in fewer than six hours will be charged regular tuition and student fees. Tuition and fees will not be charged to graduate students enrolled in the above courses. During Summer Session, tuition and fees for the above ensembles will not be charged to undergraduate or graduate students enrolled for two or more credit hours in courses other than the above.

Heskett Center Program Fees

Student—$5.00 per semester

Spouse of student—$40.00 per fiscal year

Family of student—$50 per fiscal year

Faculty or staff—$50 per fiscal year

Faculty/staff and spouse—$80 per fiscal year

Faculty/staff and family—$100.00 per fiscal year

* Fees are $10 less if paid in a lump sum at the beginning of the year.

Partial year program fees will be prorated and therefore differ from those above.

Payment of the fee entitles the individual or family to use the facility and services during those hours specifically scheduled for each membership category and/or activity of interest. Hours will vary.
Special Fees, Deposits and Waivers
Certain other fees are assessed as indicated below:

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>English composition placement fee</td>
<td>$4.00</td>
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<tr>
<td>Diploma replacement fee</td>
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<td>Identification card fee</td>
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<td>International student application processing fee</td>
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<td>Orientation fee</td>
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<td>Adult</td>
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<td>New student</td>
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<td>Transcript and certification fee</td>
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<td>Public documents per copy charge</td>
<td>$10.00</td>
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<tr>
<td>Late registration fee</td>
<td></td>
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<tr>
<td>Through 20th day</td>
<td>$10.00</td>
</tr>
<tr>
<td>After 20th day</td>
<td>$25.00</td>
</tr>
<tr>
<td>Library fines and lost materials—cost per fine schedule or cost of replacement of material plus a processing fee</td>
<td>$20.00</td>
</tr>
<tr>
<td>Reserving of class fee</td>
<td></td>
</tr>
<tr>
<td>Returned check fee</td>
<td>$10.00</td>
</tr>
<tr>
<td>Telecourse special fee</td>
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<tr>
<td>Instrument use fee, per semester</td>
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<tr>
<td>Teacher placement fee</td>
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<td>Alumni</td>
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<td>Career Placement Fee</td>
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<tr>
<td>Alumni and graduate students</td>
<td>$15.00</td>
</tr>
<tr>
<td>College of Health Professions</td>
<td></td>
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<tr>
<td>Equivalency examination fee, per credit hour</td>
<td>$8.00</td>
</tr>
<tr>
<td>Physician assistant application fee</td>
<td>$15.00</td>
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<tr>
<td>Respiratory therapy*</td>
<td>$100.00</td>
</tr>
<tr>
<td>Nonimmigrant student fee</td>
<td>$26.00</td>
</tr>
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* Acceptance fees are due no later than 30 days after admission to a program and are nonrefundable. The fee will be applied toward the tuition of the first semester of the program.

Testing and Credit by Examination Fees
Experiential learning assessment fee              $25.00
Departmental examination fee, per credit hour    $8.00

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

Drop Fee
Preregistered students may drop courses during registration without charge. When an approved change of schedule involves both the dropping and adding of courses the tuition and student fees already paid for the dropped courses will apply to the tuition and student fees for the courses being added. A $10 drop fee will be assessed during the first five weeks of a semester (two weeks of summer school) for all drop/add transactions submitted at the same time except full withdrawals. No fee will be assessed for adding courses.

Refund Policy—Complete and Partial Withdrawal
Students making a complete or partial withdrawal during the first two weeks of a semester (first week in the eight-week Summer Session) are entitled to an 80 percent refund of tuition and fees. Students making a complete or partial withdrawal during the third, fourth, and fifth weeks of a semester (second week in the eight-week Summer Session) are entitled to a 40 percent refund of tuition and fees. No refund is made to students who withdraw after the fifth week (second week in the eight-week Summer Session).

Classes and credit workshops meeting for a period other than the regular academic term will refund 80 percent during the first 10 percent of class time, 40 percent during the next 20 percent of class time and no refund thereafter. Refunds on noncredit workshops will be made only on cancellations received 48 hours prior to the time of the scheduled workshop.

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

Fee Waiver Policy
The dean of a student's college, or his or her designee, or the registrar may authorize a waiver of special fees and/or nonrefundable tuition fees in cases where the schedule change or withdrawal is required because of University regulations, clerical errors, misadvising, class schedules changed by the University or other exceptional circumstances beyond the control of the student and determined valid by the college dean or his or her designee. The waiver petitioning procedure is as follows:

1. Students request a petition form from the dean's office of their college and provide the information requested on the form.
2. Students present the petition to their college dean's office for consideration. Graduate students petition the Graduate School dean's office.
3. Students are notified of the action taken on the petition.
4. Students submit approved petition to the Controller's Office with their enrollment, schedule change or withdrawal forms.
5. When students wish to appeal a negative decision on a petition, they call their college dean's office for information on how to file an appeal.

Senior Citizen Fee Waiver
In accordance with the Kansas Board of Regents policy, students who are at least 60 years of age may enroll as auditors (noncredit) in any academic credit course in which there is space available without paying tuition and fees. Senior citizens must present a Medicare card or driver's license to validate age. A special senior citizen registration is held after the first day of classes (see the Schedule of Courses).

Senior citizens desiring college credit of the assurance of space in specific courses may enroll and pay full fees during regular registration. Course prerequisites apply to senior citizens as well as other students.

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

Late Enrollment
Students who enroll after the end of regular registration through the 20th day of classes are assessed a late enrollment fee of $10.00. After the 20th day of classes, the fee is $25.00.

At the beginning of each semester, the registrar establishes the specific date for the assessment of the late enrollment fee.

Unpaid Fees
Students who drop courses without following the procedures for withdrawing, who withdraw without notifying the registrar, or who fail to pay all tuition and fees by the due date are assessed a drop fee of $25.00 per credit hour for the dropped courses. No drop fee is assessed for students who withdraw after the fifth week of the semester (second week of summer school) for all drop/add transactions submitted at the same time except full withdrawals. No fee will be assessed for adding courses.

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Assessment and Collection
The University controller assesses and collects the fees. The controller, the dean of the College of Fine Arts and a faculty member from the College of Business Administration constitute the Board of Appeals for students who believe their fees have been incorrectly assessed. The decision of this committee is final.

Student Housing Fees
Three rates are available for student housing at The Wichita State University, depending on the number of meals the student chooses to eat in the residence hall.

Housing costs for the 1986-87 school year are $2,260 for 19 meals per week, $2,231 for 15 meals per week, and $2,078 for 10 meals per week. Single rooms are air-conditioned.

In addition to the housing fees, a $35 nonrefundable application fee is assessed of each person applying for a room in the residence halls.

Rates are for fiscal year 1987. Fees may be changed by the Kansas Board of Regents.

Financial Aids
Wichita State offers financial assistance through scholarships, employment and federally supported programs. Students interested in any type of financial assistance should contact the University's Office of Financial Aids, Grace Wilkie Hall, to see what aid is available for their specific needs. Most financial aid is based on family need, but some scholarships are awarded without consideration of financial need.

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

Employment. All full-time students are eligible for regular part-time or work-study employment at the University, with preference going to students with the greatest demonstrated financial need. Students may find employment in such positions as academic assistants, clerical workers, technical workers, custodial and food service workers and library assistants.


As part of the Office of Financial Aids, the Office of Veterans and Military Services devotes itself 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 aid information and work-study for veterans.

The Wichita State University is designated a Servicemen's Opportunity College.

Endowment Association
The Endowment Association of The Wichita State University is the appropriate channel for fund-raising at the University. The coordination of all fund-raising activities is conducted through the Endowment Association (Development Office) under the direction of the Executive Director of Development.

All investments and bookkeeping responsibilities with regard to gifts to the University are handled through the Endowment Association. A computerized system provides comprehensive recording of all gifts.

Endowed Chairs
The most prestigious manner in which to endow monies to the University is through an Endowed Chair. An Endowed Chair, named according to the wishes of the donor, may be established with an endowment of $500,000. The Endowed Chairs current to the University are:

R. P. Clinton Endowed Chair in Business
Entrepreneurship Endowed Chair
Real Estate Endowed Chair

Endowed Professorships and Fellowships
A University Professorship may cross disciplinary lines and is not restricted to a college or department. The income from such an endowment is used for support of a faculty position. A University Professorship, named according to the wishes of the donor, may be established with an endowment of $200,000.

A PhD Fellowship helps doctoral candidates to achieve their goals within a particular field. A fellowship is named according to the wishes of the donor and is established with an endowment of $120,000 or more.

The current University Endowed Professorships and Fellowships are:

Adele Davis Professorship of Humanities
Geraldine Hammond Visiting Professorship of Humanistic Studies
Hugo Wall Fellowship

Other Endowments
To improve its fiscal stability, The Wichita State University has developed a permanent endowment fund invested to provide continuing income in support of various programs and activities of the University. The major portion affords financial assistance to students as directed by the donors. Other programs supported by the endowment are:

ACE Endowment Fund
Sam Bloomfield Distinguished Engineer in Residence
Business Heritage Series Fund
Butler-Ransom Fund for Religion
Entrepreneurship Activities
Entrepreneurship Research Fund
Football 70 Flower Fund
John L. Garlough Fund
Brad Heilman Memorial
Claude R. Lamb Fund
Library Associates Fund
Eugene W. Lightner Athletic Programs
Ralph Lightner Fund
Thomas Meeker Memorial Fund
Midwest Research Fund
The Lewis and Selma Miller Fund for Fine Arts
William Miller Memorial Fund
Harrie S. Mueller
Lydia Newman Fund
Genevieve Cramer Reed
Delores and Etta Rodenberg Teaching Award
Rossdutcher Library Fund
Anna M. Ryan Fund
James Schwartz Lecture Series
Seamans Memorial Library Fund
WSU Summer Theatre
George Van Riper Distinguished Speaker Series
Marjorie Winthrop Williams

Endowed Scholarships and Grants
The Wichita State University has been fortunate to receive donations submitted in the names of the following individuals. Many are past graduates, faculty and administrators of the University who wish to assist future graduates in financing their years at The Wichita State University. The scholarships listed 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 aid.

Recipients must meet the specific requirements of the scholarships each semester. In addition, all recipients of designated scholarships must write an appropriate letter of acceptance to the donor.

Endowed scholarships and respective departments include:

Clark and Rowena Ahlgren, general
Fred and Mary Aley, business
Robert Alley, education
Alumni Awards, general
Floyd Amstutz, music
Anderson Walk-On, football
James E. Anderson, Sr., education
Robert E. Anderson-Leonard M. Chaffee, education
Jack Austin, business
A. J. and Jean Bachas, general
Bentley and Pearl Barnabas, business
W. Frank Barton, business
W. Frank Barton, entrepreneurship
Douglas Bendell, liberal arts
Christopher Benn, medicine, science/engineering

Biological Science, biology
Leslie Blake, speech
John Blazek, Wichita
V. Jerry Blas, entrepreneurship
Luella Bosworth, English
Merrill Bosworth, music
Hazel Branch, biology
Margaret Gillespie Brehm, general
Sidney J. Brick, bowling
Hazel and Edward R. Brookings, health
War O. and Agnes Brooks, biology
Marvin G. Brown Football Memorial, general
Raymond LeClear Budge, art
Charles M. Bues, chemistry
Stephen Burnam Memorial, mechanical engineering
Louise Byington, liberal arts
Marjorie Calkins Memorial, music
Vincent Cantoneri, music
James Cearus, music
Van Dilla Chapell, general
Anna V. and Robert V. Christian, chemistry
Donald G. Christian Football Memorial, general
Harry Christopher, math
James Chubb, economics
Class of 1927, general
Rick P. Clinton, business
Flora Clough, English/literature
College of Fine Arts/June Laire, fine arts
Daisy Stever Congdon, general
Harry F. Corbin, general
Sara Hyde Corbin, political science
Lee Cornell, geology
Wayne Coulsden, pre-law
Critt, Fund for Art, art
Paul T. and Mary Jane Curry, entrepreneurship
Urban Denker, business
Cecil W. and Helen J. Dorman, business
Walter J. Duerksen, music
John W. Duren Football Memorial, general
Howard E. Ellis, music
John L. Evans, pre-med
Dr. Carl G. Fahrbach Football Memorial, general
Floyd M. Farmer, education
Floyd W. Farmer Football Memorial, general
Louise Findlay, music
Martha Fleming, dance
Fletcher-McKinley, chemistry
Fourth National Bank and Trust Company, general
Helen Johnson Frank, general
Friends of Delta Upsilon, general
Choeanne and Bartee Furtney, liberal arts
Glen Gardner, general
Sam Gardner, golf
Edith A. Garlock, health
Morris and Mary Garvin, music
Merle Geist, general
Paul H. Gerling, political science
Mabel Gay, general
R. L. Gillespie, general
Jacob and Molly Glickman, general
Golf Memorial, golf

Harry Gore, general
Henry and Helen Gott, music
Harold and Eva Weiner Graton, English
Marie Graham, history
Grand Army of the Republic, logopedics
Charles and Helen Graves, general
Benjamin F. Hammond, general
Geraldine Hammond, liberal arts
Eva C. Hangen, general
Herbert J. Hannam, education
Donald R. Harbour, administration of justice
Martin E. Harrison Football Memorial, general
Mary Haymaker, English
Frank Hedrick, golf
Arthur J. Holom, mathematics
Richard H. Hornburger Award for Excellence, business
Myrl Houck, general
Grace Howell, journalism
Earl R. Hutt, aeronautical engineering
Earl R. Hutt, engineering
Ernie Jones Isley, senior honor men and women
Frank C. Isley, senior honor men and women
William H. Isley, senior honor men and women
Col. James J. Jabara, general
John C. and Maude James, engineering
J. R. and Inez Jay, general
Cheese Johnson, basketball
Ronald G. Johnson Football Memorial, general
Charles and Nina Kirby Jones, biochemistry/speech
KBI Foundation Scholarship, continuing education
Lee and Helen Kamen, liberal arts/political science
Kappa Kappa Gamma, handicapped services
Albert C. Katzenmeier Football Memorial, general
Randall B. Keisau Football Memorial, general
John F. Kennedy Memorial, general
James Bandsman Kerr, music
Frank and Margaret Kessler, music
Malory W. Kimmel Football Memorial, general
Robert M. Kiskadden, art
Fred C. Koch, entrepreneurship
Mary R. Koch, fine arts
Jay and Lillian Kornfield, music
Morris and Flossie Krouse, football/basketball
Carl R. Krueger Football Memorial, general
Robert and Dorothy Langenwalter, general
George Lewis, psychology
Thurlow Lieurance, music
Sally Duke Livingston, entrepreneurship
George David Lodge, business
Anita Lusk, business
Delano Maggard, Jr., general
Charles and Dorothy Mahin, English/education
Dr. Robert F. and Judith Malone, health
C. R. Mayfield, geology
R. Wesley McCarty, political science
Clinton C. McDonald, science
Lenura N. McGregor, general
Marjorie McMahon, math
Men of Webster, football
Dr. Daniel F. Merriam, geology
Pearl J. Milburn, general
Frank H. Miller, accounting
Stephen A. Moore Football Memorial, general
Marvin Munsell, anthropology
Craig Murphy, English
Carl Nath, business
C. Henry and Ruth Nathan, journalism
Oliver Basker, general
Frank A. Neff Memorial Award, business

John M. and Nelda Nickel, education
Kenneth Northcutt, business
David A. and LaVerne L. Nygaard, health/education
Conroy G. O'Brien, administration of justice
Dr. Henry and Minnie Ongard, history
Thomas B. Owen, Jr., Football Memorial, general
Robert T. Pate, education
John N. Payne, business/education
Don Phillips, geology
Physician's Assistant Student Society, health
Pi Mu Epsilon, math
Cla Osborn Piper, health
Adrian Poult, music
Henry and Gerry Albritton Pronto, liberal arts
Mabel A. Putnam, general
Ruth Ann Reagan, music
Tom Reeves Football Memorial, general
WSU Regents Awards, general
Charlotte E. Reynolds, German
Charles E. Rickman, liberal arts
Nettie Rickman, general
Larry D. Ricks, geology
Austin and Arline Rising, aviation
James P. Robertson, music
Eugene Robinson Football Memorial, general
Paul W. Christopherson and John Timothy Rose, health
Charles Rossduth, accounting
Robert Ryan, economics
John Rydlof Graduate Award, history
F. C. Sauer, zoology
Eugene Savaiano, liberal arts
George Sawalli, music
Terry and D. J. Scanlon, political science
John Schneider, music
Vera Hulton Seaman, general
Fred Shaw, general
Thomas F. Shedden Football Memorial, general
Ralph and Ina Shenk, physics
Sam and Rosemary Sherr, communications
Disorder Sigma Alpha Iota, music
Fritz Snodgrass, track
Josephine A. Spence, liberal arts
Stallworth, basketball
Clayton Staples, art
Steve Stelly, speech
Harold Steinbeck, geology
Edgar Stewart, engineering
Richard N. Sines Football Memorial, general
Nora S. Storz, business
H. W. Sullivan Award, engineering
Swett Prize, general
Glady's Taggart, physical education
Paul Tasch, geology
John and Mary Tatlock, geology
John R. Taylor Football Memorial, general
Teacher's Scholarship, education
Gordon B. Tenwiller, fine arts
Andrea Tiefel, education
Bill Umphrey, physical education
Harold G. and Ruth Van Noy, pre-med
Harold J. and Mary Varhanik, engineering/health
Wallace P. Ver Wiebe, geology
Jack R. Vetter Football Memorial, general
Vocal Performance Majors, music
David Walton Memorial, ROTC
Dwane and Velma Wallace, engineering
Hazel Wapole, athletics
Wichita Geological Society, geology
Wichita Oil Secretaries Association, business/secretarial/computer science
Wichita Press Women, journalism
Student Affairs

Structure
The vice president for student affairs and dean of students is responsible for the coordination and supervision of the Division of Student Affairs. Issues involving student life, development, programs, problems, and activities on The Wichita State University campus are addressed by the staff of the division.

The dean of Student Life and Services is responsible for the residence halls, off-campus housing concerns, handicapped services, fraternities and sororities, student organizations, preschool, veterans, women’s activities, placement and career services, student health, student activities, counseling students with problems or concerns, and encouraging scholastic achievement.

The dean of University College is responsible for the programs and policies of University College. (See the University College section of the Catalog.)

An assistant dean of students is responsible for Operation Success, Project Discovery and Upward Bound, the federal TRIO programs for educationally disadvantaged students. (See the Special Programs section of the Catalog for a more complete description of these programs.)

Orientation
Special orientation programs are presented through small-group interaction and discussions. For more details about the orientation program, see the University College section of the Catalog.

Counseling
The Counseling 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 are part of the Counseling Center’s function. The credit by exam program and the National Testing program are administered directly by the Counseling Center. The National Testing program includes certification tests for community professionals, CLEP tests and entrance exams for colleges and graduate schools.

The International Program
The International Program in 303 Grace Wilkie Hall serves the special needs of approximately 1,100 international students from more than 70 countries enrolled at Wichita State. For international student admission requirements, see the Admission to Wichita State section of the Catalog. An orientation program especially designed for newly arriving foreign students prepares them for entrance into the American academic system and way of life.

The International Program also sponsors the International Conversation Partners Program, the Global Classroom Program and various other activities that promote interaction between American and foreign students.

In addition, the International Program houses a Study Abroad Center which provides information to American students on study, work and travel opportunities abroad. Information concerning Fulbright-Hays grants may be obtained from this center.

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

Individual career counseling is available to assist students and alumni with planning and decision making. Assessment instruments, including SIGI (a computer guidance system) are offered for self-assessment. Workshops, presentations and classroom instruction are offered to enable persons to learn about the responsibilities of various career fields, to prepare job resumes and letters of application, to conduct effective employment interviews and to make informed decisions.

Occupational and career information, employer directories, information on employment trends, employer recruiting literature, annual salary survey reports and information on graduate and professional school opportunities are available in the Career Resource Center.

Degree candidate and alumni placement services include direct referral to career employment vacancies, on-campus interviews with employer representatives; and matching of jobs and candidates through a Computerized Employment Matching System.

Placement services also include direct referral to part-time jobs, as well as summer employment opportunities.

Housing
The Wichita State University requires new freshmen to live in a University residence hall, unless exempted, because research repeatedly has shown that freshmen who live on campus are more successful academically than freshmen who do not live on campus. All other students may select their own accommodations; however, University housing is highly recommended. The Wichita State University housing policy states:

New freshmen who have graduated from high school within the past nine months must live in a University residence hall unless they are:
1. Married
2. Living with a parent or legal guardian
3. Living with a grandparent, uncle or aunt

Special exceptions to these regulations will be reviewed by the housing officials in the Division of Student Affairs.

Admission to Wichita State does not mean automatic room reservations. Each student admitted will receive information concerning housing from the Office of Admissions and the proper forms must be filled in and returned to the housing office to reserve a room. Students are encouraged to apply early since space is limited.

Requests for information should be sent to:
Director of Housing
The Wichita State University
Wichita, KS 67208-1595

The 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.

University Preschool
The University Cooperative Preschool is a licensed school for children of WSU students. Four certified preschool teachers and 25 part-time aides supervise activities which include art, language, music, science, numbers and literature. The school is available from 7:30 a.m. to 5:30 p.m. Monday through Friday for children 2½ to six years old and 5:00 to 10:00 p.m. Monday through Thursday for children 2½ to 12 years old. Each child must stay for a minimum of two hours per day. The program permits children to attend preschool while
their parents are in class. It is available to the greater community as well.

**Handicapped Services**
The handicapped services office provides supportive services for students with impaired sensory, motor and/or speaking skills.

Student aid assistance during the 1985-86 school year has included note-taking readers, library assistants, wheelchairs, pushers, test proctors, escorts, transfer assistants, transcribers and clerical services. Those interested in these services should contact the handicapped services office for updated information on such assistance. Auxiliary aids and materials available for student use include the Perkins Braillewriter, IBM Braille typewriters, slates and stylies, raised line drawing kits, the Speech Plus Calculator, Braille measuring instruments, mobility canes, print magnifiers, four track cassette tape recorder players with earphones, standard tape recorder players, phonographs, digital Braille clocks, lap boards, transcribing papers and blank tapes. Textbooks are ordered through this office for students requesting books on tape, in Braille or in large print. Tactile campus guides, Braille campus maps and manual wheelchairs for emergency use can be provided.

The Association for Handicapped Students, a campus affiliated group of handicapped and nonhandicapped individuals, promotes fellowship while exploring issues which affect the postsecondary education of individuals with physical disabilities.

**Student Health and Hospitalization**
The Student Health Services in 209 Ahlberg Hall provides ambulatory health care for students with health concerns, medical problems, illnesses and injuries. Clinic services and health education are provided by a staff of professional nurses and community physicians. The services of registered nurses and nurse practitioners are available during office hours and physicians may be seen by appointment during their scheduled clinic hours. Physicians specializing in ear, nose and throat, dermatology, gynecology, internal medicine, surgery and family practice are available.

Special services of immunizations, tuberculin skin testing, family planning information, physical examinations required by academic programs and health screening are offered.

International students are required to submit to the Student Health Services a physical examination form and chest X-ray report completed by a physician.

The student body has chosen to participate in the Rhenium group plan for accident and sickness insurance coverage. Opportunities to enroll in the program are offered at the beginning of each regular semester. Information is available at the Student Health Services and the Office of Student Life and Services.

**Special Programs**

**Center for Business and Economic Research**
The Center for Business and Economic Research, a service of the College of Business Administration, engages in business-economic research for a wide variety of clients in both private and public sectors. The center gathers, analyzes and publishes data describing economic conditions in Wichita and Kansas and is the sole source of comprehensive monthly economic data for the state. The center's staff of faculty and graduate and undergraduate students works together on policy-oriented research and publications, publishing *Business & Economic Reports,* a quarterly, alternately with the monthly *Kansas Economic Indicators.*

**Center for Continuing Engineering Education**
The Center for Continuing Engineering Education has as its objectives:

1. Providing noncredit engineering education for professional development or occupationally/professionally related purposes
2. Cooperating with the engineering professions and related professional associations to provide specialized courses and certificate programs
3. Sponsoring, developing, and cooperating in programs and activities that extend the resources and knowledge of the University to industry, special audiences and the general public.

**Center for Continuing Health Education**
The Center for Continuing Health Education, a unit of the College of Health Professions, provides continuing educational opportunities for members of the nursing and allied health professions in Kansas. Through workshops, seminars and conferences, many offered in conjunction with local or state health and social agencies, the center and the college's educational programs provide current information on philosophy, practice and new developments in the health professions.

**Center for Entrepreneurship and Small Business Management**
The Center for Entrepreneurship and Small Business Management is housed within the College of Business Administration. The purpose of the center is to enhance understanding in the areas of entrepreneurship (new venture creation), small business management and the "American enterprise system." The center provides a comprehensive library and computer data bank for the small business subject area. Additionally, it conducts seminars and workshops, sponsors a visiting lecture series and conducts primary and secondary research. Future objectives include the creation of films for public education.

**Center for Human Appraisal**
The Center for Human Appraisal operates as a service of the College of Business Administration to extend research attitudes and interests in the behavioral sciences and apply that knowledge to governmental agencies and the business community. Projects undertaken by the center include management surveys, assessment programs, supervisory selection, selection for promotions, morale research, supervisory training and general research on people systems.

**Center for Management Development**
The Wichita State University, through the College of Business Administration, offers services of the Center for Management Development to businesses and the professional community.

The WSU Center seminars and workshops have been acclaimed for their usefulness to practicing business people and other professionals in a wide variety of organizations. The center offers a broad range of management education and development opportunities to the growth-oriented supervisor, manager or professional specialist in business, industry, government or other public or private organizations.

**Center for Productivity Enhancement**
The WSU Center for Productivity Enhancement was established by the Kansas legislature in May 1983 to assist in establishing the appropriate atmosphere in Kansas for the development of increased economic activity through the attraction of new industry. The center is focused on CAD/CAM (computer-aided design and manufacturing), advanced composite materials, robotics, artificial intelligence and related manufacturing...
technology activities. It promotes education, research and transfer of technology to industry in these areas.

Center for Women’s Studies
The Center for Women’s Studies serves to promote research and other activities related to women and their concerns, to foster closer ties between academic and community efforts with respect to women’s needs, to act as an informational referral agent and to enhance the overall awareness of campus and community to the current needs of women in the areas of education, jobs and life choices. To help achieve these aims, the center maintains a small resource library of books and periodicals open to students, faculty and others; sponsors seminars, workshops and lectures; and provides community and campus speakers. The center is responsible for administering the BA in women’s studies and supervises the work of students pursuing a concentration in women’s studies in various graduate areas.

Cooperative Education Program
The Cooperative Education program is a university-wide, centrally administered academic program providing students the opportunity to integrate formal course work with periods of relevant off-campus employment. More information is available in the Special Academic Areas section of the Catalog.

French Student Exchange Program
WSU is among the 100 colleges and universities in the United States that participate in the annual student exchange organized by the French Ministry of Education. One individual from WSU spends the academic year in France as a salaried assistant in English, and a student from France is attached to the WSU Department of Modern and Classical Languages and Literatures as a salaried assistant in French. Majors and minors in French who have graduated within one year prior to departure date are eligible to apply.

Hugo Wall Center for Urban Studies
The Wichita State University’s role as a comprehensive urban institution was outlined by the Kansas Board of Regents in 1972: “As the Regents’ urban institution, The Wichita State University’s mission includes development of programs utilizing the unique resources of the urban area.”

The Center for Urban Studies was formed in 1955 and has become a leading contributor to the urban mission articulated by the Board of Regents. The center conducts instruction, research and service programs, integrating these three essential University functions in responding to the needs of students and the urban environment. The Master of Public Administration degree is administered through the center and its faculty in public administration and urban affairs. Service programs of the center include public affairs seminars, workshops for governmental personnel, professional development seminars for governmental managers and a variety of other programs designed to link the resources of the University to urban governments. The faculty and staff of the center are engaged in a wide range of research on state and local government in Kansas, including research and analysis of boards and commissions in Sedgwick County, a history of the property tax in Kansas, a labor market analysis to guide economic development policy in the City of Wichita, an assessment of productivity in the City of Wichita, a political history of Wichita and a study of service delivery of the Wichita-Sedgwick County Department of Community Health.

The Hugo Wall Center for Urban Studies coordinates the University’s State Census Data Center as part of a five-member statewide consortium. The Data Center is the repository of 1970 and 1980 census data and responds to requests for census data.

Marcus Center for Continuing Education
Many educational services are offered through the Marcus Center for Continuing Education, an adult education facility at 4201 East 21st Street. Specialized courses for business and industry, governmental agencies and the professions; special conferences for the general public; and a wide variety of personal enrichment programs are offered in the center. In addition to renting meeting areas, the Marcus Center for Continuing Education staff provides program development, brochure preparation, mailings, fee collection, material preparation and reproduction, registration and program evaluation.

Operation Success, Project Discovery, Upward Bound
Operation Success, Project Discovery and Upward Bound are special programs designed to help students prepare for university life and to successfully complete courses of study.

Operation Success is a federally funded program providing comprehensive, intensive, flexible, one-on-one tutorial help; personal counseling; career guidance; and assistance in the development of study skills for disadvantaged students who are first generation university students and meet specific income guidelines. The program serves about 250 students each year and has been in operation at WSU since 1970.

Project Discovery, a federally funded Talent Search Program, was established at The Wichita State University in July 1977. The project assists approximately 1,500 low-income people in gaining admission to postsecondary institutions throughout the nation. Specific help is provided with admission forms, financial forms and registration for ACT/SAT assessment examinations. The project’s two offices at Wichita State and Coffeyville Community College serve high schools and community agencies in Wichita and 12 counties in southeast Kansas.

The Upward Bound program is a federally funded program that has been at WSU since 1966. The program, titled Wichita Prep, assists high school students from low-income backgrounds who have academic potential but inadequate secondary school preparation. The high school sophomores, juniors and seniors participate in an intensive six- to eight-week summer and academic year schedule to improve academic and social skills. Assistance includes tutorial assistance; academic, career and personal counseling; post-secondary admission; and classes and workshops.

Research and Sponsored Programs
The Office of Research and Sponsored Programs assists the faculty in developing sponsored research, training and other service proposals. The office collects, maintains and provides information regarding the programs, interests and needs of governments, private foundations and businesses; coordinates the preparation and submission of project proposals; and handles the general administration and reporting of sponsored grants and contracts.

Small Business Development Center
The Small Business Development Center, through the College of Business Administration, was established in October 1983. The SBDC provides free counseling and low-cost training to small businesses using consultants from the University as well as the community. Partial funding for the center is provided by the U.S. Small Business Administration.

The center at WSU works with businesses located in the 17 counties of
southcentral Kansas. The center here is also the headquarters of the state office, the Kansas Small Business Development Centers, which oversees activities of the eight SBDCs in Kansas. These centers are located at the largest academic institutions throughout the state.

**Small Business Institute**

The Small Business Institute is housed within the College of Business Administration. Its purpose is to bring together the student's knowledge and the small business experience on a consultation basis. Such interaction rounds out the senior student's education with practical experience while offering assistance to small businesses in the community.

**University Gerontology Center**

The University Gerontology Center develops and coordinates gerontology-related activities and programming at Wichita State, including instruction, research, service and continuing education. The center develops and manages community research in the area of aging and serves as a resource center and information clearinghouse to assist community agencies and organizations in planning and developing services for older persons.

**University Press of Kansas**

The University Press is operated jointly by six state Kansas universities: the University of Kansas, Kansas State University, The Wichita State University, Emporia State University, Fort Hays State University and Pittsburg State University. Founded July 1, 1967, it was the first university press in the United States to function on a statewide level under specific sponsorship of all of the state's universities. Offices are located on the campus of the University of Kansas in Room 303, Carruth-O'Leary Hall.

**WSU Center for Energy Studies**

The WSU Center for Energy Studies conducts energy research with particular emphasis to Kansas applications. Current areas of specialization are wind energy, electric utility and conservation research. Research in the engineering and technical use of microcomputers is also conducted, especially in the area of computer-aided design. The center is directed by the College of Engineering.

**Special Facilities**

Instructional facilities on the 320-acre Wichita State campus are used for educational purposes more hours per day than at any other Kansas college or university. Among notable campus buildings is the Corbin Education Center, which houses the College of Education.

During the past few years more than 300,000 square feet of space has been added to the campus in new buildings. Included are the McKnight Art Center with its Edwin A. Ulrich Museum of Art, Wallace Hall with laboratories for the College of Engineering, a new classroom-office building for Fairmount College of Liberal Arts and Sciences and a new complex for the College of Health Professions. A $10 million structure for recreation and physical education was completed in 1983. The building is named for H. D. Heskett, a 1935 alumnus and benefactor of the University. It provides office and laboratory space: a 200-meter six-lane track; swimming and diving pools; two dance studios; gymnasiums for basketball, tennis and volleyball; and eight racquetball courts.

The most recent facility on campus is Wiedemann Hall, a recital auditorium seating 420, completed in 1986. It houses a magnificent Marcussen concert organ, the first for North America built by the famous Danish firm.

Cable Television

The Wichita State University operates Channel 13 on Wichita's cable television system. WSU 13 broadcasts 115 hours per week of adult-oriented educational, cultural and informational programming. This programming includes 10 to 12 television courses per semester offered for academic credit by the various colleges at WSU. Channel 13 also produces programs featuring distinguished guest speakers, fine arts performances and other campus events. WSU 13 is affiliated with The Discovery Channel, BizNet, Spanish International Network and Campus Network, nationally delivered program services. In addition to full-time staff, 15 students are involved in the operation of the channel and the production of programs. Facilities are located in the Media Resources Center.

Campus Activities Center

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

**Computer Laboratory Facilities**

The Department of Electrical Engineering within the College of Engineering has a Hewlett-Packard 2108 minicomputer system for its laboratories. This is a disc-based system with a real-time executive software operating system capable of operating in a foreground-background mode with a 16-terminal multiplexer. Every laboratory within the department has at least 10 coaxial data lines connected to this minicomputer for terminals and/or data collection.

The department also has an Apollo DN-320 Digital Workstation. This workstation has 1.5M byte main memory with a Winchester Disk Diskette system with 70/12M bits memory.

The department has several Zenith 150 microcomputers and a terminal to access the University mainframe computers. There are other microcomputers and terminals available in the College of Engineering computer laboratory.

**Computing Center**

The Computing Center serves students, faculty and staff of the University by providing contemporary computing services for instruction, research and sponsored programs, administrative data processing and public service. These services include consultation, systems analysis and design, programming, interactive time-sharing, batch and remote batch computer operations, an on-line administrative data base and assistance to computer users in their preparation of requests for competitive bids for the acquisition and selection of computer-related equipment.

The central processing unit is an IBM 3081-D with 16 million characters of main storage and more than 17 billion characters of on-line disk storage. Magnetic tape drives, line printers, a card reader, a card punch and an off-line digital plotter are available for general
use. A network of more than 350 terminals provides interactive computing for campus classrooms, laboratories and offices. Those terminals may be used with the academic time-sharing system (CMS), interactive computer graphics, computer-assisted instruction and the administrative terminal system (CICS). Interactive terminal facilities for students and faculty are located in Abrah Library, the College of Business Administration, the College of Engineering, the departments of chemistry, physics, geology and anthropology and in the Social Science Laboratory, where a line printer is located. More than 400 microcomputers are integrated into the instructional and research areas on campus. Facilities are available to permit transfer of information between the central computer and microcomputers equipped for communications.

The Computing Center terminal facility is located in Neff Hall. Color graphics terminals, a color graphics printer and several other CRT terminals are available in Room 114. CRT terminal facilities and hard copy terminals are located in Room 113. Both rooms are open and available 24 hours a day, seven days a week. Scientific programming and consulting services for faculty and staff in instructional and research projects are located in Room 119. Student programming assistance and academic user services are located in Room 115. Batch and remote batch jobs may be submitted 24 hours a day. Printer and plotter output may be picked up from the dispatch window at Room 108 during scheduled hours.

Harvey D. Grace Memorial Chapel
Harvey D. Grace Memorial Chapel, located in the heart of the campus near Morrison Hall and the Campus Activities 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.

Helpern International Center
The Milton Helpern International Center for the Forensic Sciences serves as a vital resource of the Department of Administration of Justice and as an important depository of information relating to major forensic cases in the United States and abroad. Under the direction of Dr. William Eckert, the center serves as an important information source for forensic scientists and law enforcement agencies working to solve major criminal cases. The center also serves the needs of students majoring in the department. Its resources include extensive library material, tapes and other documents pertinent to major forensic cases. The center is located in the Liberal Arts and Sciences building.

Heskett Center
The $10 million multipurpose dance, physical education and recreation complex opened in the spring of 1983. It is named after H. D. Heskett, a 1935 alumnus and benefactor of WSU. The 166,000 square foot complex contains instructional, research and recreational areas as well as the equipment necessary to support activities.

Activity areas consist of a weight room, combatives room, 25-meter indoor swimming pool with separate diving well, a 200-meter indoor jogging track which surrounds five basketball courts, and eight handball-racquetball courts. The outdoor area contains a six-court lighted tennis complex and four large lighted play fields.

These activity areas are designed to facilitate an extensive campus recreation program.

Institute of Logopedics
The Institute of Logopedics is a private, nonprofit, residential and outpatient rehabilitation center located on 40 acres near the Wichita State campus. The institute is the largest residential facility in the world specializing in habilitation and rehabilitation of adults and children with speech, language and hearing disorders. The institute is University-related through its affiliation with the College of Education's Department of Communicative Disorders and Sciences, which offers academic preparation for Wichita State students desiring to work with communicatively handicapped children and adults. Observation and practicum opportunities are provided at the institute as part of the professional preparation of students in speech and language pathology and audiology.

KMUW—FM Radio Station
KMUW—FM radio broadcasts at 89.1 megahertz FM. The 10,000-watt stereo station is one of more than 300 public radio stations that make up the National Public Radio network. In addition to a full-time staff, about 50 students are involved in the total operation of the radio station. KMUW—FM programming includes classical and jazz music, news and public affairs, plus coverage of special events at Wichita State.

Library/Media Resources Center
Through a wide range of materials, services and facilities, the Library/Media Resources Center supports WSU courses and research. Its growing collection of more than two million items includes books and periodicals, microforms, corporate records, college catalogs, videotapes, films, slides, phonograph records, filmstrips and audio tapes. The library also serves as a depository for selected official publications of the United States. Media and telecommunication services support instruction and campus activities.

The library has open stacks and reference librarians help students and faculty locate information and use the card catalog and reference collection. They also perform literature searches in the numerous computerized data bases to which the library has access. Materials not owned by the library may be borrowed from other institutions through interlibrary loan. The library also makes available study carrels, electronic carrels, containing libraries, and viewing equipment, group-study rooms, microform reading equipment, copy machines and typewriters.

The Department of Special Collections houses a rapidly growing manuscript collection of more than 700,000 pieces, including papers of the abolitionist William Lloyd Garrison and many U.S. congressmen. Other collections include original editorial cartoons by Pulitzer prize-winning cartoonists, publications of U.S. radical organizations and maps and books on regional and local history.

The Media Resources Center houses films, video tapes and the University's cable television station. Its facilities include a television studio, graphic and photographic production areas, satellite television reception terminals, audio studios, stage scenery shops and classrooms with multimedia equipment. Qualified students have access to MRC's audio and video-editing facilities and may check out multimedia equipment for class-related activities. Besides offering courses for university credit, WSU Cable 13 and University television services provide job experiences for students who assist in television operation.

Reading/Study Skills Center
Wichita State offers a variety of services to students through the programs of the Reading/Study Skills Center. Credit and noncredit courses are offered to help students improve their reading and listening skills. Complete descriptions of the credit and noncredit courses offered at the center are included in the University College section of the Catalog.

In addition to formal course work, a math lab and other study skills workshops are made available to students enrolled at Wichita State.
Rehabilitation Engineering Center
The Kansas Board of Regents formally established the Rehabilitation Engineering Center in the WSU College of Engineering during 1978. The objective of the center is to use technology to improve the vocational prospects of the severely disabled.

A qualified engineering staff, along with a rehabilitation laboratory, technicians and a well-equipped shop facility, provides the means to accomplish the center's goals. A federally sponsored rehabilitation grant allows faculty and staff to participate actively in research.

Satellite Television Reception
Three satellite television antennas are used to receive video and audio signals from communications satellites serving North America. Satellite television resources provide students studying foreign languages with television programs produced for French and Spanish speaking audiences, furnish programming for WSU's cable television station and enable the University to participate in national video teleconferences. Receiving antennas are located to the southeast of the Library/Media Resources Center.

Social Science Research Laboratory
The Social Science Research Laboratory supports both instruction in research methods and student and faculty research in the social sciences. In addition, with the use of an optical scanner, examinations for classes across campus are graded and item analyzed. The Student Perception of Teaching Instruction (SPTI) questionnaire is administered, scored and managed by the laboratory.

The laboratory is located in the Liberal Arts and Sciences building. Equipment includes several CRTs, Decwriters and a high-speed printer, all connected to the WSU mainframe. The laboratory is open to students, faculty and social science classes.

Speech-Language-Hearing Clinic
The Wichita State University Speech-Language-Hearing Clinic, Room 104 of R. Dee Hubbard Hall, provides diagnosis and treatment of speech, language and hearing problems, including hearing aid fittings. Services are available on a cost-shared basis to University students, staff and faculty, as well as residents of surrounding communities. The clinic is open 8 a.m. to 5 p.m. Monday through Friday for scheduled appointments and also on arranged evenings for stuttering and other support group meetings. Senior and graduate students in the communicative disorders and sciences department provide services. All work is supervised by departmental faculty who hold appropriate national certification.

Sports and Recreation
Sports and recreation facilities for students at Wichita State include a regulation 18-hole golf course and an outdoor swimming pool. The 10,666-seat Henry Levitt Arena is used for intercollegiate basketball games and major entertainment events. Gessness Stadium, a 30,000-seat stadium, is used for football games and track meets. Under the west side of the stadium is the 114-foot slope of Shocker Mountain Ski School, the first synthetic ski slope ever built on a university campus. The slope has its own rope tow and a chair-lift is under construction; ski equipment is also available. Eck Stadium for Shocker baseball has an artificial surface infield and grass outfield.

Wichita State is a member of the Missouri Valley and Gateway Athletic Conferences and consistently ranks nationally in basketball, baseball, tennis and bowling.

The campus recreation program, featuring the multipurpose complex, the Heskett Center, is designed to provide activities for all students, faculty and staff. In addition to intramurals and open recreation time, offerings include sport clubs: special events: excursions for children of WSU students; faculty and staff; a family program; mini-classes and workshops; outdoor recreation and aquatics.

Ulrich Museum of Art and University Art Collection
The Edwin A. Ulrich Museum of Art, which opened to the public in December 1974, is now recognized nationally for the outstanding quality of its programs. One-person exhibitions of work by Joan Miro, David Hockney, Milton Avery, Kenneth Noland, Morris Louis, Isabel Bishop, Frederic Church, Childe Hassam, Alice Neel, Robert Motherwell, Alberto Giacometti, Gaston Lachaise and the work of other famous artists have been shown in the museum. Although the emphasis has been on contemporary art, there have also been exhibitions as diverse as prehistoric American Indian pottery; treasures from Spanish galleons sunk in 1724; art from 16th and 17th century Antwerp; artifacts from the Civil War ironclad, USS Monitor, holography, electronic art; and the art of New Guinea. In addition, there have been numerous photographic, print and ceramic exhibitions, as well as visits by 50 well-known artists.

The 6,000-object Wichita State University Endowment Association Art Collection is especially strong in 20th century American art. Its most visible works are the 46 major outdoor sculptures scattered throughout the University campus. These sculptures were created by Barbara Hepworth, George Rickey, Lynn Chadwick, Louise Nevelson, Auguste Rodin, Joan Miro, Henry Moore, Theodore Roszak, Ernest Trova and many others. The largest and perhaps most significant outdoor work is a 28' x 52' marble and glass mosaic mural entitled Personnages Oiseaux. It was created especially for the facade of the museum by Joan Miro and dedicated in October 1978. The mosaic, the largest in the world by Miro, is constructed of one million pieces of colored Venetian glass and was interpreted from Miro's maquette by Jacques Loire de Chantrell, France.

Walter H. Beech and Supersonic Wind Tunnels
Various wind tunnels are available at Wichita State for faculty and student use in aerodynamic studies. The Walter H. Beech Wind Tunnel is a 200 mph closed-return tunnel with a 7' x 10' test section. A digital data logging system and an on-line microprocessor with plotting capability are employed as part of the readout system. Two supersonic wind tunnels capable of producing wind velocities from two to four times the speed of sound, are available.

A new 1 x 1.3 meter subsonic wind tunnel has recently been completed. This facility features a laser velocimetry system for flow measurement. Two smoke tunnels, a boundary layer tunnel and a water table are also available for flow visualization studies.

Student Activities and Organizations
Student organizations may be granted the privileges of a University organization if registered with the Student Government Association (SGA), providing lists of officers and other executive members, statements of purposes and copies of constitutions and bylaws. Once an organization is filed with SGA, it may use Wichita State in its name, use University rooms or grounds for meetings and post announcements on University bulletin boards.

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, it places an increasing emphasis on the role the Student Government Association (SGA) plays on campus.

The legislative, executive and judicial responsibilities of SGA are vested in the Student Senate, Cabinet and University Supreme Court. The senate appoints students to University committees, recognizes and funds student organizations and allocates approximately $1.7 million annually to campus agencies ranging from the preschool to the Heskell Center. The cabinet executes the decisions of the senate and the officers. The supreme court issues opinions on constitutional questions and also serves as an appeals court. 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 November. 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, Campus Activities Center, The Wichita State University, 689-3480.

Student Rates
Special rates for students are available for some campus activities: The following offices have ticket and price information: Campus Activities Center — on-campus movies; Duerksen Fine Arts Center (Division of Music) — Wichita Symphony Orchestra and on-campus events; Wilner Auditorium — University Theatre; Henry Levitt Arena — athletic events; campus golf course — student golf rates.

Fraternities and Sororities
Seven national sororities are active at the University: Alpha Kappa Alpha, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Gamma Phi Beta and Sigma Gamma Rho. Thirteen national fraternities are also on campus: Alpha Phi, Alpha Tau Omega, Beta Theta Pi, Delta Upsilon, Kappa Alpha Psi, Kappa Sigma, Phi Beta Sigma, Phi Delta Theta, Pi Kappa Alpha, Sigma Alpha Epsilon, Sigma Nu, Sigma Phi Epsilon and Omega Psi Phi.

Organizations
Honorary
Alpha Lambda Delta
ASME
Beta Gamma Sigma
Delta Sigma Rho — Tau Kappa Alpha
Epsilon Gamma Chapter of Sigma Theta Tau
Eta Kappa Nu
Honors Society
Kappa Delta Pi
Kappa Kappa Psi
Lambda Alpha
Mortar Board
Mu Phi Epsilon
Omieron Delta Epsilon
Pi Delta Phi
Phi Delta Kappa
Phi Eta Sigma
Phi Kappa Phi
Phi Mu Alpha Sinfonia
Pi Delta Phi
Pi Epsilon Delta
Pi Mu Epsilon
Pi Omega Psi
Pi Sigma Alpha
Pi Tau Sigma
Psi Chi
Senior Honor Men
Senior Honor Women
Sigma Delta Pi
Sigma Gamma Epsilon
Sigma Gamma Tau
Sigma Pi Gamma
Spur
Tau Beta Pi
Tau Beta Sigma
Zeta Phi Eta

Professional and Departmental
Administration of Justice Association
Administrative Management Society
Advertising Club
Agri-Marketing Association, WSU Chapter of the National
AIESEC
Alpha Epsilon Rho
Alpha Eta Rho
Alpha Kappa Psi
Alpha Pi Mu
American Institute of Aeronautics and Astronautics
American Society of Mechanical Engineers
American Society for Personnel Administration
Anthropology Club
Art Education Club
American Society of Heating, Refrigeration and Air-Conditioning Engineers
Association for Computing Machinery
Betta Alpha Psi — Epsilon Tau chapter
Biology Club
Charla Española
Chemistry Club
Childhood Education, Student Branch of the Association for Communicative Disorders and Sciences, Graduate Student Colloquium in
Debate Society
Dental Hygiene Association, Junior American
English Graduate Student Association
Geology Club
German Club
Health, Physical Education, Recreation Majors Club
Industrial Education Club
Institute of Electronics and Electrical Engineers
Jazz Educators, National Association of KANS (Kansas Association for Nursing Students)
Le Cercle Francois
Legal Assistants Society
Linguistics Society
Math Club
Medical Technology Students Society
Music Educators National Conference
National Student Speech and Hearing Association
Pershing Rifles
Physical Education Majors Club
Physical Therapy, Student Association
Pi Sigma Epsilon — Gamma Theta chapter
Pistol Team
Political Science Club
Political Science Graduate Student Association
Potters Guild
Psychology Graduate Student Organization
Rho Epsilon
Rifle Team
Senior Classical League
Sigma Alpha Iota
SKNEA (Student Kansas National Education Association)
Society for Automotive Engineers
Society of Manufacturing Engineers
Society of Professional Journalists
Society of Women Engineers
Stammisch
Student Advisory Council for Nursing
Student American Academy of Physician Assistants
Student Physics Society
Student Social Workers Organization
Urban Affairs Graduate Student Association
Women in Communications, Inc.
Women's Studies Club

Special Interest
Amateur Radio Club
American Baptist Campus Ministries
Associated Malaysian Students of Wichita
Association for Women Students
Baha'i Club
Black Scholarship Association
Black Student Union
Campus Advance (Churches of Christ)
Campus Girl Scouts (Trefoil)
Central America Solidarity Committee
Chess Club
Chinese Association of WSU
Christian Science Organization
Circle K (Kiwanis)
Citizens for Information and Disarmament
College Republicans
Committee in Solidarity with the People of El Salvador
Crew Club
Cultural Organization of the Indian Continent
Democratic Socialist Club of America
Ecumenical Christian Ministries, Inc.
Fellowship of Christian Athletes
Flying Club
Free University
Handicapped Students, The Association for
International Association of WSU
Inter-Varsity Christian Fellowship
Karate Club
Korean Student Association
Lebanese League
Lebanese Student Association
Little Sisters of Dallas
Mecha—Movimiento Estudiantil Chicano de Aztlan
Mid-America Dance Theatre
Mikrokosmos
Model United Nations
Moslem Student Society
Muslim Student Association
Native American Heritage Association
Nurses Christian Fellowship
Pathfinders
Physical Therapy Student Christian Fellowship
Progressive Student Organizers Coalition
St. Alban’s University Parish
St. Paul’s Newman Center
Soccer Club
Southern Africa Solidarity Committee
Students Against Capitalism
Students for Alternative Theater
Students for Home Birth
Student Alumni Association
Students for Origins Research
Tai Chi Club
Thal Students Association
Ultimate Gyration Fraternal Association
Unitarian Student Organization
University Lutheran Center
Veterans on Campus
Vietnamese Student Organization
Wichita Rangers
Women’s Soccer Club
Women’s Resource Center
Word of Life Christian Fellowship
World Student Association
World Student Union
WSU Photo Club
WSU Spirit Squad
Young Democrats

Governing
ASK—Associated Students of Kansas

Brennan Hall Council
Campus Activities Center Activities Council
Division of Music Student Council
Engineering Council
Fairmount Towers Hall Council
Interfraternity Council
Intersorudence Council
Pahellenic Council
Student Government Association
Student Publications, Board of

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 are usually required for one hour of credit. In courses involving meetings other than lectures, the following symbols are used: R, lecture; L, laboratory; C, conference; D, demonstration; P, practicum, with the hours of practicum per week given in front of the letter (6-8P means six to eight hours of practicum per week).

Abbreviations
The following abbreviations of academic departments and areas are used in references to courses offered by those departments.

Acctg. Accounting
AE Aeronautical engineering
AJ Administration of justice
AM Applied music
Amer. Stud. American studies
Anthro. Anthropology
Art Ed. Art education
Art Hist. Art history
Av. Mgt. Aviation management
Biol. Biological sciences
B. Law Business law
CDS Communicative disorders and sciences
Chem. Chemistry
Comm. Communications
CS Computer science
CSP Counseling and school psychology
Dance Dance
DH Dental hygiene
DS Decision sciences

EAS Educational administration and supervision
Econ. Economics
EE Electrical engineering
Eng. English language and literature
Engr. General engineering
ET Engineering technology
Fin. Finance
Fr. French
GD Graphic design
Geog. Geography
Geol. Geology
Ger. German
Geron. Gerontology
HAE Health administration and education
Hist. History
Hon. Honors Program
HS Health sciences
IE Industrial engineering
Ind. Ed. Industrial education
In. Eng. Intensive English
IS Instructional services
Ital. Italian
Journ. Journalism
Legal Legal assistant
Ling. Linguistics
LS Library science
Math. Mathematics
ME Mechanical engineering
Mgmt. Management
Min. Stud. Minority studies
Mkt. Marketing
MOD Modern and classical languages and literatures
MS Military science
MT Medical technology
Mus.-Comp. Musicology-composition
Mus. Ed. Music education
Mus. Perf. Music performance
Nurs. Nursing
PA Physician assistant
PD Personal development
PE Physical education, health and recreation
Pers. Personnel (business)
Ph.D. Philosophy
Phys. Physics
Pol. Sci. Political science
Port. Portuguese
Psych. Psychology
PS Personnel service (education)
PT Physical therapy
RE Real estate
Rel. Religion
RT Respiratory therapy
Russ. Russian
SA Studio arts
Sm. Bus. Small business/entrepreneurship
Span. Spanish
Spch. Speech communications
Soc. Sociology
Stat. Statistics
SW Social work
UJA Urban affairs
WS Women’s studies
University College

William W. Harmon, PhD, Dean

The primary goal of University College, as a part of the Division of Student Affairs, is to assist students in their educational endeavors by providing relevant support services. Responding to the diverse needs and goals of both degree and nondegree-bound students requires a well-conceived and flexible system of programs and services.

Students in University College are enrolled in courses offered by departments in the degree-granting colleges and taught by faculty from those departments. Exceptions are the credit or non-credit personal development courses offered by University College.

University College is the academic home for (1) all freshmen working toward degrees; (2) those transfer students who have not completed 24 semester hours with at least a 2.00 grade point average or who have not declared academic majors; (3) nondegree-bound adult students who were formerly designated Continuing Education students; (4) guest students attending other colleges and universities who wish to enroll at Wichita State on a temporary basis (for one term only); and (5) selected high school students who have the consent of their high school principals.

Degree-bound students are provided with academic support services which will enable them to make successful transitions to degree-granting colleges. While enrolled in University College, those who are seeking degrees are expected to develop educational planning skills, remove high school deficiencies, develop effective study skills and habits, choose an academic major, develop personalized academic and career/life plans and complete part of the general education requirements.

Nondegree-bound students receive services designed to be responsive to the unique needs, responsibilities and learning styles of adult students. Programs, policies and procedures emphasize ease of access to the University and its resources and opportunities for individual assistance.

Services focus on individuals who want to take courses for self-enrichment, job advancement, career change, general updating or professional certification. Academic and career advising are also provided for those students who may decide after initial enrollment to work toward a degree.

University College services include orientation and educational planning programs; registration, advising and consultation; personal development courses in reading, writing, listening and
study skills; adult seminars and occupation seminars for individualized assessment and vocational exploration.

Admission to University College

Degree-bound Students: For more information on general University admission requirements, see the Admission to Wichita State section of the Catalog.

Nondegree-bound Students, Regular: Students who are not currently working toward specific undergraduate degrees at Wichita State are admitted as regular nondegree-bound students. To be admitted, they must submit high school transcripts or GED scores—and if they have attended college, college transcripts—to the Wichita State admissions center. Failure to report all previous schools attended will result in dismissal.

Nondegree-bound Students, Special (Open Admission): Adults may be admitted as special open-admission students for a maximum of 15 hours if:
1. They have graduated from high school and have not attended any school for two years or
2. They have not graduated from high school and are at least 21 years of age or
3. They are currently on active military duty or
4. They hold a baccalaureate or higher degree.

Students admitted under the open-admission policy need only submit an application for admission. Test scores and transcripts are not required.

Students admitted under the open-admission policy will be considered nondegree bound for the first 15 semester hours. In order to pursue work beyond the semester in which the 15th hour is completed, students must declare themselves to be regular nondegree students in University College or they must apply for admission as degree-bound students in University College or one of the degree-granting colleges of the University. Transcripts of previous high school or college work (or GED scores) will be required at this point.

Orientation

Orientation and educational planning programs help new students become a part of the learning community and teach the requirements, expectations and procedures of that community. The programs assist students in thinking through and developing written plans for their personal development, education and future careers.

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

Degree-bound Students: Because orientation and educational planning are not preludes to education, but rather a part of college education itself, all first-semester degree-bound University College students are required to attend an academic orientation and to participate in personal planning sessions. A required, nonrefundable orientation fee is charged to all students and includes participation in the Wichita State University Catalog and a special guidebook. Orientation programs are scheduled in advance of both the fall and spring semesters. Information about orientation and registration is sent by University College to all students who have been admitted to University College.

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

Academic Advising

Academic advising is more than class schedule building. It is a shared relationship between student and adviser that is an essential part of the university experience. As with any good relationship, each must contribute to make it work effectively.

Degree-bound Students: Every semester all degree-bound students enrolled in University College are expected to develop academic plans with the assistance of their academic advisers. Each degree-bound student enrolled primarily in day courses is assigned an academic adviser. When a student declares a major field of study, he or she is assigned a faculty member in the academic department offering that area of study. Students who have not declared majors are assigned to faculty from the various departments, to academic counselors in University College or to faculty members in the Division of Student Affairs. Evening students are encouraged to seek advice and counsel from University College staff members and should contact the University College office to find out which evenings the office is open.

Students planning on professional graduate-level studies (medicine, law, theology, etc.) are assigned to qualified faculty advisers in the selected preprofessional areas for developing strong undergraduate preparation. Students should check with their assigned advisers to see what preprofessional courses should be taken while they are in University College.

Nondegree-bound Students: Nondegree-bound students are not normally required to see an adviser or counselor for course approval before registration if they meet course prerequisites. However, students are encouraged to seek advice if they have questions or uncertainties about the type of course in which to enroll. Those students who are considering the possibility of transferring to degree programs at a later date should discuss their plans with an academic counselor to be sure that they are developing the best possible educational foundation.

Career/Life Planning

Degree-bound Students: The Career/Life Planning program is available to help degree-bound students begin to develop systematic career plans after realistically assessing their interests, values and capabilities.

University College academic counselors assist students in the exploration of the academic curriculum in preparation for their career choices. The counselors also help to identify people and information resources for further information on academic majors and/or career options. A course entitled Occupation Seminar is offered as part of the program.

Nondegree-bound Students: Career/Life Planning program activities are designed to provide nondegree students with support for exploration, clarification, decision making and follow-through in issues related to self-enrichment, job advancement, career change, general updating, or professional certification. Specific activities include personal and group consultations, using resource materials, interest testing and referrals. Credit courses, including Adult Seminar and Occupation Seminar, are offered as part of the program.

General Education Program

Degree-bound students at Wichita State are required to enroll in a specific number of semester hours of general education courses. Wichita State's requirements are based on the conviction that college graduates should be exposed to a broad sampling of knowledge about themselves and the world—not a narrow discipline of knowledge and skills.

The general education requirements include a wide variety of courses organized into several divisions, as shown in the Academic Information—Re-
quirements for Graduation section of the Catalog. Students must develop personalized general education programs by choosing courses from each of the divisions. Students often select courses that meet both general education requirements and major requirements. Nondegree-bound students should be aware of the general education requirements in the event they decide to pursue a degree at some later date.

Policies

First Semester—Transition Semester

Because there is a special period of transition and adjustment to university life, students in their first semester of college work may choose a special option of translating letter grades into credit or no credit at the conclusion of the first semester, as discussed under the Academic Information—Transition Semester section of the Catalog.

Personal Development

All students should continue their education through experience, knowledge and skills development. Toward that objective, University College provides courses in reading, writing and study skills. The departments of mathematics and English also offer high school-level courses for those who are not prepared for university-level work.

Advanced Placement and Credit

WSU students may earn credit toward a degree by satisfactory achievement on specific tests. Scores on the American College Test (English and mathematics), Advanced Placement Program, College-Level Examination Program (all general and certain subject examinations) and the Proficiency Examination Program (specific tests) may be presented for evaluation. For full details, consult the coordinator of testing in the Counseling Center.

Student Responsibility

All students are expected to familiarize themselves with course prerequisites, enrollment dates and procedures and all other policies stated in the current The Wichita State University Catalog and in The Wichita State University Schedule of Courses.

Once students in University College have enrolled in a course, they are officially entered in that course. Students must either withdraw from the course by completing and filing an official drop card or they must complete the course. If students fail to withdraw from or to complete courses, they receive F grades on their transcripts. (See Academic Information in the Catalog for full details about grading policies, incompletes and similar policies.)

Transferring to a Degree-Granting College

Degree-bound Students: All students seeking a degree are expected to qualify for transfer to one of the six undergraduate degree-granting colleges at the end of the semester in which they complete 24 semester hours. To qualify for transfer to a degree-granting college, a student must have completed 24 semester hours successfully, met the minimum GPA required by the college and successfully completed any prerequisite courses.

Students who have declared a major and who qualify for transfer into the colleges of their choice are transferred automatically.

Degree-bound students may not continue in University College after the semester in which they complete 48 semester hours.

Nondegree-bound Students: Those students not seeking degrees may remain in University College beyond 48 hours by filing and having approved a petition of intent for nondegree status with the Dean of University College. Those who subsequently wish to work toward Wichita State baccalaureate degrees may transfer their credits to an undergraduate degree-granting college.

In transferring to another college, students must meet the admissions requirements established by that college.

Probation and Dismissal Standards

Probation: Since a 2.00 (C) average is required for graduation, students are placed on academic probation whenever they have attempted six hours and their cumulative grade point average falls below 2.00. (An explanation of terms used in this section is found in the Academic Information section of the Catalog.) The transition semester counts toward the number of hours attempted but does not count in the calculation of the grade point average used to assess probation or dismissal.

Transfer students admitted on probation must complete at least 12 semester hours of credit work, achieve a 2.00 grade point average on work at Wichita State and have a 2.00 cumulative grade point average before probation is removed.

Students on probation are normally limited to maximum loads of 12 hours per semester, although exceptions may be made by the Dean of University College. The limitation of 12 hours also applies to students who have declared a transition semester.

Dismissal: Degree-bound University College students who have accumulated 12 attempted credit hours after being placed on probation (unless other standards were specified as a condition of admission or readmission) and who do not have a 2.00 grade point average for the most recent semester or Summer Session will be academically dismissed. Once degree-bound students accumulate 48 hours, they will be transferred or dismissed from University College.

The grading system is explained in the Academic Information section of the Catalog.

Nondegree-bound students are subject to the same probation/dismissal standards as above with the following exception: At 48 hours, nondegree students will be asked to reaffirm their nondegree status with the Dean of University College.

Readmission after Academic Dismissal

Students who have been academically dismissed may seek readmission to University College by appealing, in writing, for an exception to the regulations. University College requires petitioners to meet with an academic counselor for a personal interview and to prepare a written petition which is considered by the University College Exceptions Committee and then forwarded to the University's Committee on Admissions and Exceptions for final action.

Because counseling and advanced planning require careful attention and much time, students must secure their recent academic records, complete their petition satisfactorily and have had 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.

Cases for readmission must be developed by the students themselves. They should center their petitions around explanations for their failures and presentations of evidence for their future successes.
Personal Development Courses

All the following courses are graded Credit (Cr) for satisfactory work or No Credit (NCr) for unsatisfactory work.

Credit Courses

100. Freshman Seminar. (1). A study of the University as a resource for personal development and the development of an individual master plan for study and self-development in the University. J 11 100 2 0601

100A. Adult Seminar. (1). A special class for adults who have been out of school for one year or more. Designed to help adults learn more about themselves and about The Wichita State University. Covers career information, interest testing and interpretation, educational planning and other activities. J 10 100A 2 0601

102. Occupation Seminar. (1). A study of occupations and curricula development of a personal profile from test results and past experiences, selection of a major curriculum and development of a master plan to be followed. J 11 102 1 4999

160. Reading Improvement Techniques. (3). A course designed for students who seek to improve reading and study skills. Reading and study habits are diagnosed and results are used to design a program of self-improvement in these and other skills for each student. J 12 160 1 1501

Noncredit Courses

The following courses are not applicable to a degree in the baccalaureate colleges.

050. Personal Assessment Planning. (1 or 3). A course designed to provide specialized developmental instruction, using a variable format. J 10 050 2 4999

060. Basic Reading Skills. (3). For students with significant reading skill deficiencies. Students will undergo extensive diagnostic testing and appropriate individualized instruction will be provided based on results of administered tests. J 12 060 1 1501

080. Writing Improvement Techniques. (2). Designed for those students who are interested in developing writing skills directly related to use in academic courses. Emphasis is placed on individualized and basic skill development. J 12 080 1 1501

090. Listening and Verbal Communication. (2). Much of the information students gain in college is through listening to lectures and discussions. This course provides training in the skills of recognizing important information and taking good notes. J 12 090 0 0601
The mission of the Wichita State College of Business Administration is to provide an educational environment in which students and faculty can discover, examine critically, preserve and transmit the knowledge and values essential to the improvement of the quality of life for society and for the individual. By offering these learning opportunities, the college contributes to the development of professionally competent and socially responsible men and women for careers in business, government and other organizations requiring the organizational, managerial and analytical skills necessary in today's rapidly changing environment.

This mission is influenced by the location of the college 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 College of Business Administration is committed to programs and activities that will help sustain the contribution that this urban center makes to the economic, professional and cultural health of the state and nation.

Within this context, the faculty of the college state the following objectives:

1. To offer programs (undergraduate, graduate and postgraduate) to develop and update professional competence in all facets of management and administration.
2. To add to the total body of knowledge concerning business and administration through fundamental and applied research and to actively participate in the search for solutions to business and community problems.
3. To serve as an information and research center for the community, state and region.
4. To foster mutually supportive relationships with the business community of the city, state and nation in order to promote understanding and cooperation in educational and professional activities.

The college is a member of the American Assembly of Collegiate Schools of Business; all its undergraduate and graduate programs are accredited by this organization.

Degrees Offered

Baccalaureate
The undergraduate curriculum of the College of Business Administration 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: business education, economics, finance, real estate and decision sciences, management, and marketing and small business.

Students may obtain a second bachelor's degree in the College of Business Administration if they: (1) complete a minimum of 30 hours in residence in the College of Business Administration in addition to the work required for the first bachelor's degree and (2) satisfy the college'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
Two-year programs in secretarial and legal assistant training, which lead to the Associate of Science, are available. The secretarial program is offered by the Department of Business Education and the legal assistant program by the Department of Finance, Real Estate and Decision Sciences.

Graduate
Master's degree programs in the college lead to the Master of Business Administration (MBA), Master of Professional Accountancy (MPA), Master of Science (MS) in accounting and administration and the Master of Arts (MA) in economics.

The MS in accounting is being phased out and will be replaced by the MPA. No further admissions to the MS degree program in accounting are being accepted. Students currently pursuing such a degree have the option of transferring to the MPA program or completing the MS degree in accounting by December 31, 1986.

For additional information on graduate programs, see The Wichita State University Graduate School Bulletin and the College of Business Administration-Master of Professional Accountancy section of the Catalog.

Business Teacher Education
Students interested in preparing to teach business subjects in high school should enroll their first year in University College and then transfer into the College of Education. All Wichita State students who receive a certificate to teach must meet the requirements outlined in the College of Education section of the Catalog.

Business Emphases in Other University Programs
Students in Fairmount College of Liberal Arts and Sciences may major in economics. Students from all colleges may minor in accounting, business administration or economics. Students in the College of Education may major or minor in business education or economics, as well as minor in accounting. Students in all colleges other than business may pursue a minor in business administration.

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 College of Business Administration provides the organizational administration course work for the degree program in health care administration offered through the College of Health Professions. This program prepares students to be qualified health care administrators in one of the many types of health facilities.

The College of Business Administration cooperates with the College of Engineering in offering a graduate degree in engineering management science.

Policies

Admission
Entering Wichita State freshmen interested in business administration are first admitted to University College and must meet the general entrance requirements of the University.

Initial admission to the College of Business Administration is available to students from University College, degree-granting colleges within the University of other universities and colleges, provided the student has (1) completed 24 semester credit hours, (2) a cumulative grade point average of 2.25 and (3) completed six hours of English composition, three hours of speech and three hours of college algebra.

Advanced standing in the College of Business Administration is available to students who have (1) completed 60 semester hours, (2) a cumulative grade point average of 2.25, (3) completed six hours of elementary accounting, six hours of elementary economics, business statistics, business calculus and a business computer programming course and (4) declared a professional major in the college. Note: For degree-seeking students in the College of Business Administration, advanced standing is a prerequisite for all upper-division courses in the college.
Transfer students planning to transfer into the College of Business Administration 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)
- **Communications**
  - Composition (6 hours)
  - Speech (3 hours)
- **Computer Science**
  - Any programming language (3-4 hours)
- **Humanities** (8 hours)
- **Social Sciences**
  - Principles of economics (6 hours)
  - Psychology, sociology, anthropology, political science (6 hours)
- **Business**
  - Introductory accounting (6 hours)
  - Business statistics (3-4 hours)
  - Nonbusiness electives (10 hours)

### Probation and Dismissal

Students are placed on probation at the end of any semester in which they do not have a cumulative grade point average of 2.25. Probation is removed when their cumulative grade point average reaches the 2.25 level. Students remain on probation if (1) they earn a 2.00 or better grade point average in the semester during which they are on probation and (2) their cumulative grade point average does not fall below 2.00. 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 College of Business Administration if they fail to meet the requirements of their probationary status. When dismissed, students must apply to the College of Business Administration Exceptions Committee to be considered for readmittance on a final probationary status. Application should be made in the student records office, 106 Clinton Hall.

### Extension or Correspondence Work

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

### A/Pass/Fail

The following restrictions pertaining to courses taken for A/Pass/Fail credit apply to students enrolled in the College of Business Administration:

1. No course in the College of Business Administration core may be taken on an A/Pass/Fail basis.
2. No course in the student's area of emphasis may be taken on an A/Pass/Fail basis.
3. Except for the cases given above, students enrolled in the College of Business Administration are subject to the A/Pass/Fail regulations of the University.

### Limitations on Student Load

Initially admitted College of Business Administration students are limited to a maximum of 16 hours, to which may be added one hour of military studies or physical education. Students admitted to Advanced Standing are limited to a maximum of 18 hours, of which may be added one hour of military studies or physical education.

All College of Business Administration students are limited to enrollment in one course during a summer precession, 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 College of Business Administration participates in the University 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 adviser. 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 College of Business Administration is to help students progress toward their educational objectives. The college's advising system offers:

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

Advising is designed to provide assistance where desired and appropriate. Students, especially those nearing graduation, are encouraged to make full use of the advising 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 The Wichita State University for a degree and (2) the continuing evaluation of completion of graduation requirements.

  Evaluation of transfer work is initially accomplished by the University's office of admissions. Evaluation of business and economics course work is done by the college's student records office, 106 Clinton Hall, working in conjunction with the dean's office and the various departments within the college.

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

- **Schedule Building:** Schedule building is the determination of specific courses a student should take in a given semester. Students should refer to the *Wichita State University Schedule of Courses and Catalog* in consultation with a faculty adviser or staff of the college'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 adviser.

- **Program Planning:** Students are encouraged to outline an entire plan of study early in their academic career.
The faculty of the College of Business Administration strongly endorses the Graduation Requirements each student admitted to the College of Business Administration's academic honesty policy. The suggested sequence of courses includes classes which are part of the College of Business Administration core requirements. Core courses required for the BBA are:

**Mathematics**
- Math. 111, College Algebra
- Math. 144, Business Calculus
- Math. 144Q, Business Calculus

**Business Education/Secretarial Science Majors (114 Business Education Building)**
- All business education and secretarial science majors are advised in the Department of Business Education.

**Academic Honesty**
The faculty of the College of Business Administration strongly endorses the statement on academic honesty appearing in the general information section of this Catalog.

**Graduation Requirements**

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

1. Complete at least 56 hours of course work offered outside the college (Econ. 201Q and 202Q may count as courses outside the college, but Hist. 515, 516 and 614 and Pol. Sci. 655 and 687 may not.)
2. Complete at least 50 semester hours of course work offered by the College of Business Administration.
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 College of Business Administration.
5. Achieve a grade point average of 2.25 or better on (a) all college work, (b) all work taken at Wichita State, (c) all business and economics courses, (d) all business and economics courses taken at Wichita State, (e) all courses counted toward the student's major emphasis and (f) all courses counted toward the student's major emphasis taken at Wichita State.

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

**Freshman Year**
- Math. 111, College Algebra
- Math. 144, Business Calculus
- Eng. 101-102, College English I-II
- Speech 111, or 112—Basic Public Speaking or Basic Interpersonal Communication
- General education electives

**Sophomore Year**
- Accgt. 210, Financial Accounting I
- Accgt. 220, Managerial Accounting I
- CS 190, Introduction to Programming for Business, or CS 200, Introduction to Programming and a programming language selected from CS 201-216 Econ. 201Q-202Q, Principles of Economics I-II
- Econ. 231, Introductory Business Statistics
- General education electives

**Junior Year**
- DS 350, Introduction to Production Management
- DS 495, Management Information Systems for Business

**Senior Year**
- Mgmt. 360, Concepts of Administration
- Mkt. 300, Marketing
- Upper-division economics course

**Upper-division business courses (courses numbered 300 to 600) must have completed 60 semester credit hours.**

**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 college and University regulations. The dean's office will also refer students to the appropriate office should the student be unsure as to where to find assistance.

Undergraduate Academic Advising Center (location not determined when Catalog was printed; location information at 100 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 for 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 College of Business Administration.

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 the Office of the Dean.

Business Education/Secretarial Science Majors (114 Business Education Building). All business education and secretarial science majors are advised in the Department of Business Education.

Students planning to enroll in upper-division business courses (courses numbered 300 to 600) must have completed 60 semester credit hours. Accreditation of the college by the American Assembly of Collegiate Schools of Business stipulates that students must be classified as juniors to enroll in upper-division courses. Exceptions are made to this requirement for any of the following:

1. Students who have close to 60 hours and have enrolled in the required lower-division (100-200 level) courses may enroll in introductory upper-division courses to complete a full schedule.
2. Students with a cumulative grade point average of 3.25 or above may have the junior standing prerequisite waived with the consent of the instructor of the course and the chairperson of the department in which the course is taken.
3. Students may petition the college's Exceptions Committee for special permission to enroll in upper-division courses.

The suggested sequence of courses includes classes which are part of the College of Business Administration core requirements. Core courses required for the BBA are:

**I. Mathematics**
- Math. 111, College Algebra*
- Math. 144, Business Calculus*
- Math. 242Q, Introductory Analysis I, will be accepted in lieu of Math. 144**

**II. Environment of Business**
- Mgmt. 430, Business and Society
- Econ. 201Q-202Q, Principles of Economics I-II and one upper-division economics course

**III. Business Functions**
- Mkt. 300, Marketing
- Fin. 340, Finance
- DS 350, Introduction to Production Management

**IV. Accounting, Quantitative Methods and Information Systems**
- Accgt. 210, Financial Accounting I*
- Accgt. 220, Managerial Accounting I*
- Econ. 231, Introductory Business Statistics*
- CS 190, Introduction to Programming for Business; or CS 200,
Introduction to Programming, and a programming language selected from CS 201-216.

Note: Accounting majors should take Acctg. 300.

DS 495, Management Information Systems for Business (except accounting majors)

V. Organizational Theory

Mgmt. 360, Concepts of Administration

VI. Business Policy

Mgmt. 681, Administrative Policy

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

Major/Minor Areas

Candidates for the BBA degree must satisfy the additional requirements of one of the following curricular majors. All students may avail themselves of the indicated minors.

Accounting Major

School of Accountancy

Two degree programs are offered by the School of Accountancy—the Master of Professional Accountancy and the Bachelor of Business Administration with accounting major. In addition, a minor in accounting is available to students who are not accounting majors. For information about the Master of Professional Accountancy degree, see the College of Business Administration—Master of Professional Accountancy section of the Catalog.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 300, Accounting Systems and the Microcomputer</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 310, 410 and 510, Financial Accounting I, II and IV</td>
<td>9</td>
</tr>
<tr>
<td>Acctg. 320, Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 430, Taxation I</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 560, Accounting Information Systems I</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 640, Auditing</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. elective</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 435, Law of Commercial Transactions</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 436, Law of Business Associations</td>
<td>3</td>
</tr>
<tr>
<td>† Econ. 340, Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 210, Composition: Business, Professional and Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

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

Business Administration Major

Required courses: Hrs.

A minimum of 15 hours must be selected from courses listed below and distributed over five of the seven areas:

Acctg. 310, Financial Accounting II (3); Acctg. 320, Managerial Accounting II (3); Acctg. 410, Financial Accounting III (3); Acctg. 430, Taxation I (3).

DS 675, Decision Making Techniques (3); DS 651, Design of Operations Systems (3); DS 652, Operations Planning Systems (3).

Econ. 304, Managerial Economics (3); Econ. 340, Money and Banking (3); Econ. 661, Collective Bargaining and Wage Determination (3); Econ. 672, Introduction to International Economics and Business (3).

Fin. 640, Financial Management (3); Fin. 641, Investments (3); Fin. 643, Capital Markets and Financial Institutions (3).

Mgmt. 462, Leadership and Motivation (3); Mgmt. 464, Organizational Communication (3); Mgmt. 665, Organizational Development (3); Mgmt. 667, Organizational Structure and Design (3); Mgmt. 680, Decision Making (3); Mgmt. 683, Comparative and Interpersonal Management (3).

Pers. 466, Personnel Management (3).

Mkt. 403, Marketing Research (3); Mkt. 405, Retail Management (3); Mkt. 609, Marketing Program (3).

Electives: Selected from any of the above or other upper-division courses in the College of Business Administration. These may be "concentrated" or spread over a number of different disciplines.

Business Administration Minor. A minor in business administration is available to any student who is not pursuing a degree in the College of Business Administration. The minor consists of the following:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 210, 220</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 201Q, 202Q</td>
<td>6</td>
</tr>
<tr>
<td>Three of the following four courses</td>
<td>6</td>
</tr>
<tr>
<td>DS 350, Fin. 340, Mgmt. 360, Mkt. 300</td>
<td></td>
</tr>
<tr>
<td>Electives from upper-division business courses</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Math. 111, College Algebra, is a prerequisite for some of the required
courses; students should include Math. 111 as part of their background preparation. Students who wish to take DS 350 must have Math. 144 and Econ. 231 or the equivalent as prerequisites. Students who have not met these prerequisites as part of their major program of study may take them as part of their electives for the minor.

Business Education Major

Department of Business Education

Required courses for the secretarial major are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus. Ed. 133, Beginning Typewriting</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 136, Advanced Typewriting</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 237, Technical Typewriting</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 231, Elementary shorthand</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 234, Advanced shorthand</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 240, Technical shorthand</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 136, Records Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 203, Office Procedures and Organization</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 204, Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 260, Automated Word Processing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Business Education Minor.** In addition to following the major in business teacher education with emphasis in secretarial science described above, students may minor in business education. Students planning to teach business education as a second subject in secondary schools are required to take 24 hours of business courses, including Acctg. 110 and 120; Econ. 201; Bus. Ed. 136 and 237; and nine hours from business administration courses or shorthand, of which one course must be upper division.

Economics Major

Department of Economics

A major requires a minimum of 21 upper-division hours in economics beyond the college core. Within the 124 hours required for graduation, a maximum of 41 hours in economics are allowed, counting the courses in the college core. The following courses are required and must be included in the 124 hours:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 301, National Income Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 302, Production, Price and Distribution Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 340, Money and Banking</td>
<td>3</td>
</tr>
</tbody>
</table>

Upper-division electives in economics beyond the college core (not to include more than six hours from among Econ. 625, 626 and 627)  12

**Economics Minor.** A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of 15 hours of economics exclusive of Econ. 100, 101G, 102, 200G and 231. Econ. 2010 and 2020 (or equivalent) must be included.

Finance Major

Department of Finance, Real Estate and Decision Sciences

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fin. 640, Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 641, Investments</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 643, Capital Markets and Financial Institutions</td>
<td>3</td>
</tr>
<tr>
<td>Electives, from the following:</td>
<td>6</td>
</tr>
<tr>
<td>Fin. 644, Contemporary Issues in Banking</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 644, Commercial Bank Management</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 645, Security Analysis and Valuation</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 648, International Finance</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 310, Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 340, Money and Banking</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives, selected with consent of major adviser  6

**Bank Management Emphasis.** Finance majors wishing to emphasize bank management should include the following required courses in their major:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fin. 444, Contemporary Issues in Banking</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 644, Commercial Bank Management</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 340, Money and Banking</td>
<td>3</td>
</tr>
</tbody>
</table>

Additionally, students should consider the possibility of an internship in the summer between their junior and senior year or during one of their last three semesters in college.

International Business Major

Department of Management

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fin. 648, International Finance</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 561, Introduction to International Economics and Business</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 683, Comparative and International Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 601 International Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

Directed electives:

Two of the following courses selected in consultation with the student's major adviser  6

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 615, Economics of Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 671, Economic Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 580, Economic Geography</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 492, Internship in Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 403, Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>Free business electives</td>
<td>3</td>
</tr>
</tbody>
</table>
| Within the student's total degree program, at least nine hours are required in the areas of language, culture, history and politics of countries other than the United States.

Management Major

Department of Management

Seven courses selected from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mgmt. 462, Leadership and Motivation</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 464, Organizational Communication</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 665, Organizational Development</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 667, Organizational Structure and Design</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 689, Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 683, Comparative and International Management</td>
<td>3</td>
</tr>
<tr>
<td>Pers. 466, Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>Pers. 468, Compensation Management</td>
<td>3</td>
</tr>
<tr>
<td>Pers. 664, Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>DS 651, Design of Operations Systems</td>
<td>3</td>
</tr>
<tr>
<td>DS 652, Operations Planning Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Up to six credit hours may be substituted from upper-level courses in business administration with consent of the major adviser.

Marketing Major

Department of Marketing and Small Business

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mkt. 403, Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 405, Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 609, Marketing Programs</td>
<td>3</td>
</tr>
<tr>
<td>Electives, from the following:</td>
<td>6</td>
</tr>
<tr>
<td>Mkt. 404, Retail Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 601, International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 604, Distribution Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 606, New Product Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 607, Promotion Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 608, Selling and Sales Force Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives, selected with consent of major adviser  6
Professional Administration Major
Department of Management

Required courses:
- Pers. 466, Personnel Management (3)
- Pers. 664, Labor Relations (3)
- Pers. 666, Selection, Training and Placement (3)
- Electives, from the following: (6)
- Mgmt. 462, Leadership and Motivation
- Mgmt. 464, Organizational Communication
- Mgmt. 663, Organizational Interactions
- Mgmt. 665, Organizational Development
- Mgmt. 667, Organizational Structures and Design

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

Required courses:
- DS 575, Decision Making Techniques (3)
- DS 651, Design of Operations Systems (3)
- DS 652, Operations Planning Systems (3)
- Directed electives: Two courses selected from a list of department-approved electives, in consultation with a decision sciences faculty adviser (6)
- Electives, selected with consent of major adviser (6)

Real Estate and Land Use Economics Major
Department of Finance, Real Estate and Decision Sciences

Required course:
- RE 310, Principles of Real Estate (3)
- Electives, from the following: (6)
- RE 438, Real Estate Law
- RE 611, Real Estate Finance
- RE 614, Real Estate Appraisal
- RE 618, Real Estate Investment Analysis
- RE 619, Residential Marketing, Management and Development

Master of Professional Accountancy

The Master of Professional Accountancy is a five-year degree program designed to prepare the student for a successful career as a professional accountant in business, public accounting, government or education. The candidate must complete a 96-hour preprofessional curriculum, meet specified admission requirements to the School of Accountancy and complete the 55-hour professional program.

Preprofessional Curriculum
Students pursuing the Master of Professional Accountancy (MPA) are required to meet specified requirements for admission to the School of Accountancy. During the candidate's undergraduate work, the following requirements must be met:

1. The candidate must complete the general education requirements for The Wichita State University, plus additional nonbusiness course work, for 56 semester hours. The following courses are specifically required by the School of Accountancy and may be counted within this 56 hours:
   - Acctg. 300, Accounting Systems and the Microcomputer (3)
   - Econ. 2010 and 2020, Principles of Economics I and II (6)
   - Eng. 210, Composition: Business, Professional and Technical Writing (3)
   - Eng. 685Q, Advanced Composition (3)
   - Math. 111, College Algebra (3)
   - Math. 144, Business Calculus (3)
   - Phil. 144Q, Moral Issues (3)

2. The candidate must complete the following College of Business Administration core requirements:
   - Acctg. 210, Financial Accounting I (3)
   - Acctg. 220, Managerial Accounting I (3)
   - DS 350, Introduction to Production Management (3)
   - Econ. 231, Introductory Business Statistics* (3)
   - Econ. 340, Money and Banking (3)
   - Fin. 340, Finance* (3)
   - Mgmt. 360, Concepts of Administration* (3)
   - Mkt. 300, Marketing* (3)

3. The candidate must complete the following courses required by the School of Accountancy:
   - Acctg. 310 and 410, Financial Accounting II and III (6)
   - Acctg. 320, Managerial Accounting II (3)
   - Acctg. 430, Taxation I (3)
   - B. Law 435, Law of Commercial Transactions (3)

*If these courses are not taken prior to admission to the MPA program, they must be completed at the graduate level.

Admission Requirements
During the semester in which the preprofessional curriculum will be completed, the candidate for the MPA must apply for admission to the Graduate School. No bachelor's degree will be awarded; however, the student desiring such a degree may be granted the degree with a minimum of additional coursework as specified in the Bachelor of Business Administration—Accounting Major section of the Catalog. Requirements for admission in full standing to the MPA program are as follows:

1. Completion of the 96-hour preprofessional program, including all specified course requirements, described above.
2. A total of 1,100 points based on the formula of 200 times the overall grade point average (4.0 system) of the last 60 hours plus the Graduate Management Admission Test (GMAT) score.
3. A grade point average not less than 2.75 on all courses identified as College of Business Administration core courses.
4. A grade point average of not less than 3.00 on the 12 hours of accounting courses required beyond the introductory level.

Conditional Admission
Students who have completed 96 semester hours and lack no more than nine hours of specific preprofessional course requirements may be admitted on a conditional basis. These nine hours must be completed in the first semester following conditional admission or as soon thereafter as course scheduling permits.

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

Students From Other Educational Institutions
Students who hold a baccalaureate degree from an accredited institution may be admitted to the School of Accountancy if they meet the minimum scholastic requirements. They will be required to make up any specific preprofessional course deficiencies, as soon as course scheduling permits and to complete all School of Accountancy requirements for which they have not had an equivalency, including a minimum of 30 semester credit hours beyond the requirements for the baccalaureate degree.
The 64-hour program is geared to the Degree Program Admission might be expected to perform are legal Other College of Business Admin­ Students seeking admission to the Legal of the tasks a graduate of the program extensive professional responsibilities University, the initial requirements of the Assistant Program must meet the gen­ Students not pursuing the degree pro­ gram are required to complete a special admission form. The student must ident­ify the particular course or courses, the reason for seeking admission and the background which is the basis for re­ quest for waiver of any stated prerequi­sites. Such special admissions are evaluated against the following criteria: (1) whether the purpose of the student con­forms to the objectives of the program, (2) whether the student has the back­ground necessary to handle the course and not impede the class and (3) whether there is space available. 

Degree Requirements 

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

**Course** | **Hrs.**
--- | ---
I. General Education Requirements (50 hours) | 
 | 
**Basic Skills (12 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101 and 102, College En­</td>
<td>6</td>
</tr>
<tr>
<td>glish I and II</td>
<td></td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Division A—Humanities and Fine Arts**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;G&quot; or &quot;Q&quot; course electives</td>
<td>3-12</td>
</tr>
</tbody>
</table>

**Division B—Social and Behavioral Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;G&quot; or &quot;Q&quot; course electives</td>
<td>3-12</td>
</tr>
</tbody>
</table>

**Division C—Mathematics and Natural Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;G&quot; or &quot;Q&quot; course electives</td>
<td>3-12</td>
</tr>
</tbody>
</table>

II. Professional Curriculum (34 hours)

A. Required Courses (16-19 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Law 1300, Introduction to Law</td>
<td>3</td>
</tr>
<tr>
<td>Legal 230, Introduction to Paralegalism</td>
<td>1</td>
</tr>
<tr>
<td>&quot;Legal 231A, Legal Research and Writing I</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 233, Litigation I</td>
<td>3</td>
</tr>
<tr>
<td>Legal 236, Legal Assistant Intern­ship</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 240, Substantive Law</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 210, Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>B. Professional Electives (15-18 hours)</td>
<td></td>
</tr>
<tr>
<td>&quot;Legal 232, Legal Aspects of Business Organizations</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 234, Estate Administration</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 235, Law Office Management and Technology</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 236, Litigation II</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 237, Family Law</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 239, Special Topics</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 241, Legal Research and Writing II</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 242, Estate Planning</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 331, Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 435, Law of Commercial Transactions</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 436, Law of Business Associations</td>
<td>3</td>
</tr>
<tr>
<td>RE 438, Real Estate Law</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 430, Taxation I</td>
<td>3</td>
</tr>
<tr>
<td>&quot;AJ 220, Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>&quot;AJ 320, Criminal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>CS 190, Introduction to Programming for Business, or CS 200, Introduction to Programming, and a program­ming language selected from CS 201-216</td>
<td>3-5</td>
</tr>
<tr>
<td>Mgmt. 360, Concepts of Administration</td>
<td>3</td>
</tr>
</tbody>
</table>

C. The 34-hour professional cur­riculum must include a mini­mum of 18 hours of legal speci­ality courses. Legal specialty courses are identified with an asterisk (*). Other courses may qualify as legal specialty courses for students with cor-
porate, governmental or criminal law career objectives.

D. A student who does not have law-related work experience that satisfies the intent and purpose of a legal assistant internship must, as a graduation requirement, complete Legal 238, Legal Assistant Internship. Students who have law-related work experience may validate that experience to meet this requirement by application to the director of the program. Academic credit, however, will not be granted for validated work experience.

Associate of Science in Secretarial Training

The Associate of Science program in secretarial training provides students an opportunity to receive high quality secretarial preparation in a college atmosphere. At the same time the program is designed with a view toward helping students attain the status of Certified Professional Secretary. The degree requirements are summarized as follows:

Course Hrs.
Composition and Speech
Eng. 101, College English I 3
Speech 111, Basic Public Speaking, or
Speech 112, Basic Interpersonal Communication 3
Social Sciences 3
Humanities 6
Science and/or Mathematics 7
Electives 7
Administration
Mgmt. 360, Concepts of Administration, or
L. Business 332, Law and Society 3
Economics
Econ. 201Q, Principles of Economics 3
Business Education
Bus. Ed. 133, 138, 237, Typewriting 9
Bus. Ed. 136, Records Management 3
Bus. Ed. 203, Office Procedures and Organization 3
Bus. Ed. 204, Office Machines 3
Bus. Ed. 231, 234 and 240, Shorthand 9
Bus. Ed. 260, Automated Word Processing 3
Total hours 60-70

Thirty hours and 60 credit points must be earned in residence, and 12 of the last 15 hours must be taken in residence. Of the required 64 hours, not more than one-fourth of D work will count on the Associate of Science in secretarial training.

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.)

Accounting

School of Accountancy

Lower-Division Courses

210. Financial Accounting I. (3). The study of accounting as a means of communicating financial information about the activities of business enterprises. Emphasis is placed on 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. Prerequisites: sophomore standing and Math. 109 or Math. 111. B 11 210 0 0502

220. Managerial Accounting I. (3). The study of accounting in terms of management's information requirements. Emphasis is given to the use of cost accounting in controlling a firm's activities. Prerequisites: Acctg. 210; Math. 109, 111 or 144; sophomore standing. B 11 220 0 0502

Upper-Division Courses


310. Financial Accounting II. (3). A thorough, in-depth study of conceptual and technical aspects of financial accounting. Emphasis is placed on evaluation and measurement problems of income determination and balance sheet presentation. Asset accounting is covered in depth. Prerequisites: Acctg. 210; Math. 109, 111 or 144; junior standing. B 11 310 0 0502

320. Managerial Accounting II. (3). The study of accounting for manufacturing operations. The processing, analysis and interpretation of cost data for income determination, inventory valuation and internal management use is stressed. Prerequisites: Acctg. 220 and Math. 144. B 11 320 0 0502

390. Special Group Studies in Business. (1-3). Repeatable for credit with School of Accountancy consent. B 11 390 0 0502

410. Financial Accounting III. (3). A continuation of Acctg. 310. Liabilities, equity and the Statement of Changes in Financial Position are emphasized. Prerequisites: Acctg. 310; Acctg. 330 or concurrent enrollment; Math. 109, 111 or 144; junior standing. B 11 410 0 0402

430. Taxation I. (3). An examination of the federal income tax law relating to individual income taxation. Prerequisites: Acctg. 210; Math. 109, 111 or 144; junior standing; Acctg. 330 or concurrent enrollment. B 11 430 0 0502

491. Independent Study in Accounting. (1-3). Individual study for Credit Only. Prerequisites: 2.75 grade point average in accounting, junior standing and School of Accountancy consent. B 11 491 0 0502

Courses for Graduate/Undergraduate Credit

Dual course numbers are used for courses that will be taken simultaneously by baccalaureate candidates and candidates in the School of Accountancy. Additional work will be required of the latter.

510/710. Financial Accounting IV. (3). A continuation of Acctg. 410. Includes an examination of accounting concepts and techniques related to partnerships, consolidated statements, foreign exchange and fund accounting. Prerequisites: Acctg. 410; Math. 109, 111 or 144; junior standing. Acctg. 710 requires admission to the MPA program or School of Accountancy consent. B 11 510 0 0502; B 11 710 0 0502

560/760. Accounting Information Systems I. (3). A study of the content, design and controls of accounting systems, with emphasis on the use of computers for processing financial data. Prerequisites: Acctg. 220; Math. 109, 111 or 144; CS 200 and 205 or Acctg. 330; senior standing; Acctg. 760 requires admission to the MPA program or School of Accountancy consent. B 11 560 0 0502; B 11 760 0 0502

615/715. Financial Accounting V. (3). An examination of accounting concepts and techniques related to consolidated statements subsequent to date of acquisition. A systematic treatment of basic concepts and methodology of accounting theory. Prerequisites: Acctg. 510/710; Math. 109, 111 or 144; senior standing. Acctg. 715 requires admission to the MPA program or School of Accountancy consent. B 11 615 0 0502; B 11 715 0 0502

620/720. Managerial Accounting III. (3). Advanced study of the use of accounting information in financial policy decisions, profit planning and control, quantitative analysis of financial data and capital budgeting. The application of selected techniques and methods of accounting is included. Prerequisites: Acctg. 320; Math. 144; Econ. 231; senior standing. Acctg. 720 requires admission to the MPA program or School of Accountancy consent. B 11 620 0 0502; B 11 720 0 0502
630/730. Taxation II. (3). A study of the federal tax law as it applies to corporations, partnerships, estates, trusts and gifts. Prerequisites: Acctg. 210 and 430; Math 109, 111 or equivalent. Undergraduate students must pass the MPA program or School of Accountancy consent. B 11 630 0 0502; B 11 730 0 0502.

640/740. Auditing I. (3). A study of the auditor's attest function, with emphasis on auditing standards and procedures, independence, legal responsibilities, codes of ethical conduct and evaluation of accounting systems and internal control. Prerequisites: Acctg. 510/710; Acctg. 560/760; CS 200 and 205 or Acctg. 300; Math 109, 111 or 144; senior standing. Acctg. 740 requires admission to the MPA program or School of Accountancy consent. B 11 640 0 0502; B 11 740 0 0502.

650/750. Seminar in Selected Topics. (1-3). Repeatable for credit with School of Accountancy consent. B 11 650 0 0502; B 11 750 0 0502.

Courses for Graduate Students Only

800. Financial Accounting. (3). A study of the basic structure of accounting, income determination, asset valuation, liability recognition and accounting for ownership equity. The identification and analysis of financial statements is included. May not be taken for credit in the School of Accountancy. Prerequisite: no previous credit in accounting or departmental consent. B 11 800 0 0502.

801. Managerial Accounting. (3). An examination of accounting for managerial decision making. Concepts of cost analysis, return on investment analysis, and operations and capital budgeting are covered. May not be taken for credit in the School of Accountancy. Prerequisite: Acctg. 800 or equivalent. B 11 801 0 0502.

803. Federal Taxes and Management Decisions. (3). An examination of the relationship between accounting and tax laws and management decision making. Concepts of cost analysis, return on investment analysis, and operations and capital budgeting are covered. May not be taken for credit in the School of Accountancy. Prerequisite: Acctg. 800 or equivalent. B 11 803 0 0502.

810. Accounting Evolution and Social Environment. (3). Study and discussion of accounting concepts from an evolutionary point of view. Emphasis is given to the relationship between accounting and social and economic factors. Prerequisite: undergraduate emphasis in accounting, admission to the MPA program or instructor's consent. B 11 810 0 0502.


820. Managerial Accounting IV. (3). An advanced study of theoretical concepts underlying cost accounting, with emphasis on the nature of business costs, establishing a conceptual framework for cost and managerial accounting and selected problem areas in cost determination and analysis. Prerequisite: undergraduate emphasis in accounting or admission to the MPA program. B 11 820 9 0502.

825. Analytical Methods in Accounting. (3). An examination of applied mathematical models in accounting. Emphasis is placed on the mathematical representation of cost and management accounting models. Prerequisites: Math 360 or Math 320 and senior standing. Acctg. 740 requires admission to the MPA program or instructor's consent. B 11 825 0 0502.

830. Taxation III. (3). The application of research and planning techniques to federal tax law. Selected topics in federal taxation are also examined. Prerequisites: Acctg. 630/730; Math 109, 111 or 144; Acctg. 300; B 11 830 0 0502.

840. Auditing II. (3). An advanced study of auditing with emphasis on EDP auditing, statistical sampling and ethics. Prerequisites: Acctg. 640/740; Acctg. 510/710; CS 200 and 205 or Acctg. 300; Math 109, 111 or 144. B 11 840 0 0502.

860. Accounting Information Systems II. (3). A study of the costs of accounting 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: Acctg. 560/760; Acctg. 300 or 220 or 801; Math 109, 111 or 144; CS 200 and 205 or Acctg. 300. B 11 860 0 0502.

880. Contemporary Issues in Accounting. (3). An examination of current issues in accounting, with emphasis on the releases of professional organizations and governmental agencies. Prerequisites: Acctg. 510/710; CS 200 and 205 or Acctg. 300; Math 109, 111 or 144. B 11 880 0 0502.


891. Directed Study in Accounting. (1-3). Prerequisite: School of Accountancy consent. B 11 891 3 0502.

895. Research Seminar in Accounting. (3). An advanced seminar offering an opportunity for oral discussion and written reports on matters of current interest in diverse areas of accounting. A major course objective is to develop the student's ability for independent research and the presentation and defense of findings. Prerequisite: undergraduate emphasis in accounting, admission to the MPA program or instructor's consent. B 11 895 4 0502.


Airfare Management

Department of Marketing and Small Business

Lower-Division Courses

190. Selected Topics. (1-3). Repeatable with departmental consent. B 17 190 0 0501

222. Ground School. (2). A preparation for the FAA private pilot written examination. The student must show evidence of successful completion of this examination before receiving credit for this course. Credit by examination or experience is available only to aviation management majors. Graded on Cr/NCr basis only. B 17 222 0 0506.

223. Private Flight. (3). Includes approximately 40 hours of flight required to obtain a private pilot certificate. Credit by examination or experience is available only to aviation management majors. Graded on Cr/NCr basis only. Prerequisite: Av. Mgt. 222. B 17 223 0 0506.

Upper-Division Courses

320. Introduction to Aviation. (3). A study of all of the branches of aviation: aircraft manufacturing, fixed base operations, air cargo and passenger operations, government agencies and military aviation. Covers employment possibilities in the field. Prerequisite: senior standing and 2.75 grade point average. Graded on Cr/NCr basis only. B 17 320 0 0506.


420. General Aviation: Management and Marketing. (3). An overview of general aviation and its relations with the total aviation industry, including the worldwide organization of the general aircraft industry, its marketing strategies, its social and environmental impact and the economics of corporate aircraft utilization. Prerequisites: Mkt. 300 and Mgmt. 360. B 17 420 0 0506.

421. Airport Planning and Management. (3). The principles and procedures pertaining to the planning of airport facilities, plus an understanding of the techniques of airport management, including airport design, financing of construction, services provided, income rate setting, accounting procedures, personnel and public relations, marketing and maintenance. Also includes current problems in certification security, safety, land acquisition, zoning, and state and federal participation in airport development. Prerequisites: DS 350, Fin. 340, Mkt. 300 and Mgmt. 360. B 17 421 0 0506.

422. Airline and Air Travel Management. (3). The organizational and financial structure of airline companies, their operating policies, marketing policies, equipment selection, personnel and public relations, and a review of the pertinent federal and international regulations. Covers both airport and passenger operations. It also contains a section on the organization and operation of air travel agencies and their relations with airlines. Prerequisites: DS 350, Fin. 340, Mkt. 300 and Mgmt. 360. B 17 422 0 0506.

491. Independent Study. (1-5). Offered for Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.75 grade point average in aviation management. Graded on Cr/NCr basis only. B 17 491 3 0501.

492. Internship in Aviation Management. (1-3). Offered for Cr/NCr only. Prerequisites: junior standing, 2.75 grade point average in aviation management and departmental consent. B 17 492 3 0501.
Courses for Graduate/Undergraduate Credit

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 17 690 9 0501

750. Workshop in Aviation Management. (1-4). Prerequisite: junior standing. B 17 750 9 0501

Business Education

Department of Business Education

Lower-Division Courses

133. Beginning Typewriting. (3). A survey of the correct fingering and mechanical operation of a typewriter and an introduction to business forms. B 14 133 1 0514

136. Records Management. (3). A study of modern management methods and practices used in the creation, utilization, maintenance, retention, preservation and disposition of business records. B 14 136 0 0514

138. Advanced Typewriting. (3). A course stressing business, letter, and manuscript forms, tabulation, and timed production problems. Prerequisite: Bus. Ed. 133, or one year of high school typewriting or departmental consent. B 14 138 5 0514

203. Office Procedures and Organization. (3). A study of the various secretarial procedures in a modern office. Prerequisite: sophomore standing or departmental consent. B 14 203 0 0514

204. Office Machines. (3). A course covering the operation of 10-key adding machines and electronic calculators, office duplicating machines and voice transcription, as well as the study of copying, machine processes. Prerequisite: BE 133. B 14 204 5 0514

231. Elementary Shorthand. (3). A study of the theory of Gregg Series 90 Shorthand. Prerequisite: Bus. Ed. 133 or one unit of high school typewriting or departmental consent. B 14 231 5 0514

234. Advanced Shorthand. (3). A review of Gregg Series 90 Theory. Emphasis is placed on advanced dictation and dictable transcriptions. Prerequisite: Bus. Ed. 231 with a grade of C or better or departmental consent. B 14 234 5 0514

237. Technical Typewriting. (3). A study of letter forms used in business, difficult tabulating projects, legal typewriting, medical typewriting, and advanced timed production problems. Emphasis is placed on accuracy at a high rate of speed to meet office standards. Prerequisite: Bus. Ed. 138 or two units secretarial training in high school or departmental consent. B 14 237 5 0514

240. Technical Shorthand. (3). Advanced dictation, with emphasis on technical vocabulary. Prerequisite: Bus. Ed. 237, with a grade of C or better and Bus. Ed. 237, or departmental consent. B 14 240 5 0514

260. Automated Word Processing. (3). This course provides a basic background of the concepts, procedures and careers in the automated office. Each student will receive individualized instruction on the Magna II and

the Magna III with a CRT covering basic functions of input, revision, playback procedures, thought organization, pagination, decimal tab, boiler plate documents and merging. The trainee is encouraged to become efficient and productive in word processing. Evaluation is based on quality and quantity of work done. Special emphasis is placed on available copies. Prerequisite: Bus. Ed. 138 or departmental consent. B 14 260 1 0514

Upper-Division Courses

300. Office Practice. (3). An exploration into advanced office duties, techniques, and problems. Prerequisite: business education major or minor with credit in Bus. Ed. 237 or departmental consent and junior standing. B 14 260 5 0514

450. Directed Studies. (1-5). Prerequisites: departmental consent and junior standing. B 14 450 3 0514

Course for Graduate/Undergraduate Credit

750. Workshops in Business Education. (1-4). The selection of one major area of business education for study in terms of teaching office machines, the functional use of selected machines and a survey of available equipment. Prerequisite: business education major or minor with credit in Bus. Ed. 237 or departmental consent and junior standing. B 14 300 5 0514

Business Law

Department of Finance, Real Estate and Decision Sciences

Lower-Division Courses

1300. Introduction to Law. (3). A basic introduction to law. Includes an examination of the nature and functions of law, the structure of the American legal system, and legal processes and procedures. Also covers the major areas of substantive law. Open to students with a grade of C or better or departmental consent. B 14 1300 5 0514

190. Selected Topics. (1-3). Repeatable with departmental consent. B 15 190 3 0506

Upper-Division Courses

311. Legal Environment of Business. (3). An introduction to the legal environment within which the business system operates. The course considers the nature and functions of law and the legal system in relation to private and public law. Emphasis is placed on the case law of public law, including the ethical and social responsibility aspects of business behavior. Prerequisite: junior standing. B 15 311 0 0501


Decision Sciences

Department of Finance, Real Estate and Decision Sciences

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent. B 15 190 0 0501
Upper-Division Courses

350. Introduction to Production and Operations Management. (3). An overview of the concepts, tools and techniques used in making managerial decisions related to the production or operations function of an organization. Topics include facility location and layout, forecasting, operations scheduling, quality control, inventory planning and control, work design and measurement. Prerequisites: Econ. 231 and Math. 144, or equivalent, and junior standing. B 15 350 0 0506

390. Special Group Studies in Decision Sciences. (1-3). Repeatable with departmental consent. B 15 390 0 0506

491. Independent Study. (1-5). Offered CnrlCr only. Closed to graduate credit. Prerequisites: junior standing and 2.75 grade point average in decision sciences. B 15 491 0 0506

492. Internship in Decision Sciences. (1-3). Offered CnrlCn only. Prerequisites: junior standing, 2.75 grade point average in decision sciences and departmental consent. B 15 492 3 0506

495. Management Information Systems for Business. (3). A study of business information systems for management decision making and control. Includes coverage of system components, controls and applications. Prerequisite: one course in programming from DS 201-216 or equivalent, or CS 190 and junior standing. B 15 495 0 0701

Courses for Graduate/Undergraduate Credit

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. Topics include linear and dynamic programming, transportation models, graph theory and simulation. Prerequisite: DS 350. B 15 575 0 0507

651. Design of Operations Systems. (3). A course structured to give an in-depth view of the long-term design aspects of operations systems. Topics include process analysis and design, production control information systems, facilities planning, materials handling, system job design, personnel planning and scheduling and current issues. Prerequisite: DS 350. B 15 651 0 0506

652. Operations Planning Systems. (3). A course structured to give an in-depth analysis of the short-term or operational aspects of goods- or service-producing systems. Topics include forecasting methods, inventory control models, material requirements planning, aggregate planning and scheduling and current issues. Prerequisite: DS 350. B 15 652 0 0506

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 15 690 9 0501

750. Workshop in Decision Sciences. (1-4). Prerequisite: junior standing. B 15 750 2 0507

Courses for Graduate Students Only

850. Production and Operations Management. (3). Concepts for planning and controlling the production of either goods or services. Topics include: linear programming, scheduling, quality control, inventory models and waiting line models. Not open to students with credit in DS 350. Prerequisites: calculus and statistics. B 15 850 0 0506

851. Intermediate Production Management. (3). Theory of production systems, decision making under uncertainty and advanced technological forecasting methods for business and industry. Application of forecasting methods and some operations research models to real-world production systems. Prerequisite: DS 350 or 850. B 15 851 0 0506

871. Multivariate Statistical Methods. (3). A study of selected multivariate statistical methods used in support of modern decision making. Topics include multivariate hypothesis testing, multiple regression, correlation analysis of variance and covariance and discriminant analysis. Prerequisite: Econ. 870 or Econ. 231. B 15 871 0 0503

872. Advanced Statistical Analysis. (3). Topics such as sample design, chi-square, variance analysis and correlation and regression analysis are examined from conceptual and decision-making points of view. Prerequisite: DS 871. B 15 872 0 0503

874. Management Information Systems for Business. (3). A study of business information systems for management decision making and control. Includes coverage of system components, controls and applications. Includes an introduction to a programming language. B 15 874 0 0705

875. Management Science. (3). A course providing quantitative bases from which the student may develop analytical abilities for use as a decision maker. Areas of study include mathematical programming, game theory, forecasting, queueing theory and simulation. Prerequisite: calculus. B 15 875 0 0507

876. Advanced Management Science. (3). An in-depth examination of selected management science models. To be included are advanced inventory and quality control topics, goal programming and other current decision-making techniques. Prerequisite: DS 875 or departmental consent. B 15 876 0 0507

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 15 890 9 0506

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 15 891 3 0506

893. Special Project in Decision Sciences. (1-4). A special project, including original case research, supervised internships or field research. Prerequisite: approval of the MS Committee or Open only to MS candidates. B 15 893 3 0506

895-896. Thesis. (2-2). B 15 895 4 0501; B 15 896 4 0501

Economics

Department of Economics

The requirements for an emphasis in economics for a Bachelor of Business Administration are listed under the Bachelor of Business Administration in the beginning of this section.

Students who plan to continue their study of economics in a PhD program should see an adviser in the Department of Economics and, in most cases, include additional mathematics courses.

Courses in the economics department are offered in the following subject areas. Since course descriptions are listed in numerical sequence, the following summary is presented to assist in locating courses by subject area.

General studies—Econ. 101G

Economic principles and theory—Econ. 102G, 2010, 2020, 203H, 204H, 301, 302, 304, 405, 800, 801, 802, 803, 804

Industrial organization and regulated industries—Econ. 614, 615, 616, 617, 810, 814, 815

History and comparative systems—Econ. 100, 222, 223, 225, 227

Courses and econometrics—Econ. 231, 602, 631, 831, 836

Monetary theory, money and banking—Econ. 340, 640, 840

Public finance—Econ. 653, 655, 853

Labor, manpower and health economics—Econ. 303, 660, 661, 662, 663, 665, 861

Economic growth and development; international economics—Econ. 671, 672, 674, 870, 871

Urban environmental and regional economics—Econ. 685, 687, 688, 885, 888

Directed study, thesis—Econ. 491, 692, 750, 891, 892, 895, 896

Lower-Division Courses

100. Business History of the United States. (3). Cross-listed as Amer. Stud. 100. A survey of American business evolution from colonial times to the present. Emphasis is placed on types of business structures and the role of the public sector. Not open to upper division students in the College of Business Administration. B 13 100 0 2204

101G. The American Economy. (3). An examination of the basic forces reshaping the underlying structure of the American economy and a consideration of the policy implications which accompany this restructuring. B 13 101G 0 2204

102Q. Consumer Economics. (3). An examination of the consumer’s role in the economy. The study of market organization and its impact on consumers, a discussion of information sources for consumers and an analysis of the programs for consumer protection are included. Not open to upper division students in the College of Business Administration. B 13 102Q 0 2204


202Q. Principles of Economics II. (3). (Microeconomic theory) An introduction to price theory and distribution analysis. Market structure and performance, contemporary issues and public policy are also included. Prerequisite: Econ. 2010. B 13 2020 0 2204
Upper-Division Courses

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
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<tr>
<td>B1330400517</td>
<td>Advanced Topics in Economic Analysis</td>
<td>Econ. 201Q and junior standing, departmental consent, and 2.75 grade point average in economics.</td>
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Courses for Graduate/Undergraduate Credit

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</tr>
</tbody>
</table>

203H. Honors Principles of Economics. (4). A general survey of economic method, character and scope and basic microeconomics and macroeconomics, with applications to problems in your area of interest. Required for the student to develop an analytic framework for interpreting economic events, trends, institutions and policies. 

204H. The Economics of Public Issues. (3). Seminar on selected topics of current interest in economics that analyzes major economic problems of the day. As a guide to making public policy decisions, included are the economics of environmental control, externalities, public goods, social costs and their effects in the market system; related problems such as urban development and economic growth; inflation, unemployment, concentration of economic power, depletion of resources, pollution and conservation. Open only to honors students. B 13 203H 0 2204

231. Introductory Business Statistics. (4). An introduction to statistical inference, estimation and hypothesis testing. Included are measures of location and dispersion, probability, sampling distributions, discrete and continuous probability functions, non-parametric methods, elements of Bayesian decision theory, linear regression and correlation, and time series analysis. Prerequisite: Math. 111 or 112. B 13 231 0 0503

203. Intermediate Macroeconomics. (3). The concepts of aggregate demand and aggregate supply are introduced. After developing theoretical foundations for these, policy applications are discussed, including policy issues such as unemployment, inflation, government and international trade deficits and interest rates. Prerequisites: Econ. 202 and junior standing. B 13 301 0 2204

202. Intermediate Microeconomics. (3). Theory of resource allocation by means of prices and markets. Economic choice, production, cost, supply, demand and market structure are discussed, as well as efficiency conditions in consumption, production, distribution and exchange. Prerequisites: Econ. 202 and junior standing. A 13 302 0 2204

203. Economic Problems of the Aged. (3). Cross-listed as Gerot. 303. An examination of the special economic problem areas of health, transportation and income, including social security, retirement planning, fraud and consumer protection, community resources and services, insurance, taxes, nutrition and housing. The course emphasizes on economic principles and on improving the consumer knowledge and management skills of the elderly. Prerequisite: Econ. 202Q or departmental consent. B 13 303 0 2204

304. Managerial Economics. (3). An application of microeconomic theory to the solution of business problems. Prerequisites: Econ. 202Q, intermediate business statistics, calculus and junior standing. B 13 304 0 0517

340. Money and Banking. (3). A study of money, credit, inflation and the structure and role of the commercial banking and Federal Reserve systems. The relationship between banks and other financial institutions is included, as well as the role of money in determining the level of economic activity and prices. Prerequisites: Econ. 201Q and junior standing. B 13 232 0 0503

491. Directed Study. (1-5). Individual study of various aspects of problem of economics. Repeatable for credit. Cr/Cr only. Prerequisites: Junior standing, departmental consent and 2.75 grade point average in economics. B 13 491 3 2204

602. Mathematical Methods in Economics. (3). An introduction to mathematical tools that are especially useful in economics, econometrics and finance. Topics include a review of differential and integral calculus, an introduction to matrix algebra and various constrained optimization and economic modeling techniques. Emphasis is on economic applications and modeling. Prerequisites: Econ. 202Q and junior standing. B 13 602 0 2204

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. 202Q and junior standing. B 13 605 0 2204

614. Industrial Organization. (3). A study of both competitive and noncompetitive market structure, conduct and performance, with special emphasis on relations to public policy such as antitrust. Prerequisites: Econ. 202 and junior standing. B 13 614 0 2204

615. Economics of Transportation. (3). A study of economic characteristics of transportation modes, problems and policies. Prerequisites: Econ. 202Q and junior standing. B 15 615 0 0510

616. Economics of Air Transportation. (3). A study of economic characteristics of air transportation. Prerequisites: Econ. 202Q and junior standing. B 13 616 0 0510

617. Economics of Regulation. (3). A study of the theory and practice of regulation. Included are both the traditional regulation of public utilities and the recent developments in the new forms of regulation, such as safety and environmental regulations. Prerequisites: Econ. 202Q and junior standing. B 13 617 0 0510


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 society. Emphasis is placed on the relationship between politics and war; changes in economic ideologies; and cultural effects of economic change. Prerequisites: Econ. 201Q and junior standing. B 13 625 0 2204

626. Origins of the Industrial State. (3). Cross-listed as Hist. 644. An analysis of the development of capitalism in the U.S. economic development and policy, from the Civil War to the present. Emphasis is on changes in the reputations and influence of businessmen in American society. Prerequisites: Econ. 201Q and junior standing. B 13 626 0 2204

627. Economic History of the United States. (3). Cross-listed as Hist. 515. An analysis of the basic factors in economic growth, agriculture, trade and commerce, industrial development, the role of foreign trade and the role of the government in economic activity are explored. Prerequisites: Econ. 201Q and junior standing. B 13 627 0 2204

631. Intermediate Business Statistics. (3). A study of the regression model with extensions. Topics include hypothesis testing and other related statistical methods, with emphasis on application to business and economic data. Prerequisites: Econ. 231 and junior standing. B 13 631 0 0503

640. Monetary Problems and Policy. (3). An analysis of monetary problems and policy. Debt management policies and the structure of interest rates are included. Prerequisites: Econ. 202Q and junior standing. B 13 640 0 0503

653. Public Finance. (3). An analysis of fiscal institutions and decision-making in the public sector. Topics include American economy, budget planning and execution, taxation, debt and fiscal policy. Prerequisites: Econ. 202Q and junior standing. B 13 653 0 2204


660. Labor Economics. (3). An introduction to labor economics, surveying both theoretical and empirical research in labor economics. Topics include labor markets, wage determination, human capital theory and others. Prerequisites: Econ. 202Q and junior standing. B 13 660 0 0516

661. Collective Bargaining and Wages Determination. (3). An examination of economic and legal aspects of collective bargaining, emphasizing the techniques and procedures used, and the major issues and problems inherent in the bargaining process. The manner in which wages are determined under various institutional relationships is explored. Prerequisites: Econ. 202Q and junior standing. B 13 661 0 0516

662. Work and Pay. (3). The orientation of this course will investigate the economic aspects of work and the workplace. Its scope will deal with the demographics of the labor force, methods of rewarding those who participate in the labor force and such topics as the quality of work life, worker alienation and the nature of work under capitalism. Prerequisites: Econ. 202Q and junior standing. B 13 662 0 0516

663. Economic Insecurity. (3). Cross-listed as Gerot. 663. Personal economic insecurity, such as unemployment, old age, health care, disability and erratic economic fluctuations. Costs and benefits of government action to aid in meeting such insecurities are included. Prerequisites: Econ. 202Q or instructor's consent; junior standing. B 13 663 0 2204

665. Health Economics. (3). Cross-listed as HAE 504. An analysis of health care systems in the United States, focusing on the demand for and supply of health care services; the quantity, quality and pricing of health services, the need for insurance, and the role of govern-
750. Workshop in Economics. (1-4). Prerequisite: junior standing. B 13 750.2 2204

Courses for Graduate Students Only

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. B 13 600.2 2204

801. Macroeconomic Analysis. (3). An intensive analysis of contemporary literature and problems of national income analysis. Prerequisites: Econ. 301 and one course in calculus. B 13 601.2 2204

802. Microeconomic Analysis. (3). An intensive analysis of contemporary literature and problems in the areas of production, pricing and distribution. Prerequisites: Econ. 302 or 804 and one course in calculus. B 13 602.2 2204

803. Analysis of Business Conditions. (3). A study of economic forecasting and its relationship to macroeconomic analysis. Not for graduate credit in the MA program in economics. Prerequisites: Econ. 800 or equivalent and one semester of introductory statistics. B 13 803.2 2204

804. Managerial Economics. (3). A survey of theoretical and analytical tools of economics, with special emphasis on the role of managers. Not for graduate credit in the MA program in economics. Prerequisites: Econ. 202Q or 800 and one course in calculus. B 13 684.2 0617

810. Business and Public Policy. (3). The study of the effects of government regulation, monetary and fiscal policies on business, as well as the social responsibility of businesses. Not for graduate credit in the MA program in economics. Prerequisite: departmental consent. B 13 810.2 2204


815. Seminar in the Regulated Industries. (3). An intensive analysis of the economic characteristics of the regulated industries (e.g., transportation and public utilities), with emphasis on issues, problems and public policy in these industries. Prerequisite: Econ. 302, 615, 616, 617 or 804. B 13 815.2 0510

830. Statistical Methods for Business. (3). An examination of statistical concepts and methods applicable to business decision making. Included are probability theory, point and interval estimation, hypothesis testing, regression analysis, analysis of variance and selected nonparametric techniques. Not open to students with credit in Econ. 23. Repeatable for credit. B 13 830.2 0603

831. Introduction to Econometrics. (3). Analysis of time series, multiple regression, multiple regression with dummy variables and introduction to econometric methods. Prerequisites: Econ. 631 and one course in calculus. B 13 631.2 0503

836. Methodology of Economics. (3). A study of what constitutes the basis of knowledge in economics. The manner in which the principles of deductive reasoning, deduction and induction can be applied to produce knowledge in economics is explored. Prerequisites: Econ. 202 and 631. B 13 636.2 2204

840. Seminar in Monetary Theory. (3). An examination of neoclassical and contemporary monetary theories. An analysis and evaluation of current monetary problems are included. Repeatable for credit with departmental consent. Prerequisites: Econ. 202Q and 340. B 13 840.2 0504

853. Seminar in Public Finance. (3). An analysis of theoretical and applied aspects of public finance in the American and foreign economies. Selected topics of current and permanent importance are explored. Repeatable for credit with departmental consent. Prerequisite: Econ. 653. B 13 853.2 2204

861. Seminar in Contemporary Labor Issues. (3). An intensive analysis of contemporary economic and political issues. The specific nature of the problems is determined by the interest of those enrolled in the course. Repeatable for credit with departmental consent. Prerequisite: Econ. 360. B 13 861.2 0516

870. Seminar in International Trade and Finance. (3). Cross-listed as Fin. 820. A seminar in theoretical concepts and contemporary selected issues of international economics and finance. Selected topics include such areas as foreign exchange markets, the Eurodollar market, Arab oil dollars in the international monetary system, transfers of value and the role of the common markets, etc. Prerequisite: Econ. 674, Fin. 648 or instructor's consent. B 13 870.2 0513

871. Seminar in Economic Growth and Development. (3). A study of theories of economic growth and development. Selected topics relating to economic growth and development, such as national planning, allocation of resources, selection and evaluation of projects and public policies are included. Prerequisite: Econ. 301, 302 or 671. B 13 871.2 2204

885. Seminar in Environmental Quality Control. (3). Examination of actual problems, projects and current approaches to environmental quality control. A critical look at current happenings and trends is included. Prerequisite: Econ. 685. B 13 885.2 2204

888. Seminar in Urban Economics. (3). An analysis of the determinants of city structure, the location of economic activity and land use. Current urban problems such as crime, pollution, zoning, housing and optimal city size are discussed with reference to current empirical research. Prerequisite: Econ. 302 or 688. B 13 888.2 0504

891. Directed Study. (1-3). Individual study of various aspects and problems of economics. Repeatable for credit with departmental consent. Prerequisites: graduate standing and departmental consent. B 13 891.2 2204

892. Group Studies in Economics. (1-3). Repeatable for credit with departmental consent. B 13 892.1 2204

895. Thesis Research. (1-2). B 13 895.2 2204

898. Thesis. (1-2). B 13 898.2 2204
Finance
Department of Finance, Real Estate and Decision Sciences

Lower-Division Courses

1400. Personal Finance. (3). Management of the cash flows experienced by individuals and families. Analysis of alternative strategies to meet personal financial goals through various investment media with emphasis given to risks and returns. The student is exposed to a set of tools that can be applied in personal financial management to provide a flexible and relevant framework for future decision making. B 15 1400 0 0504

190. Selected Topics. (1-3). Repeatable with departmental consent. B 15 190 3 0504

Upper-Division Courses


348. Introduction to Insurance. (3). A basic study of both property/casualty and life/health insurance. Analysis of risk and ways to treat both personal and business loss exposures. Study of the contracts, rate making and services of the insurance business, as well as the marketing and regulation of both private and governmental insurance. Prerequisite: junior standing. B 15 348 0 0504


444. Contemporary Issues in Banking. (3). A survey of contemporary issues facing the U.S. commercial banking system. Course content varies according to the timeliness of various issues. The course is not only for those planning a career in banking but for anyone interested in current trends and issues in banking. Prerequisite: Fin. 340. B 15 444 0 0504

491. Independent Study. (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisite: Jr. standing and 2.75 grade point average in finance. B 12 491 3 0504

492. Internship in Finance. (1-3). Offered Cr/NCr only. Prerequisites: Jr. standing, 2.75 grade point average in finance and departmental consent. B 15 492 2 0504

Courses for Graduate Students Only

820. Seminar in International Trade and Finance. (3). Cross-listed as Econ. 674. A seminar in theoretical concepts and contemporary selected issues of international economics and finance. Selected issues would include such topics as foreign exchange markets, the Eurodollar market, Arab oil dollars in the international monetary system, transfer of inflation between countries, etc. Prerequisite: Fin. 648 or Econ. 674 or instructor's consent. B 15 820 9 0513

840. Financial Systems. (3). An intensive analytical introduction to finance from the management viewpoint, including the theory of financial management, the financial institutions and the challenges and operations of practical problems of business finance. Prerequisite: Acctg. 600 or equivalent. B 15 840 0 0504

841. Financial Administration. (3). An integrated treatment of basic business finance, financial management, financial statement analysis and financial institutions. Prerequisite: Fin. 840 or equivalent. B 15 841 0 0504

842. Structure and Policies of Financial Institutions. (3). The development, management and impact of financial institutions, including planning, measuring and achieving financial goals. Prerequisite: Fin. 840 or equivalent. B 15 842 0 0504

843. Capital Markets and Financial Institutions. (3). An introduction to the capital markets system. The management and operations of financial institutions are studied. Each major type of financial institution is viewed in the context of its competitive environment with respect to both asset and liability management. Prerequisites: Fin. 340 and junior standing. Credit in Econ. 340 is strongly recommended. B 15 843 0 0504

844. Commercial Bank Management. (3). A study of bank asset and liability management. The internal organization of commercial banks, current problems and recent innovations in commercial banks are explored. Prerequisites: Fin. 643 and junior standing. B 15 844 0 0504

845. Security Analysis. (3). An analysis and valuation of investment securities issued by corporations and governmental agencies. Prerequisite: Fin. 644 or departmental consent. B 15 845 0 0504

846. Capital Budgeting. (3). A study of the organization and operation of the capital budgeting system. Problems in partial decentralization and in comparability of estimates of funds flow are explored. Contemporary methods of treating uncertainties and constraints and the application of programming techniques are included. The determination of appropriate discount rates is also studied. Prerequisite: Fin. 840 or equivalent. B 15 846 0 0504

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 15 890 9 0504

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 15 891 3 0504

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 administration degree candidates. B 15 893 2 0504

895-896. Thesis. (2-2). B 15 895 4 0504; B 15 896 4 0504

Legal Assistant
Department of Finance, Real Estate and Decision Sciences

Lower-Division Courses

230. Introduction to Paralegalism. (1). The new role concept of the legal assistant in the practice of law. An inquiry into what paralegal 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 130Q, concurrent enrollment or departmental consent. B 15 230 0 5096

231A. Legal Research and Writing I. (3). An introduction to the tools and techniques of legal research, with emphasis on the basic analytical skills. The course 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. B 15 231 0 5096

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R 2L means four hours of lecture and two hours of lab.
232. Legal Aspects of Business Organizations. (3). The law of business organizations with emphasis on the practice aspects related to employment agreements, partnership agreements, and corporate documents. Prerequisites: Admission to the Legal Assistant Program or departmental consent. B 15 232 0 5096

233. Litigation I. (3). An introduction to the civil litigation process with emphasis on the practice aspects associated with a civil action. Topics covered include civil procedure, preparation and use of pleadings, discovery, law of evidence and appeals. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 242 0 5096

234. Estate Administration. (3). The law of intestate succession, wills and trusts, with emphasis on the administration of an estate under Kansas law. Includes the preparation of wills, trust instruments and documents related to these areas. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 234 0 5096

235. Law Office Management and Technology. (3). The application of modern concepts of organization, management and systems technology to the law office. Emphasis is placed on 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. B 15 235 0 5096

236. Litigation II. (3). A continuation of Litigation I with emphasis on 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. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 236 0 5096

237. Family Law. (3). An introduction to family law including the role of a lawyer as counselor. Emphasis is placed on the practice aspects related to divorce, separation, custody, child support and guardianship matters. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 237 0 5096

238. Legal Assistant Internship. (3). Internship training in a law office, corporate law department or government agency. Offered Cr/NCr only. Prerequisite: 12 hours of legal specialty courses and internship committee approval. B 15 238 0 5096

239. Special Topics. (1-3). Repeatable with departmental consent. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 239 0 5096

240. Substantive Law. (3). An introduction to substantive law with emphasis on the law of contracts, torts and property. Special emphasis is placed on development of skill in recognizing substantive law issues. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 240 0 5096

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. B 15 241 0 5096

242. Estate Planning. (3). A study of the federal estate and gift tax structure and the planning techniques which are utilized to minimize the impact of taxation on the transmission of property from one generation to another. Includes a study of wills and trusts as estate planning tools. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 242 0 5096

Management

Department of Management

Lower-Division Courses

100. Introduction to Business. (3). An introduction to the current issues, concepts and functions of business and its environment. Not open to upper-division students in the College of Education. Semester enrollment is recommended. B 16 100 0 5096

101G. Introduction to Business. (3). Everyone spends a lifetime dealing with and being influenced by business firms. The main goal of this course is to introduce students to current issues, concepts and functions of business and its environment. Students may not receive credit in both Mgmt. 101G and Mgmt. 100. B 16 100 0 5096

101G. Introduction to Business. (3). Cross-listed as WS 163. Considers women in all phases of business with an in-depth look at women in management. Examples of specific subject areas include hiring, promotion and problems unique to women. The primary aim is to make men and women aware of the role that women now play and their future potential. B 16 163 0 5096

190. Selected Topics. (1-3). Repeatable with departmental consent. B 16 190 0 5096

Upper-Division Courses

360. Concepts of Administration. (3). A study of behavioral and traditional concepts that apply to the management of organizations. An analysis of administrators and the environment in which they operate is included. Prerequisite: junior standing. B 16 360 0 5096

390. Special Study in Management. (1-3). Repeatable with departmental consent. B 16 390 0 5096

400. Business and Society. (3). An examination of the economic, political, social, and legal environment in which business operates. Consideration is given to the philosophic foundation of capitalism and how business has interacted with government, consumers and labor over time. Emphasis is placed on the role of business in dealing with various societal problems. Current issues, such as the social responsibility of business, affirmative action, safety and health, environmental protection and the challenge to the legitimacy of the firm, are dealt with from the perspective of the decision-making process. Prerequisite: junior standing. Completion of Mkt. 300, Fin. 340, DS 350 and Mgmt. 360 is strongly recommended. B 16 430 0 5096

462. Leadership and Motivation. (3). A study of theories of human motivation and adaptation of these theories to programs in organizations. Concepts of authority and delegation are stressed and leadership styles are analyzed. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 462 0 5096

464. Organizational Communication. (3). An examination of the design of organizational communication systems. An introduction to communication models and the analysis of the interpersonal communication process is included. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 464 0 5096

491. Independent Study. (1-5). Offered for Cr/NCr only. Closed to graduate credit. Prerequisite: junior standing and 2.75 grade point average in management. B 16 491 0 5096

492. Internship in Management. (1-3). Offered for Cr/NCr only. Prerequisite: junior standing and 2.75 grade point average in management and departmental consent. B 16 492 0 5096

Courses for Graduate/Undergraduate Credit

561. Introduction to International Economics and Business. (3). Cross-listed as Econ. 672. A survey of the economic foundations of international trade and investment. After a study of international trade, theory and policy (the international economy), it explores the operations of the multinational firm within that environment. Prerequisites: Econ. 202Q and junior standing. B 16 561 0 5096

659. Organizational Interactions. (3). An examination of interpersonal and organizational interactions. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 659 0 5096

665. Organizational Development. (3). Planned organizational change. Emphasis is on team building for organizations. Individual, group and structural developments are included. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 665 0 5096

667. Organizational Structure and Design. (3). An introduction and exploration of the interrelationships of organizational goals, decision making, environment, technology, climate, innovation and organizational structure/design are analyzed utilizing a systems approach. Additional topics include formal versus informal structure, differentiation, integration, organizational structures. Prerequisites: junior standing and Mgmt. 360. B 16 667 0 5096

680. Decision Making. (2). Cross-listed as UA 730. A study of the theories and decision making with attention directed to the factors of creativity, the crisis factor with subjective, rational, cognitive inhibiting problems, identification, evaluation of alternatives, applications of qualitative methods to decision processes and decision making in organizations. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 680 0 5096
681. Administrative Policy. (3). An integration of all aspects of business administration in the analysis of and making decisions for policy development. Prerequisites: DS 350, Fin. 340, Mkt. 300, Mgmt 360 or departmental consent and senior standing. B 16 681 0 0506

683. Comparative and International Management. (3). The study of contemporary management concepts and practices applicable to private and public sector organizations in an international setting and their impact on operational and management functions in multinational corporations. The student is introduced to the dynamic growth of business and government interaction on a global basis. The course includes an examination of nationalization and industrial development, labor and industrial relations, host country activities to promote or restrict international business, development of technological and managerial skills and marketing expertise. Prerequisites: Mgmt 360 or concurrent enrollment and junior standing. B 16 683 0 0506

684. Health Administration Policy. (3). An introduction of all aspects of health administration in the analysis of and making decisions for policy development. Prerequisites: a basic course in economics, accounting, finance and management or administration and junior standing. B 16 684 0 0506

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 16 690 9 0506

750. Workshop in Management. (1-4). Prerequisite: junior standing. B 16 750 2 0506

Courses for Graduate Students Only

830. Socio-Legal Environment of Business. (3). An examination of the economic, political, social, and legal environment in which business operates. Consideration is given to the philosophic foundation of capitalism and the role of the firm in society. Emphasis is placed on the role of business in dealing with various societal problems. Current issues, such as the social responsibility of business, affirmative action, occupational health and safety, environmental protection, and the coalition of the legitimacy of the firm, are dealt with from the perspective of the decision-making manager. B 16 830 0 0506

836. International Business Administration. (3). An introduction to international business administration with particular attention given to the development of multinational business strategies in light of the diverse economic, political, and cultural dimensions of environments that exist in both developed and developing areas of the world. B 16 836 0 0513

860. Management of Organizations. (3). An introduction to management and organizational theory. Includes such topics as classical and contemporary management theory, human relations, group dynamics, motivation, communication, organizational structure and design, and sector organizations. B 16 860 0 0506

862. Organizational Behavior. (3). A study in individual behavior in an organizational setting. Human variables in business are analyzed from the standpoint of job placement, performance and individual development.

Topics covered include behavioral development, motivation and learning in human relations. Prerequisite: Mgmt. 660 or departmental consent. B 16 862 0 0506

865. Communication. (3). An analysis of communication models with emphasis on their applications to communication problems in organizations. Social-psychological processes underlying persuasion in interpersonal relations and through the mass media are explored. Communication systems and techniques within formal organizations are analyzed critically. Prerequisite: Mgmt. 660 or departmental consent. B 16 865 0 0506

866. Organizational Conflict and Stress. (3). Studies in flexibility and rigidity. A review is made of research and thinking in the areas of innovation, conflict, resolution, stress and anxiety as relevant to organizational structures and behaviors. Prerequisites: Mgmt. 660 or departmental consent. B 16 866 0 0506

869. Research in Behavioral Science. (3). An analysis of some of the concepts and tools in behavioral science that are relevant to research in organizations. One or two areas such as motivation, cognitive processes, attitudes and values, etc., may be analyzed in depth. Prerequisite: Mgmt. 862 or departmental consent. B 16 869 0 0506

880. Analysis of Behavioral Systems. (3). Concentration on theoretical and methodological contributions to the understanding of behavioral systems. Models and research methodology in individual behavior, small-group processes and organizations are critically analyzed. Prerequisite: departmental consent. B 16 880 0 0506

881. The Philosophy of Management. (3). Concentrated readings and research to define the relationship of management leadership in our society. Prerequisite: departmental consent. B 16 881 0 0506

885. Business Policies. (3). An analysis of business problems from the perspective of top management. Prerequisite: departmental consent. B 16 885 0 0506

886. Seminar in Research Methodology. (3). A study of concepts and procedures in the design and performance of research. B 16 886 9 0501

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 16 890 9 0506

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 16 891 3 0506

893. Special Project in Management. (1-4). A special project including original case research, supervised internships or field research. Prerequisite: approval of the MS Committee. Open to MS in administration degree candidates. B 16 893 3 0506

895-896. Thesis. (2-2). B 16 895 4 0501; B 16 896 4 0506

Marketing

Department of Marketing and Small Business

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent. B 17 190 3 0506

Upper-Division Courses

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. B 17 300 0 0509


403. Marketing Research. (3). A study of the design of marketing information systems and marketing research procedures. Prerequisites: Mkt. 300, Econ. 301 and junior standing. B 17 403 0 0509

404. Retail Management. (3). An examination of the essential principles and practices of retail business management, including site location, store design and department layout, merchandise management, sales promotion and customer services. In addition, the course 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. B 17 404 0 0509

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. B 17 405 0 0509

491. Independent Study. (1-5). Offered for Cr/Nr only. Closed to graduate credit. Prerequisites: junior standing and 2.75 grade point average in marketing. B 17 491 3 0509

492. Internship in Marketing. (1-3). Offered for Cr/Nr only. Prerequisite: junior standing and 2.75 grade point average in marketing and departmental consent. B 17 492 2 0509

Courses for Graduate/Undergraduate Credit

601. International Marketing. (3). Problems and procedures of marketing in foreign countries. The effects of foreign cultures and marketing systems on the design of marketing programs are included. Prerequisites: Mkt. 300 and junior standing. B 17 601 0 0509

604. Distribution Management. (3). A study of all areas involved with the distribution of a firm's products or services. These areas focus on such issues as the development of a firm's marketing channels and its relationship 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. B 17 604 0 0506

606. New Product Marketing. (3). This course addresses the issues of identifying, evaluating, developing and commercializing new products within both smaller and larger firms. It explores the role of the product/brand manager, a position that is an internal entrepreneur. Prerequisites: Mkt. 300, 403 and 405. B 17 606 0 0509

607. Promotion Management. (3). An analysis of all issues involved with the promotion of an organization and its products or services. These promotion issues deal with the development of advertising campaigns,
Courses for Graduate Students Only

800. Marketing Systems. (3). An intensive analytical introduction to the combination of institutions that comprise the overall marketing system. The marketing function as a major subsystem within the individual business firm is also presented. B 17 800 0 0509

801. Contemporary Issues in Marketing Management. (3). A broadening of the concept of marketing by examining the impact of contemporary macroenvironmental conditions upon micromarketing decisions. Analysis includes identification and study of environmental issues, issue participants, new managerial decisions required and limitations to marketing decision making. Prerequisite: Mkt. 800 or equivalent. B 17 801 0 0509

802. Marketing Strategy. (3). Integration of long-term marketing strategies and policies. Budgetary control and the evaluation of the effectiveness of marketing systems are included. The organization of the marketing department and its relation to the total organization are also probed. Prerequisite: Mkt. 800 or departmental consent. B 17 802 0 0509

803. Marketing Analysis. (3). The application of the scientific method to the solution of marketing problems. Prerequisite: Mkt. 800 or equivalent. B 17 803 0 0509

805. Consumer Decision Processes. (3). An examination of different aspects of the behavior of consumers and of the factors that help explain their behavior. An analysis of current models and models is included. Prerequisite: Mkt. 800 or departmental consent. B 17 805 0 0509

809. Marketing Theory. (3). A utilization of marketing research findings to analyze current marketing theory. Conceptual and theoretical frameworks for marketing analysis are developed. Six hours of marketing, including Mkt. 801. B 17 809 0 0509

809. Seminar in Special Topics. (1-5). Repeatable with departmental consent. B 17 809 0 0501

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 17 891 3 0501

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 administration degree candidates. B 17 893 3 0509

895-896. Thesis. (2-3). B 17 895 4 0501; B 17 896 4 0501

Personnel

Department of Management

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent. B 16 190 3 0511

Upper-Division Courses


466. Personnel Management. (3). An analysis of the functions of personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline and personnel research. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 466 0 0515

468. Compensation Administration. (3). Approaches to compensation processes in organizations. Discussion of job evaluation techniques, wage level and wage structure determination, individual performance analysis, individual wage rate decisions, incentive plans and benefits. Consideration of the legal constraints on compensation practices. Prerequisite: Pers. 486 or consent of instructor. B 16 468 0 0515

491. Independent Study. (1-5). Offered for Cr/NCR only. Closed to graduate credit. Prerequisite: junior standing and 2.75 grade point average in personnel courses. B 16 491 3 0515

492. Internship in Personnel. (1-3). Offered for Cr/NCR only. Prerequisites: junior standing, 2.75 grade point average in personnel courses and departmental consent. B 16 492 2 0511

Courses for Graduate/Undergraduate Credit

664. Labor Relations. (3). A course designed to present the philosophy underlying labor legislation and the function of collective bargaining and employment relationship. Prerequisite: junior standing. B 16 664 0 0515

666. Selection, Training and Placement. (3). Analysis of advanced programs of employee selection, training and placement. Testing, interviewing, counseling, appraisal, job analysis and job design are explored. Prerequisites: Pers. 466 or departmental consent and junior standing. B 16 666 0 0515

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. B 16 690 9 0511

750. Workshop in Personnel. (1-4). Prerequisite: junior standing. B 16 750 9 0515

Courses for Graduate Students Only

867. Seminar in Personnel Administration. (3). An in-depth study and analysis of several critical and/or major current problems in personnel and a review of significant literature. The direction of the course could be determined by the interests of the class. Prerequisite: Pers. 466. B 16 867 9 0515

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: Pers. 466 or instructor's consent. B 16 868 0 0515

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 16 890 9 0501

991. Directed Studies. (1-5). Prerequisite: departmental consent. B 16 991 3 0501

993. Special Project in Personnel. (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 administration degree candidates. B 16 993 3 0501

995-996. Thesis. (2-3). B 16 995 4 0501; B 16 996 4 0501

Real Estate

Department of Finance, Real Estate and Decision Sciences

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent. B 15 190 3 0511

Upper-Division Courses

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. B 15 310 0 0511

390. Special Group Studies in Real Estate. (1-3). Repeatable with departmental consent. B 15 390 3 0511

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. B 15 438 0 0511

491. Independent Study. (1-5). Offered for Cr/NCR only. Closed to graduate credit. Prerequisites: junior standing and 2.75 grade point average in real estate courses. B 15 491 3 0501

492. Internship in Real Estate. (1-3). Offered Cr/NCR only. Prerequisites: junior standing, 2.75 grade point average in real estate and departmental consent. B 15 492 2 0511

Courses for Graduate/Undergraduate Credit

661. Real Estate Finance. (3). Real estate financing instruments, institutions, traditional
and creative financing techniques. Risk analysis, mortgage financing and underwriting, primary and secondary mortgage markets. Prerequisite: Fin 340. RE majors should have completed RE 310. B 15 611 0 0511

614. Real Estate Appraisal. (3). Impact of socio-economic conditions on real estate values. Cost, sales comparison and capitalized income approaches to market value. Demonstration appraisal. Prerequisite: RE 310. B 15 614 0 0511

616. Real Estate Investment Analysis. (3). Equity investor decision criteria, institutional and ownership entity investment constraints, financial leverage opportunities, cash flow analysis and creative income tax strategies. Prerequisite: Fin 340. RE majors should have completed RE 310. B 15 618 0 0511

619. Residential Marketing, Management and Development. (3). Theory and practice. Includes supply and demand, urban and neighborhood market analyses, location theory and land-use succession, forecasting activities, brokerage administration, closing procedures, property management and public policy devices relative to land-use decisions. Case study or problems. Prerequisite: RE 310. B 15 619 0 0511

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 17 690 3 0511

750. Workshop in Real Estate. (1-4). Prerequisite: junior standing. B 17 750 9 0511

Courses for Graduate Students Only

810. Real Estate Feasibility Analysis. (3). Theory and practice of analyzing the feasibility of both new construction and redevelopment of income-producing projects. Detailed comprehensive case studies are approached with contemporary analytical techniques. Prerequisite: RE 310, 614 and 618. B 15 810 0 0511

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 17 890 9 0511

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 17 891 3 0511

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 administration degree candidates. B 17 893 2 0511

895-896. Thesis. (2-2). B 17 895 4 0511; B 17 896 4 0511

Small Business/Entrepreneurship

Department of Marketing and Small Business

Lower-Division Course

160Q. Introduction to Entrepreneurship. (3). An introductory course that is designed not only to familiarize the student with the world of small business but also to analyze the personal strengths and weaknesses of the entrepreneur. Prerequisite: Finance 340, Mgmt. 360, and senior standing. B 17 160Q 0 0506

Upper-Division Courses

361. Entrepreneurship: The Start-Up. (3). This course will help the student explore various ways to own a business including starting a new business, buying a franchise or buying an existing business. Prerequisite: junior standing and 2.75 grade point average in entrepreneurship courses. B 17 361 0 0506

465. Small Business Management. (3). The focus of this course is on the management of small businesses, including personal strengths and weaknesses. Topics to be covered include: (1) management concepts, (2) teamwork techniques, (3) record-keeping procedures, (4) new product development, and (5) small business finance. Prerequisites: Acctg. 210, Mkt. 200, Fin. 240 and Mgmt. 260. B 17 465 0 0506

491. Independent Study. (1-5). Offered for Cr/NCr only. Open only to MS in administration degree candidates. Prerequisite: RE 310. B 17 491 3 0506

492. Internship in Entrepreneurship. (1-3). Offered for Cr/NCr only. Prerequisites: junior standing, 2.75 grade point average in entrepreneurship and departmental consent. B 17 492 3 0506

Courses for Graduate/Undergraduate Credit

560. Consulting with Small Business. (3). This course will give hands-on experience consulting with existing small businesses. Prerequisite: approval of the MS Committee. Open only to MS in administration degree candidates. B 17 560 3 0506

866. New Venture Feasibility Seminar. (3). The focus of this course is on directing students in the appropriate methods of selecting financial sources and in raising seed capital through the preparation of a comprehensive feasibility study. Prerequisites: Mkt. 300, Fin. 340, and Mgmt. 360, and junior standing. Open only to MS in administration degree candidates. B 17 866 3 0506

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 17 890 9 0506

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 17 891 3 0506

893. Special Project in Entrepreneurship. (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 administration degree candidates. B 17 893 3 0506

vant to the problem, propose solutions to the problem and help the owner implement agreed-upon solutions. The student will gain a personal knowledge of the lifestyle of an entrepreneur, both pro and con, as well as experienced-based knowledge, about various aspects of managing a smaller business. Prerequisites: Mkt. 300, Fin. 340, Mgmt. 360, and senior standing. Preferred Sm. Bus. 465 also be taken. B 17 868 2 0506

868. Advanced Entrepreneurship. (3). This course will explore opportunities, such as leveraged buyouts, R&D limited partnerships, private placements of stock, role of entrepreneur in economic development, marketing strategy for smaller businesses and strategic planning for startups at various growth stages. The student will prepare a feasibility study plan and be required to present the plan for evaluation by a panel of academics from various business disciplines. Prerequisite: Sm. Bus. 360 (or consent of instructor). B 17 868 0 0506

690. Special Topics in Entrepreneurship. (3). This advanced course will have in-depth discussion of emerging topics within the field of entrepreneurship. Topics to be discussed will be on a rotating basis, allowing the student to repeat the class once. Prerequisites: Sm. Bus. 668, Sm. Bus. 465, senior standing. B 17 690 9 0506

750. Workshop in Entrepreneurship. (1-4). Prerequisite: junior standing. B 17 750 2 0501

Courses for Graduate Students Only

866. New Venture Feasibility Seminar. (3). The focus of this course is on directing students in the appropriate methods of selecting financial sources and in raising seed capital through the preparation of a comprehensive feasibility study. Topics to be covered are: (1) sources of capital, such as venture capitalists, investment bankers, banks and other institutions; (2) marketing strategies for smaller businesses; (3) product development, (4) market research and (5) actual preparation of the loan package. Prerequisites: Sm. Bus. 668, Mkt. 800, Fin. 840, DS 850, Mgmt. 860 or equivalent and approval of the instructor. B 17 866 9 0506

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 17 890 9 0506

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 17 891 3 0506

893. Special Project in Entrepreneurship. (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 administration degree candidates. B 17 893 3 0506
College of Education

Providing professional programs appropriate for the development of broadly educated and competent teachers, administrators, supervisors, counselors, school psychologists and other specialists is the principal purpose of the College of Education. The college's faculty provides leadership in professional service and research designed to contribute to the improvement of both schools and professional practice at local, state and national levels.

Curricula listed in the following sections are organized to give students an opportunity for systematic study. Programs are arranged to permit the development of (1) an understanding of education's place in a democratic society, (2) a philosophy of education consistent with functioning within that society, (3) an adequate professional preparation which affords an opportunity to relate content to practice, (4) a knowledge of human growth and development and (5) skills in the application of principles of human learning.

The College of Education is accredited by all appropriate agencies. (See the Accreditation and Associations section of the Catalog.) Since it is accredited by the State Board of Education in Kansas, the college can recommend to the board that appropriate teacher's certificates be awarded upon completion of other requirements established by the Kansas Board of Education.

Degrees Offered

Undergraduate
The college offers programs leading to the baccalaureate degree and/or to state teacher certification at the elementary, early childhood/elementary and secondary levels. The State Board of Education regulates the standards for all teaching certificates, and the curricula offered by the college are altered as needed to keep abreast of requirement changes established by the board.

Additional courses in industrial technology, physical education and recreation provide optional nonteaching routes to the baccalaureate degree.

A student may obtain a second bachelor's degree in the College of Education by being admitted to the College of Education, completing a minimum of 30 hours in a planned program in addition to the work required for the first bachelor's degree and satisfying the requirements for graduation from the College of Education.

Graduate
Course sequences available through
departments within the Graduate School can lead to the Master of Education (MEd) or Master of Science Education (MSE). Students wishing advanced course work in counseling and school psychology may fulfill program requirements leading to the Specialist in Education (EdS). Students may also earn graduate credit leading to the specialist degree in educational administration or the doctoral degree in educational administration through the doctoral transfer program with the University of Kansas. The Master of Arts (MA) and Doctor of Philosophy (PhD) can be earned through the Department of Communicative Disorders and Sciences.

The graduate offerings include programs designed to help students meet the requirements for certification as elementary principals, secondary principals, supervisory personnel, educational administrators, school counselors, early childhood teachers, early childhood/handicapped teachers, special education teachers, reading specialists, school psychologists, speech and language pathologists and audiologists, library/media specialists and other specialists. Master's programs in elementary education, secondary education and educational psychology have also been designed for teacher practitioners who wish to enhance their teaching skills levels. For specific graduate programs see The Wichita State University Graduate School Bulletin.

Policies

Admission to the College of Education

Before being admitted to the College of Education, students must fulfill the general entrance requirements of the University. To transfer to the College of Education, students must complete 24 hours and achieve a 2.25 grade point average.

Admission to Teacher Education Programs

Admission to the College of Education does not mean that a student is accepted into one of the teacher education certification programs. To be admitted as a candidate for the state teacher's certificate, students must meet the following criteria:

1. successfully complete IS 231
   (a) competency tests in English and mathematics
   (b) health examination
   (c) audio-visual literacy
   (d) computer literacy
2. complete 50 semester hours of University credit
3. attain a minimum grade point average of 2.50 overall as well as 2.50 in the major field. (An applicant whose GPA does not meet the minimum 2.50 may apply for probationary status. If admitted, the student must achieve the minimum standard GPA points by the time he/she has completed the first 30 hours after probationary admission.)
4. have a grade of C or higher in English 101 and 102
5. have a grade of C or higher in Speech 111 or 112

Any student denied admission to the Teacher Education Program may appeal the denial by filing a written petition with the Admissions, Retentions and Exceptions Committee of the College of Education.

Enrollment Limits

Students enrolled in the College of Education may not enroll in more than 21 semester hours of work per semester during the academic year. Summer Session enrollments are limited to a maximum of six hours for each four-week session or 12 hours during the Summer Session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.00 or higher may petition their department chairperson for permission to enroll in excess hours.

Probation and Dismissal

Students are expected to make satisfactory progress in their studies. Students who fail to do so may be placed on probation at any time and may ultimately be dismissed from Wichita State. Students in the College of Education are formally placed on probation at the conclusion of any semester in which their overall or their WSU grade point average falls below 2.25. They will be continued on probation at the end of any semester in which they have been on probation if their grade point average for the semester is at least 2.25, and they will remain on probation until they achieve a cumulative grade point average of 2.25. Students who fail to earn at least a 2.25 for any semester on probation may be dismissed for poor scholarship.

Students may be academically dismissed at the end of a semester unless they began that semester on academic probation. Also, students may in no case be academically dismissed from Wichita State before they have attempted a total of at least 12 semester hours at the University after being placed on probation.

Students dismissed for poor scholarship may reenroll only with the special permission of the Admissions, Retentions and Exceptions 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 Admissions, Retentions and Exceptions Committee of the College of Education and then forwarded to the University's Committee on Admissions and Exceptions for final action.

Because counseling and advanced planning require careful attention and much time, students should secure their recent academic records, complete their petition and have had their readmissions counseling session at least five days before the first day of enrollment of the semester for which they wish to be readmitted.

Students must develop their own cases for readmission. They should center their petitions around explanations for their failures and presentations of evidence for their future successes.

Bureau of Educational Placement

Through the Bureau of Educational Placement, The Wichita State University provides career planning and placement assistance for students and alumni desiring positions with schools and other educational agencies. Eligible for registration are individuals who have completed at least 15 semester hours at The Wichita State University and who meet the required education curriculum for certification in their field. Undergraduates may register if their overall grade point average permits entry into the student teaching block. Application forms may be obtained from the Bureau of Educational Placement, 221 R. Dee Hubbard Hall.

Cooperative Education

The College of Education is one of the participating colleges in the University Cooperative Education program. This program is designed to provide off-campus, paid, work-related 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 various academic departments in the college. To enroll in the program or for more information, students should contact the college Cooperative Education Coordinator.
Requirements for Graduation and Certification

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 carefully study the requirements for their particular area of study.

Students enrolled in the College of Education must maintain at least a 2.25 grade point average. Admission to the student teaching seminar requires an overall grade point average of at least 2.50 and at least a 2.50 average in the major field, a grade of C or higher in Eng. 101 and 102, or a statement of proficiency from the Department of English, a grade of C or higher in Speech 111 or 112, or an equivalent, and the recommendation of the student's major department. A grade of C or higher in student teaching is necessary to receive a recommendation for a teaching certificate.

Requirements for admission to student teaching for communicative disorders and sciences students are listed in the department's program description later in this section. Certain programs may require a higher grade point average for admission to student teaching.

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.)

Students interested in the following fields should contact an adviser in the College of Education: special education; bilingual education, in conjunction with either the elementary or secondary program; early childhood certification and library certification, in conjunction with the elementary or secondary education programs.

Effective May 1, 1986, all graduates applying for teacher certification in Kansas must satisfactorily complete a pre-certification examination established by the Kansas State Department of Education in order to qualify for their initial certificate.

General Education

A total of 42 hours of general education courses is required for teacher certification, including the following requirements for graduation.

I. Basic Skills (12 hours)
   A. Written communication (six hours)
   B. Oral communication (three hours)*
   C. Mathematics (three hours)—college algebra

II. Distribution Requirements (G or Q courses only)
   A. At least nine hours of humanities and fine arts—literature (three hours required). American studies, art education, art history, foreign languages, history, linguistics, musicology-composition, music education, philosophy, religion or other
   B. At least six hours of social and behavioral sciences—Psychology 111 (required), anthropology, economics, geography, political science, sociology or other
   C. At least six hours of natural sciences and mathematics—biology, chemistry, geology, mathematics, physics or other
   D. At least nine hours of electives from general education courses mentioned above

Note: (a) No courses from the student's major department may be counted in the general education area; and (b) courses must be taken in at least two departments in each division outside the division containing the student's major. All course work in divisions A-D must be G or Q courses.

*In the Professional Education section, or in Division B, either Psych. 414, Child Psychology, or IS 233, Educational Psychology: Child Development, must be taken.

Professional Education

Professional education requirements in areas of specialization as well as additional general education requirements in these areas are summarized on the following pages.

Communicative Disorders and Sciences (Logopedics)

I. General Education

Students majoring in Communicative Disorders and Sciences are expected to meet all general education requirements. In Division B, at least six hours of psychology are required. Within Division B, or in the Professional Education section, either Psych. 414, Child Psychology, or IS 233, Educational Psychology: Child Development, must be taken.

II. Professional Education

Selected courses from major, plus 18 hours including the following courses:

- IS 231, Teacher Education Lab, 0 hours
- IS 232, Introduction to Professional Education, 2 hours
- IS 231, Research in Professional Education, 2 hours
- IS 233, Educational Psychology: Child Development, 3 hours
- IS 234, Psychology and History of Education, 2 hours
- IS 428, Social and Cultural Foundations of Education, 3 hours
- IS 433, Educational Psychology: Child Development, 3 hours
- IS 434, Educational Psychology: Learning and Evaluation, 3 hours
- IS 456, Multicultural Education, 3 hours
- IS 601, Introduction to Exceptional Children, 3 hours
- IS 616, Literature for Adolescents, 3 hours
- IS 319, Language Arts in the Elementary School, 3 hours
- IS 321, Science in the Elementary School, 3 hours
- IS 306, Social Studies in the Elementary School, 3 hours
- IS 420, Reading in the Elementary School, 3 hours
- IS 421, Teaching Methods and Instructional Materials for Elementary Reading, 3 hours
- IS 444, Mathematics in the Elementary School, 3 hours
- IS 453, Classroom Dynamics, 2 hours
- IS 446, Elementary Education: Student Teaching Seminar, 1 to 3 hours
- IS 447, Student Teaching in the...
III. Allied Fields (27 hours)

The following course must be completed:

Math. 501, Elementary Mathematics, 5 hours

Plus courses in each of the following areas:

Art Education 110, 210, 211
Music Education 351, 352, 356, 611
Physical Education 115, 117, 210, 325, 326, 327, 360, 515
Health Education (3 hours)

Courses must be taken in three of the following areas, if not taken as part of the General Education Program: sociology, economics, anthropology, political science and geography.

Secondary Education

I. General Education

Students majoring in secondary education must 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.

1. Major field—a field normally taught in secondary schools must be studied.

2. Minor field—at least one minor field must be taken. Completion of a minor does not qualify the student to teach that field. Special arrangements must be made for the student to qualify to teach in minor fields. In no case may the minor consist of fewer than 15 semester hours. No minor is required if an area major of 50 hours is elected.

III. Professional Education

a. IS 232, Introduction to Professional Education, (2 hours)
b. IS 231, Teacher Education Lab (0 hours)
c. The following courses must be taken:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 333, Educational Psychology: Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>IS 234, Philosophy and History of Education</td>
<td>2</td>
</tr>
<tr>
<td>IS 428, Social and Cultural Foundations of Education</td>
<td>2</td>
</tr>
</tbody>
</table>

For majors in art, speech and drama, English, social studies, science and mathematics:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 433, Educational Psychology: Learning and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>IS 454, General Methods of Secondary Teaching</td>
<td>3</td>
</tr>
<tr>
<td>IS 465, Advanced Methods of Secondary Teaching</td>
<td>3</td>
</tr>
<tr>
<td>Student Teaching—Secondary School</td>
<td>1</td>
</tr>
<tr>
<td>IS 456, Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td>IS 453, Classroom Dynamics (optional)</td>
<td>2</td>
</tr>
<tr>
<td>IS 601, Introduction to Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>IS 401, Secondary Reading Foundations</td>
<td>3</td>
</tr>
</tbody>
</table>

For majors in industrial education, music, physical education, foreign language and business education:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 333, Educational Psychology: Learning and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>IS 442, Special Methods in Teaching</td>
<td>4</td>
</tr>
<tr>
<td>Student Teaching—Secondary School</td>
<td>1</td>
</tr>
<tr>
<td>IS 456, Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td>IS 453, Classroom Dynamics (optional)</td>
<td>2</td>
</tr>
<tr>
<td>IS 601, Introduction to Exceptional Children (music majors take Mus. Ed. 611)</td>
<td>3</td>
</tr>
<tr>
<td>IS 401, Secondary Reading Foundations</td>
<td>3</td>
</tr>
</tbody>
</table>

**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, the College of Business Administration or the College of Education. Students must meet the specific course requirements of the department in which the major is offered. For example, students may elect to major in history because they wish to become high school history teachers. To do so, they must complete the history major as prescribed by the history department in Fairmount College of Liberal Arts and Sciences. In addition, they must 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 teacher 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 for the junior or senior high school must be made with an academic adviser 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 specific course requirements of the department from which the major or minor work is taken prevail. Any of the fields is suitable as a supporting minor, but it should be remembered that the minor will not qualify a student to teach unless special arrangements have been made in advance.

**Majors and Minors**

Art
- Biological sciences
- Business education
- Chemistry
- Classical languages
- Economics
- English language and literature
- French
- German
- History
- Industrial education
- Mathematics
- Music
- Natural sciences—biological
- Natural sciences—physical
- Physical education
- Physics
- Political science
- Psychology
- Social studies
- Sociology
- Spanish
- Speech
- Speech/theater
- Theater

**Minor Only**

Accounting
American studies
Anthropology
Computer studies

*Needs no minor if a 50-hour field major is outlined in consultation with an advisor from the College of Education*

1. A major in psychology, sociology or economics must be accompanied by specific course work in history or political science.
2. Teaching preparation for a modern language requires 24 semester hours in the language to be taught or 15 semester hours if the prospective teacher has 24 hours in another modern language.
3. Religion must be combined with philosophy on a minor—no more than eight hours of religion will count toward a degree.

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Elementary School, 13 hours, and/or

*ISEE 448, Student Teaching in the Elementary/Early Childhood School, 13 hours.*
Combined Curricula
The teaching assignment after graduation often involves a combination of related subjects. For this reason intensive study in the following combined disciplines is offered in lieu of a departmental major and minor. Students should work closely with advisers to ensure proper course selection for certification.

Business Education
Secondary business education majors at Wichita State will be certifiable in the various business subjects.

Courses
<table>
<thead>
<tr>
<th>Business Education</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typewriting</td>
<td>6</td>
</tr>
<tr>
<td>Shorthand</td>
<td>6</td>
</tr>
<tr>
<td>Records management-Bus. Ed.</td>
<td>3</td>
</tr>
<tr>
<td>Office Procedures-Bus. Ed.</td>
<td>3</td>
</tr>
<tr>
<td>Office Machines-Bus. Ed.</td>
<td>3</td>
</tr>
<tr>
<td>Automated word processing-Bus. Ed.</td>
<td>3</td>
</tr>
<tr>
<td>Office practice-Bus. Ed.</td>
<td>3</td>
</tr>
</tbody>
</table>

71 or 72

Minor. For a business education minor, students must take Acctg. 210 and 220, Econ. 201Q and 231; Bus. Ed. 138, 237 and 260, and nine hours, including one upper-division course, from the following: accounting, aviation management, business law, decision sciences, economics, finance, legal assistant, management, marketing, personnel, real estate, shorthand or small business and entrepreneurship. Additional work will be required for teacher certification.

Natural Sciences—Physical
This major requires a minimum of 50 hours. A teacher who qualifies under this provision may also teach chemistry and general science as well as biology. Students may also make special arrangements to qualify to teach earth and space science. Requirements for a major listed below include the general education requirements in mathematics and science for the College of Education.

Major. Requirements for a natural sciences—biological major are: core requirements—Biol. 203Q, Chem. 111Q, Geol. 302Q and Physics 213Q; biology requirements—Biol. 204, 418, 520, 524, any class in botany and one of Biol. 560, 640F, 575 or 576; chemistry requirements—Chem. 112Q and 531.

Minor. A teaching minor in the natural sciences—biological consists of at least 25 hours including Biol. 203Q and 204, Chem. 111Q, Physics 213Q and Geol. 302Q. Students should not elect this minor if they are majoring in one of the sciences. Those who do may use the same course for both major and minor requirements only if they select additional hours equal to those taken to satisfy both the major and minor requirements.

Natural Sciences—Biological
This major requires a minimum of 50 hours. A teacher who qualifies under this

Social Studies
Completion of the following program will lead to certification in comprehensive social studies at the secondary level. The following fields are included in this certification: American history, world history, government, anthropology, economics, geography and sociology.

Major. The major requires the following:

1. American history (18 hours)
   a. History 131Q and 132Q .............................................. 8
   b. 10 hours chosen from: History 517 and 518, Constitutional History .............................................. 6
   2. World History (8 hours)—Hist. 101G and 102G, History of Western Civilization
   3. Political Science (12 hours)—Poli. Sci. 121Q, American Politics, plus nine hours from (a) for interest in U.S. government or (b) for international emphasis.
   4. Anthropology (3 hours)—Anthro. 102Q, Cultural Anthropology, or Anthro. 124Q, General Anthropology.
   5. Economics (3 hours)—Econ. 201Q, Principles of Economics.
   6. Geography (3 hours)—Geog. 125Q, Principles of Geography, or Geog. 210Q, World Geography, or Geog. 262Q, Cultural Geography.
   7. Sociology (3 hours)—Soc. 211Q, Introduction to Sociology.

Minor. A teaching minor consists of at least 25 hours from the above program including one half of 1a and 1b and Pol. Sci. 121Q.

Art Education
See Department of Art Education, College of Fine Arts.

Communicative Disorders and Sciences (Logopedics)
The Department of Communicative Disorders and Sciences provides academic and clinical training for students at The
Wichita State University who wish to work with communicatively handicapped children and adults. The undergraduate program offers broad, comprehensive and preprofessional preparation for specialized training, which is offered on the graduate level. Graduate work, culminating in a master's degree, is required to obtain professional certification as a speech and language clinician or audiologist in the public schools, hospital clinics or rehabilitation centers or to engage in private practice. With an undergraduate, preprofessional major, students can normally complete the master's program in one calendar year and be eligible for certification by the American Speech-Language-Hearing Association and the state of Kansas public schools. The Ph.D. in communicative disorders and sciences prepares individuals to function professionally as independent clinicians or as teacher-scholars in an academic setting.

Undergraduate Major
The preprofessional, undergraduate major places primary emphasis on the general areas of communicative sciences and disorders and beginning specialized emphasis on speech and language pathology or audiology. Supervised practicum courses are required as part of the training program. CDS 417 is required for undergraduate students majoring in speech and language pathology, and CDS 447 and 448 are required for students wishing to qualify as speech and language clinicians in the public schools. CDS 441 is required for undergraduate students majoring in auditory, and CDS 457 and 458 are required for students wishing to qualify as audioligists in the public schools. CDS 785 is also required for all students on either an undergraduate or graduate level.

Students should make formal application for practicum courses during enrollment in CDS 220 or no later than the second semester of the sophomore year. Transfer students should apply during the semester prior to, or immediately upon, taking upper-division courses in the department. Evaluation of the student's speech, language and hearing proficiency will be conducted at this time. Significant deviations in any area must be corrected to maximum ability before student teaching.

Undergraduate Minor
A minor in communicative disorders and sciences consists of 17 hours and may be earned in either the College of Education or Fairmount College of Liberal Arts and Sciences. The following courses are recommended for a minor unless other arrangements are made: CDS 111Q, 132, 214, 216, 218, 220, 315, 318, 322, 417, 431 and 520. To qualify as speech and language clinicians in the public schools, students must also complete CDS 327, 447 and 448.

Speech and Language Pathology
The major with emphasis in speech and language pathology consists of a minimum of 34 hours and includes the following courses:

Required: CDS 111Q, 132, 214, 216, 218, 220, 315, 318, 322, 417, 431 and 520. To qualify as speech and language clinicians in the public schools, students must also complete CDS 327, 447 and 448.

Optional: CDS 540, 700, 710, 720, 726, 747, 760 and 785.

Audiology
The major with emphasis in audiology consists of a minimum of 35 hours and includes the following courses:

Required: CDS 111Q, 132, 214, 216, 218, 220, 315, 318, 322, 417, 431, 447 and 540. To qualify as an audiologist in the public schools, students must also complete CDS 327, 457 and 458.

Optional: CDS 700, 710, 735, 747, 760 and 785.

Deaf Education
Undergraduate preparation with beginning emphasis in deaf education consists of a minimum of 36 hours and includes the following courses:

Required: CDS 111Q, 132, 214, 216, 218, 220, 315, 318, 540, 561, 747, 760 and 785. In addition, selected methods courses in elementary education will be chosen in consultation with an advisor.

Teacher Education
One full semester of student teaching is required for all students working toward certification as public school speech and language clinicians or audiologists. To complete this requirement, students must take CDS 417 or 441, in a clinical setting, then CDS 447 and 448, or CDS 457 and 458, in a public school setting, accumulating a total of ten hours of credit.

The assignment for student teaching begins with the opening of the public schools, and the student teacher is expected to follow the public school calendar, on a half-day basis, for a semester.

Students must apply for admission to both student teaching semesters (CDS 447 and 417 or 441 and 457). They must have an overall grade point average of 2.50; a 2.50 average in the major field; a grade of C or higher in Speech 111 or 112, or their equivalents; and the recommendation of the major department. Medical clearance must also be obtained before the start of the student teaching assignment. Evaluation of the student's speech, language and hearing proficiency will be conducted at this time. Significant deviations in any area must be corrected to maximum ability before student teaching.

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 and language pathology or in audiology.

Undergraduate Minor
A minor in communicative disorders and sciences consists of 17 hours and may be earned in either the College of Education or Fairmount College of Liberal Arts and Sciences. The following courses are recommended for a minor unless other arrangements are made: CDS 111Q, 132, 214, 216, 218 and 220. Arrangements for the minor should be made in consultation with the Department of Communicative Disorders and Sciences.

Other Requirements
Participation in many of the department's clinical practicum courses requires that a student obtain medical clearance prior to the start of the course. This requirement is indicated in the individual course descriptions. Procedures to be followed may be obtained from the department's office. Also, seniors and graduate students who participate in active clinical practice during the year must purchase professional liability insurance in the amount of not less than $200,000/ $600,000. This must be done on a yearly basis, when appropriate.

CDS 705, Communicative Disorders, which is cross-listed as Speech 685, is a
general survey course and may not be used as part of either a major or minor in communicative disorders and sciences at the undergraduate or graduate level without departmental consent.

Corrective Training
Corrective training for members of the community with speech, language, or hearing disorders, as well as students enrolled from Wichita State, may be arranged with the Department of Communicative Disorders and Sciences. A minimal fee may be charged.

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.

Communication Sciences

Lower-Division Courses

214. 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. The respiratory, phonatory, articulatory, and auditory mechanisms are discussed from a functional point of view. Prerequisite: prior or concurrent enrollment in CDS 1110. D 12 214 0 1220

216. Introduction to Speech and Hearing Sciences. (3). Examination of elements in the chain of events that leads to human communicative and linguistic functions. Prerequisites: sophomores standing and prior or concurrent enrollment in CDS 1110. D 12 216 0 1120

218. Phonetics: Theory and Application. (3). Cross-listed as Linguistics 218. The study of the physiological, acoustic, and perceptual specification of sound and a survey of current research in phonetics and articulatory science. Prerequisites: sophomores standing and prior or concurrent enrollment in CDS 1110. D 12 218 0 1120

220. Developmental Psycholinguistics. (3). The study of the acquisition of language in the child from birth to six years of age. Various acquisition theories are evaluated in light of current psychological and linguistic thought. Special emphasis is given to the development of phonology, morphology, and syntax. Prerequisites: sophomores standing and prior or concurrent enrollment in CDS 218. D 12 220 0 1120

Courses for Graduate/Undergraduate Credit

710. The Neurology of Speech and Language. (4). A consideration of basic neuroanatomy and neurophysiology necessary for obtaining an understanding of the representation of normal and pathological conditions of the central nervous system and of conditions resulting from neurological impairment. Prerequisite: at least senior standing. D 12 710 0 1120

735. Anatomy, Physiology and Pathology of the Auditory System. (3). Detailed anatomy and function of the auditory system. Normal and pathological conditions are studied, with emphasis on clinical manifestations. Prerequisite: CDS 431. D 12 735 0 1120

Courses for Graduate Students Only

828. Advanced Speech and Hearing Science. (3). 3R; 1L. Advanced study of speech and hearing processes, primarily in their normal aspects. Attention is devoted to current understanding of speech generation, the speech signal and the normal function of hearing. Attention is also given to techniques of investigation of these processes. Prerequisites: CDS 216 or equivalent or departmental consent. D 12 828 0 1120

830. Laboratory Instrumentation. (3). 2R; 3L. An introduction to research and clinical research instrumentation used in fields of communicative disorders and sciences. Experience with instrumentation is gained through practical projects and applications within the laboratory. Prerequisite: CDS 828. D 12 830 0 1120

867. Introduction to Psychoacoustics. (3). 3R; 1D. Basic principles underlying the perceptual hearing process, with emphasis on the interdependencies between sound stimuli and subjective auditory experience as related to communication behavior. Prerequisite: CDS 540. D 12 867 0 1120


910. Communicative Sciences: Acoustic Phonetics. (3). 3R; 2L. A critical review of pertinent research concerning the physiological characteristics of speech. Also included are speech perception and techniques of speech synthesis and analysis. Prerequisite: CDS 626. D 12 910 0 1120

920. Neurophysiology of Communication. (2). Special lectures, seminars, clinical demonstrations and independent study. D 12 920 0 1120

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.

Speech and Language Pathology

Lower-Division Courses

1110. Disorders of Human Communication. (3). An orientation to disorders of human communication, communicative and psychosocial problems commonly encountered and general approaches to habilitation. D 12 1110 0 1120

132. Introduction to Clinical Management in Speech and Language Pathology. (2). 2R; 2L. An overview of management procedures for communicative disorders in relation to other educational disciplines. Techniques for observation of speech-language pathology management and the various components of diagnostic and treatment procedures in a speech-language-hearing clinic are required. Prerequisites: prior or concurrent enrollment in CDS 1110 and medical clearance. D 12 132 0 1120

Upper-Division Courses

315. Articulation Disorders: Diagnosis and Clinical Management. (3). Emphasis of normal and deviant articulation. Etiology, evaluation, and methods of modification are also included. Prerequisites: CDS 214 and 218. D 12 315 0 1120

318. Behavioral Analysis of Speech and Language Disorders. (2). 2R; 3L. A presentation of principles and applications of behavioral analysis and behavior modification with persons exhibiting speech and language disorders. Techniques for management of behavior with parents, clients and professional workers and the use of clinical equipment are discussed. Ongoing observation of training programs of two or more persons is required. Prerequisites: CDS 220, junior standing and medical clearance. D 12 322 1120

321. Clinical Management of Speech and Language Disorders. (2). 2R; 3L. Supervised application of techniques with simpler problems. Observation and management of communicative disorders and an introduction to assessment and language intervention techniques. Forty-five hours of direct observation and practicum are required. Prerequisites: CDS 315, junior standing and medical clearance. D 12 321 0 1120

327. Clinical Methods in the Public Schools. (3). Organization, administration and professional relationships in public school speech and language programs. Emphasis is placed on the development of programs on the elementary and secondary school levels. Emphasis is given to procedures for administration, record keeping and utilization of various instructional media. This course should be taken the semester prior to student teaching—CDS 447 and 448. Prerequisites: CDS 315, 318 and 322. This course may be taken concurrently with CDS 322. D 12 327 0 1120

400H. Honors Seminar. (2). Advanced study in selected areas of speech, language and hearing disorders, with students structuring the content of the seminar. Course provides an opportunity for original student contributions within a group seminar experience under the guidance of a senior professional. Prerequisites: CDS major with junior or senior standing who is eligible for the Emory Lindquist Honors Program. D 12 400H 0 1220

417. Supervised Practicum in Speech Language Pathology. (3). 3R; 2L. Techniques and methods for development of clinical skills in a supervised practicum setting. Lecture portion of the course will enhance clinical management techniques applied to articulation and language disorders. Students...
will be required to complete a minimum of 25 hours of clinical practice. Prerequisites: junior or senior standing, CDS 315, departmental consent one semester prior to enrollment and medical clearance. D 12 417 2 1220.

447. Speech and Language Practicum in the Public School. (6). Half-time participation in a public school speech and language management program under the guidance of a certified clinician and a college supervisor. Prerequisites: junior or senior standing, CDS 315, departmental consent one semester prior to enrollment and medical clearance. D 12 447 2 1220.

448. Public School Speech and Language Programs. (2). Discussion and evaluation of student teaching experiences in public schools, demonstrations of applied clinical skills, counseling on the elementary and secondary school levels. To be taken concurrently with CDS 447. D 12 448 9 1220.

490. Directed Study in Speech and Language Pathology and Audiology. (Individual study or research on specific problems. Repeatable for credit. Instructor's consent must be obtained prior to enrollment. D 12 490 3 1220.

Courses for Graduate/Undergraduate Credit

520. Language Disabilities in Children. (3). Psychological and cognitive approaches to language disabilities in children. Practical application of language assessment procedures, interpretation of results and remediation of language problems are covered. Prerequisite: CDS 111Q or 705, 220 or departmental consent. D 12 520 1 1220.

700. Cleft Palate: Evaluation and Clinical Management. (3). Methods of evaluating and modifying articulation and resonance in cleft palate individuals. The role of the speech clinician within an interdisciplinary team is explored. Consideration is given to other organic anomalies. Prerequisite: prior or concurrent enrollment in CDS 214. D 12 700 0 1220.

705. Communicative Disorders. (3). Cross-listed as Speech 665. A survey of speech, language, hearing disorders: their identification and treatment; and constitutional specialists in the total habilitative process. Background in normal communicative structures, processes and acquisition is provided for understanding communicative disorders. Areas introduced include language disabilities in children, adult aphasia, articulation disorders, voice disorders, cleft palate, laryngeal studies, stuttering, cerebral palsy and hearing impairment. Not open to students majoring in CDS. Credit in both CDS 111Q and 705 is not allowed. D 12 705 0 1220.

720. Stuttering: Diagnosis and Clinical Management. (3). A review of current thought in the biologic and developmental aspects of the disorder. Behaviorally based diagnostic procedures for children and adults are covered, as are methods for clinical management and treatment. Includes procedures for parent and client interviewing and counseling. Opportunities for observation and demonstration therapy are provided. D 12 720 0 1220.

726. Voice Disorders: Diagnosis and Clinical Management. (3). Review of current knowledge on the symptomatology and etiology of commonly encountered voice disorders in children and adults. Presentation of procedures for differential diagnosis and clinical management, based on a working knowledge of the anatomy and physiology of normal voice production. Prerequisite: at least sophomore standing and CDS 214. D 12 726 0 1220.

727. Teaching English as a Second Language. (2-3). Cross-listed as Eng 727 and Ling 727. Current methods of teaching English to native speakers are discussed. Students learn to analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use. D 12 727 0 1220.


810. Cerebral Palsy: Evaluation and Clinical Management. (3). The study of cerebral palsy and related neurological disorders. An evaluation and modification of speech and associated functions and a study of the cerebral palsied individual in society are included. Prerequisite: prior or concurrent enrollment in CDS 710. D 12 810 0 1220.

815. Interviewing and Parent Counseling. (3). Preparation of current techniques of case history taking and interviewing as they apply to speech, language, hearing and behavior disorders in handicapped children and adults. Procedures employed in ongoing and terminal counseling are considered. D 12 815 0 1220.

820. Examination Methods in Speech and Language Pathology. (3). 3R; 3L. Appraisal and differential diagnostic techniques in speech and language pathologies. A weekly diagnostic practicum for communicative disorders. Emphasis is on writing and follow-up procedures provided. Prerequisites: medical clearance and terminal seminar of graduate program. D 12 820 1 1220.

824. Language Intervention Strategies. (3). Discussion of current language intervention strategies and programs. Assessment procedures leading to the development of individualized programs are also examined. D 12 824 0 1220.

825. Seminar in Communicative Disorders. (2-3). Review of recent developments and a study of methods of integrating research findings and newer clinical methods and concepts into a rehabilitative program. D 12 825 0 1220.


834. Beginning Graduate Practicum in Communicative Disorders. (1). 1R; 2L. Supervised application of diagnostic and/or clinical management techniques with children and adults presenting communicative disorders. Prerequisites: junior or senior standing, CDS 315, departmental consent and one semester prior to enrollment and medical clearance. D 12 834 2 1220.

835. Graduate Practicum in Communicative Disorders. (1-3). 3-6L. Supervised application of diagnostic and/or clinical management techniques with children and adults presenting communicative disorders. Prerequisites: CDS 471 or equivalent, CDS 447 or equivalent, medical clearance, and departmental consent. D 12 835 2 1220.

Audiology

Upper-Division Courses

431. Introduction to Audiology. (3). 3R; 1L. History and scope of the field. Basic aspects of the normal hearing function are studied and a survey of audiometric testing procedures, including audiometric screening, is made. An introduction to the use of hearing aids, auditory training, lip reading and rehabilitative counseling is also included. Prerequisites: CDS 431 or equivalent, medical clearance and departmental consent. D 12 431 1 1220.

441. Beginning Practicum in Audiology. (1). 1R; 4L. Introduction to supervised practicum and the application of audiological techniques in audiological situations. Lecture stresses clinic and practicum procedures. Four hours of audiological practicum per week are required. Prerequisites: CDS 431 or equivalent, medical clearance and departmental consent. D 12 441 2 1220.

457. Audiology Practicum in the Public Schools. (5). Half-time participation in a public school audiological program under the guidance of a certified clinician and a college supervisor. Prerequisites: CDS 473, 431 and 441, senior standing, medical clearance and departmental consent one semester prior to enrollment. D 12 457 2 1220.

458. Public School Audiology Programs. (2). Discussion and evaluation of student maximum usage of audiological techniques in public schools; demonstration of applied audiological skills; counseling on the elementary and secondary school levels. To be taken concurrently with CDS 457. D 12 458 9 1220.

540. Introduction to Audiology Technique. (3, 5). Techniques and procedures for administering the basic audiological test battery and screening tests for various age levels and the interpretation of audiological results. Calibration and maintenance of audiometric equipment. Students majoring in audiology will enroll for five hours of credit. Prerequisite: CDS 431 and at least junior standing. D 12 540 1 1220.

Courses for Graduate/Undergraduate Credit

747. Rehabilitation Audiology. (3). Educational and psychological impact of hearing loss. Methods of improving the educational and family environment for the benefit of the hearing impaired are covered. Procedures for maintenance and repair of hearing equipment are discussed. Speech reading and auditory training
Deaf Education

Courses for Graduate/Undergraduate Credit

560. Signing Exact English I. (1). 2R. Introduction to the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Independent outside practice is necessary to facilitate skill. Prerequisite: junior standing or departmental consent. D 12 560 0 1220

561. Signing Exact English II. (1). 2R. An advanced class in the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Vocabulary and interpreting skills will be emphasized. Prerequisite: CDS 560. D 12 581 0 1220

780. Introduction to Deaf Education. (3). Evolution of educational programs and methods used with the deaf. Contributions of related disciplines to educational methodology and special aspects of curriculum development in schools and classes for the deaf are surveyed. Also included is a review of common communication systems and social and vocational considerations. Prerequisite: CDS 431. D 12 760 0 1220

General

Lower-Division Course

281. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. Offered Cr/NCr only. D 12 281 0 1220

Upper-Division Courses

481. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. Offered Cr/NCr only. D 12 481 0 1220

490. Directed Study in Speech and Language Pathology or Audiology. (1-3). Individual study or research on specific problems. Repeatable. Instructor's consent must be obtained prior to enrollment. D 12 490 0 1220

Courses for Graduate/Undergraduate Credit

715. Selected Topics in Communicative Disorders and Sciences. (1-3). Individual or group study in specialized areas of communicative sciences and disorders. Repeatable. D 12 715 0 1220

750. Workshop in Communicative Disorders and Sciences. (1-4). A course offered periodically on selected aspects of speech and hearing habilitation. D 12 750 0 1220

Courses for Graduate Students Only

800. Introduction to Graduate Study and Research. (3). A general introduction to graduate study. A survey of basic research methods utilized in the fields of communicative sciences and communication pathology. Presentation of principles for scientific writing and critical reading of professional research journals is included. Final project involves the formulation of a possible research methodology in the area of communicative science or communication pathology. D 12 800 0 1220

880. Presentation of Research. (1-3). A directed research project culminating in a manuscript appropriate for publication. Repeatable, but total credit hours may not exceed three. Prerequisites: CDS 800 and instructor's consent prior to enrollment. D 12 880 4 1220

890. Independent Study in Speech and Language Pathology or Audiology. (1-3). Arranged individual study in specialized content areas in speech and language pathology or audiology. Repeatable. Prerequisite: Instructor's consent prior to enrollment. D 12 890 3 1220

899. Thesis Research. (1-2). Repeatable, but total credit hours counted toward degree requirements must not exceed two. D 12 899 4 1220

915. Advanced Selected Topics in Communicative Disorders and Sciences. (1-4). Advanced individual or group study in specialized areas of communicative sciences and disorders. Intended for doctoral students or advanced master's-level students. Repeatable. D 12 915 0 1220

925. Clinic and Program Administration. (2). Approaches to clinical administration and program planning and development. Attention is given to community analysis and utilization, personnel management, evaluation of program effectiveness, standards for accountability and fiscal procedures. D 12 925 0 1220

930. Seminar in Clinical Research. (3). Presentation of advanced models in research design applicable to the investigation of communicative disorders in a clinical setting. Prerequisites: CDS 800 and competency in statistics. D 12 930 9 1220

935. Advanced Practicum in Communicative Disorders and Sciences. (1-4). Supervised individual directed practice in one or more of the following sections: Advanced Practicum in Client Management, Advanced Practicum in Clinical Supervision, Advanced Practicum in Academic Instruction, Advanced Practicum in Research and Advanced Practicum in Clinical and Program Administration. This course is intended for advanced doctoral students or advanced master's-level students. Repeatable; more than one section may be taken concurrently. D 12 935 2 1220

990. Advanced Independent Study in Speech and Language Pathology, Audiology or Speech Science. (1-3). Arranged individual directed study in content areas in speech and language pathology, audiology or speech science. Repeatable. Prerequisites: advanced standing and instructor's consent. D 12 990 3 1220


Industrial Education

The overall goal of industrial education is to provide a broad concept of industrial technology. Within this broad concept students are given specific educational...
content that will allow them to pursue their desired career objectives. The primary employment markets for industrial education majors are teaching and industry. Teaching opportunities are available at both secondary and postsecondary levels. Opportunities in industry are found in the areas of production, service, and supervision.

Undergraduate Major—Teaching Emphasis. Persons preparing to teach industrial education subjects in the public schools must satisfy certification requirements established by the Kansas Board of Education.

A major in industrial education with a teaching emphasis requires a minimum of 50 semester hours, including Ind. Ed. 111, 112, 113, 120, 121, 170, 180, 190, 501, 519 and not fewer than 21 hours of electives. Students seeking recommendation for state certification must also complete a 32-hour sequence described under the secondary education heading at the beginning of the College of Education section of the Catalog.

Undergraduate Major—Industrial Technology Emphasis. This option requires a minimum of 60 semester hours, including Ind. Ed. 111, 112, 113, 120, 121, 170, 180, 190 and not fewer than 12 semester hours selected from upper-division industrial education courses. Courses in the General Education Program must include Math. 123, Chem. 103Q, Phys. 111Q and Psych. 316. Courses offered in related departments may be counted toward an industrial education major. Students may select related courses to satisfy their particular needs, provided they have consulted with their major adviser.

Admission to the industrial technology major requires a 2.25 grade point average. Students who fail to make satisfactory progress in their studies are governed by College of Education policies on probation and dismissal.

Undergraduate Minor—Technical Emphasis. This minor requires a minimum of 18 semester hours selected from laboratory course offerings. Courses must be chosen in consultation with the department.

Graduate Courses. The Master of Education program provides for specialization in secondary education with an emphasis in industrial education. Courses must be selected in consultation with the student's graduate adviser. For further information consult The Wichita State University Graduate School Bulletin.

Lower-Division Courses

111. Introduction to Industrial Education. (2). Industrial education as a career; an introduction to present-day programs and the opportunities available. The course is recommended as a first course to be taken in the department. D 11 111 0 0839

112. Construction Technology. (3). 2R; 3L. A course emphasizing the understanding of technology and the scope of industry as it applies to construction. Instruction includes development of material specifications, learning of the behavior of materials and control of products and processes. D 11 112 1 0839

113. Manufacturing Technology. (3). 2R; 3L. A study of how machinery integrates man, machines, and materials into efficient production systems. The study focuses on the management, personnel and production techniques of manufacturing. D 11 113 1 0839

120. Drafting I. (3). 2R; 3L. An introduction to orthographic projection, pictorial representations, with emphasis placed on auxiliary views, sectional views, sketching, revolutions, dimensions, shading, lettering, and use of drafting instruments. D 11 120 1 0839

121. Drafting II. (3). 2R; 3L. A study of the relationship of views in drafting, with emphasis on projection of solid objects, planes and lines using standard drafting techniques and procedures. Prerequisite: Ind. Ed. 120. D 11 121 1 0839

170. Materials and Processes. (3). 2R; 3L. A study of basic material processing methods, emphasizing those that are most common to all materials. Through laboratory applications, the student can develop an understanding of material processing that will facilitate the appropriate selection of suitable materials and processes for particular products. D 11 170 1 0839

180. Power and Energy. (3). 2R; 3L. A study of energy sources, means of harnessing energy, transmitting energy and the effects of power systems. The major types of power and energy to be considered are mechanical, fluid, electrical and combinations. D 11 180 1 0839

190. Visual Communications. (3). 2R; 3L. A study of systematic procedures common to development of visual communications, including analysis of communication problems, selection of media, communication preparation, communication dissemination, communication evaluation and communication storage and retrieval systems. Students develop communication projects using each of the following media: technical graphics, printing, television and photography. D 11 190 1 0839

230. Metals I. (3). 2R; 3L. A basic course dealing with the processes, equipment, materials, and production of the metalworking industry; lab experience in sheetmetal, benchmetal, forging, casting, and machine tools. D 11 230 1 0839

240. Woodwork I. (3). 2R; 3L. A study of the use of hand and power tools, methods of finishing wood, and an overall view of the woodworking industry. D 11 240 1 0839

255. Power Mechanics I. (3). 2R; 3L. A study of the operation of motor vehicles, including chassis and drive-line components. Lab experiences include repair techniques and procedures. D 11 255 1 0839

260. Plastics I. (3). 2R; 3L. Study of plastic materials being used in industry; fundamental operations including molding, casting, thermforming, fabrication and finishing. D 11 260 1 0839

280. Electricity I. (3). 2R; 3L. A study of basic principles of electricity and electronics as related to home and industry. Emphasis on electrical theory, transmission and utilization. Prerequisite: Ind. Ed. 230. Laboratory activities include experimentation and fabrication of electrical components. D 11 280 1 0839

281. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. Offered CrNcr only. D 11 281 2 0839

Upper-Division Courses

325. Woodwork III. (3). 2R; 3L. For advanced woodworking students with special emphasis on tools, materials and construction practices as they relate to the building trades. Prerequisite: Ind. Ed. 240. D 11 325 1 0839

328. Drafting III. (3). 2R; 3L. Development of working drawings in machine, aircraft, structural steel, electrical, architectural details, pipe, mechanical systems—all conforming to industrial and prescribed standards. Prerequisite: Ind. Ed. 121. D 11 328 1 0839

331. Metals II. (3). 2R; 3L. A study of materials, machines and hand tools used by the metalworking industry and intermediate machine tool operations. Prerequisite: Ind. Ed. 230. D 11 331 1 0839

337. Metals III. (3). 2R; 3L. A study of the structure, physical and mechanical properties of metals and the effect of heat treatment on these characteristics. An introduction to hot working metals by forging and casting. Emphasis is placed on combining metals by electrolytic, arc, MIG and TIG welding techniques. Prerequisite: Ind. Ed. 230. D 11 337 1 0839

341. Woodwork II. (3). 2R; 3L. A study in design, construction and finishing of woodworking projects with special emphasis on woodworking machine tools including methods and processes used by industry. Prerequisite: Ind. Ed. 240. D 11 341 1 0839

350. Power Mechanics II. (3). 2R; 3L. Study of motor vehicles, including tune-up, electrical systems, fuel systems and engine service. D 11 351 1 0839

361. Plastics II. (3). 2R; 3L. Technical information and product development and construction of molds and forms for molding, casting, laminating and thermforming. Prerequisite: Ind. Ed. 260. D 11 361 1 0839

362. Plastics III. (3). 2R; 3L. Advanced problems in production techniques, compression and injection molding; recent developments and experimental work. Prerequisite: Ind. Ed. 260. D 11 362 1 0839

370. Directed Study in Materials and Processes. (1-4). The directed study will deal with content related to trade and occupational titles such as auto mechanics, electronics, electrical wiring and hydraulics. This course provides
Courses for Graduate/Undergraduate Credit

500. Industrial Field Studies. (1-4). An in-depth analysis of industrial concepts from the perspective of hands-on experience. The course includes a comprehensive written paper, conceptualizing research and development, finance, marketing, production and industrial relations as a course requirement. The paper involves a comparison of the theoretical to the state of the art in a local industrial firm. A one-hour group conference is held on campus each week for purposes of directing student perception. This course may be repeated by selecting specific areas from the industrial principles listed above. D 11 500 2 0839

501. Preparation of Instructional Materials. (3). The selection, development and organization of instructional materials for effective teaching of industrial education. D 11 501 0 0839

519. Shop Planning and Organization. (3). Selection, purchase and organization of shop equipment and supplies. Developing and maintaining necessary records and reports and the preparation of shop facilities are also included. D 11 519 0 0839

750. Workshop in Industrial Education. (1-4). Offered from time to time on various aspects of industrial education. D 11 750 2 0839

751. Institute in Industrial Education. (1-6). A course designed to develop knowledge and competence related to curricular and methodological innovations in industrial education. The course is designed to satisfy the competencies that are identified as essential for teaching a defined subject area. Prerequisite: departmental consent. D 11 751 0 0839

790. Special Problems in Industrial Education. (1-4). Course study designed to develop knowledge and competence related to curricular and methodological innovations in industrial education. The course is designed to satisfy the competencies that are identified as essential for teaching a defined subject area. Prerequisite: departmental consent. D 11 790 4 0839

Courses for Graduate Students Only

820. Foundations for Curriculum Development in Industrial Education. (3). A study of the theory and practice of curriculum development as determined by social, cultural and industrial changes, including current industrial education curriculum designs, problems and trends. D 11 820 0 0839

821. Curriculum Construction in Industrial Education. (3). Selection and construction of curriculum content for general and specialized areas of study in industrial education. Prerequisite: Ind. Ed. 820. D 11 821 0 0839

840. Instructional Technology in Industrial Education. (3). A course designed to acquaint graduate students with the emerging technology of instructional design. The course includes a study of programmed instruction, systems approach to instruction, instructional television, projected media, motion films, computer-assisted instruction, resource centers and other pertinent topics. Prerequisite: departmental consent. D 11 840 0 0839


Instructional Services

Instructional Services—General

Instructional Services—General courses may apply to the program areas of early childhood, educational psychology, elementary education, special education and secondary education.

Lower-Division Courses

100. The Teacher Aide—Introduction. (1). The first course in a 15-hour sequence designed to introduce the paraprofessional aide to the education and the Wichita State University. D 21 100 0 0801

101. The Teacher Aide—Self-Awareness and Interpersonal Relations. (2). The second course in a 15-hour sequence designed to provide teacher aides with a better understanding of their own behavior, how it affects others and some ways to control their own behavior. D 21 101 0 0801

102. The Teacher Aide—Group Dynamics. (1). Designed for the teacher aide in working with students, classroom teachers and colleagues in group situations. D 21 102 0 0801

103. The Teacher Aide—Cultural Differences. (1). Designed to assist the teacher aide in understanding the social and family patterns of various minority groups. D 21 103 0 0801

104. Introduction to Child Development. (2). An overview of child growth and development designed as an introductory course for the paraprofessional in the public schools. Prerequisite: IS 101, 102, 103 or departmental consent. D 21 104 0 0822

105. Operation of Media Equipment. (1). Basic operation and simple maintenance of media equipment used in schools. D 21 105 0 0899

106. Overview of Instructional Materials. (1). An examination of available commercial materials used in public schools for teaching specific skills and concepts. Prerequisite: IS 105 or departmental consent. D 21 106 0 0899

107. Preparation of Material and Supervised Practicum—Early Childhood. (6). Designed to provide the prospective paraprofessional aide with the knowledge necessary for the development and preparation of skill and concept building materials in early childhood. Included is a 40-hour supervised practicum experience. Prerequisites: IS 104 and 106. D 21 107 2 0801

108. Preparation of Material and Supervised Practicum—Mathematics. (6). Designed to provide the prospective paraprofessional aide with the knowledge necessary for the development and preparation of skill and concept building material in mathematics. Included is a 40-hour supervised practicum experience. Prerequisites: IS 104 and 106. D 21 108 2 0801

109. Preparation of Material and Supervised Practicum—Reading. (6). Designed to provide the prospective paraprofessional aide with the knowledge necessary for the development and preparation of skill and concept building material in reading. Included is a 40-hour supervised practicum experience. Prerequisites: IS 104 and 106. D 21 109 2 0801
150. Workshops in Education. (1-4). D 21 150 2 0802

231. Teacher Education Lab. (0). During the sessions, students receive information concerning the required health examinations and the English and mathematics competencies examinations and are given the audiovisual and computer equipment use check. D 21 231 2 0801

232. Introduction to Professional Education. (2). This first course in professional education permits students to become acquainted with formal education. Teaching as a career is studied as an occupation. The nature of the curriculum, human relations aspects of education and career options outside of public schools are the major topics studied. Thirty hours of field experience in the schools are required. Prerequisites: Sophomore standing and grade of C or better in Eng. 101 and 102. D 21 232 0 0801

281. Cooperative Education. (1-8). The goal of this course is to provide 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, 2.25 grade point average and IS 232. Repeatable for credit. Offered Cr/NC only. D 21 281 2 0801

290. Directed Study. (2-3). D 21 290 2 0801

Upper-Division Courses

452. Special Studies in Education. (1-3). Designed primarily for elementary and secondary education majors. Repeatable with advisor's consent. D 21 452 2 0802

453. Classroom Dynamics. (2). Study of concepts from sociology and psychology with purpose of learning to effectively use groups to prevent classroom problems, analyze the social system in a classroom and to manage individuals and groups within the classroom. Prerequisite: Concurrent enrollment in second- or elementary student teaching. D 21 453 0 0801

456. Multicultural Education. (3). Examination of concepts of race, racism, culture, social class, oppression, cultural pluralism and their implications for education generally affecting the movement toward better educational materials and instructional strategies are analyzed with regard to the concepts studied. D 21 456 0 0801

481. Cooperative Education. (1-8). The goal of this course is to provide 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, 2.25 grade point average and IS 232. Repeatable for credit. Offered Cr/NC only. D 21 481 2 0801

490. Individual Studies in Education. (1-3). D 21 490 3 0802

Courses for Graduate/Undergraduate Credit

620. Introduction to Middle Level Education. (3). An overview of the historical, philosophical, social and psychological factors affecting the movement toward better educational opportunities for learners from ages ten to 14. D 21 620 0 0829

621. Curriculum/Instruction Alternatives for Middle Level Education. (3). An exploration into the development of alternative curricular organizational instructional strategies for better meeting the needs of preadolescents in grades five through nine. D 21 621 0 0829

703. Research and Implementation of Learning Centers. (3). This course will consider a variety of alternative approaches to the teaching of students at all grade levels and subject matter areas via learning centers. D 21 703 0 0801

714. Activities for Human Relations I. (3). Topics covered are values, communications and creativity. Activities in the above areas can be used by individuals and groups in instructional settings. They are used to explain, teach and enhance human relationships. D 21 714 0 0829

715. Activities for Human Relations II. (3). Topics covered are introductory activities, cooperation and self-awareness. Activities in the above areas can be used by individuals and groups in instructional settings. They are used to explain, teach and enhance human relationships. D 21 715 0 0829

718. Group Dynamics for Educators. (3). A laboratory course on human relations and group dynamics based upon involvement in various group activities. D 21 718 0 0829

740. Utilizing the Print Media in Classrooms. (3). Explores various ways the print media may be used to teach creative thinking skills, propaganda analysis, communicative activity, study and work habits, practice and improved reading through speed and comprehension practice. Special stress is placed upon the utilization of the daily newspaper, a supplement to other materials in teaching the various school subjects. Preparation of teaching materials for the school classroom is also emphasized. D 21 740 0 0803

746. Introduction to Career Education. (3). An introduction to the philosophical considerations of career education. Particular attention is given to the development of a career training program. Additional content includes an introduction to the development of career counseling programs. Prerequisite: Successful completion of 24 credit hours, 2.25 grade point average and IS 232. Repeatable for credit. Offered Cr/NC only. D 21 746 0 0801

747. Curriculum Development in Career Education. (3). Designed to assist school personnel in the development of K-14 scope and sequence for a curriculum design that considers the principles of a career education as a unifying theme. Following the scope and sequence development, participants are assisted in the writing of curricular units for their individual teaching assignments. Prerequisite: IS 746 or instructor's consent. D 21 747 0 0821

750. Workshops in Education. (1-4). D 21 750 2 0803

752, 753 or 754. Special Studies in Education. (1-3). Designed for elementary and secondary school teachers. Repeatable with advisor's consent. Prerequisite: Teacher certification or departmental consent. D 21 752 2 0802; D 21 753 2 0802; D 21 754 2 0802

755. Aerospace-Aviation Education. (3). A course for those who have an interest in aviation education and particularly for those who plan to teach aviation in the secondary schools. There are two parts: (1) aeronautical knowledge of the airplane and of flight and (2) general knowledge about aviation and aerospace. Part I includes the basic ground school subjects of aerodynamics, structures and propulsion, meteorology, navigation, communication and federal aviation regulations. Part II presents information concerning occupational opportunities and the influence of powered flight on modern society. D 21 755 0 0893

785. Instructional Media. (3). Selection, use and presentation of educational media. Includes instructional design, media planning skills, visual literacy, slide show production and design and production of transparency, basic photography, audio recording and mixing, video tape recording and the operation of instructional audio-visual equipment. Prerequisite: IS 780. D 21 785 0 0803

789. Values Clarification Education. (3). An introduction to the techniques used in values clarification strategies. Valuing techniques and the essential skills for valuing. D 21 789 0 0829

Courses for Graduate Students Only

838. Curriculum Alternatives. (3). An exploration of curriculum models that are alternative to the traditional curriculum and the socioeconomic, political and psychological factors that motivate development. Prerequisite: IS 830. D 21 830 0 0803

862. Seminar on Research Problems. (1-3). Development and presentation of research proposals. Required of students enrolled in thesis programs. D 21 862 4 0824

875-876. Master's Thesis. (2-3). Prerequisites: IS 875, D 21 875 4 0824; D 21 876 4 0824

890. Special Problems in Education. (1-4). Different problems and research under supervision of a graduate instructor. Prerequisite: departmental consent. D 21 890 3 0802

Instructional Services—Early Childhood

In addition to the following courses, ISEP 728, Growth and Development I, and ISEP 740, Introduction to Early Childhood, Special Education: Infancy and Preschool, relate to this area. Their descriptions appear under the heading Instructional Services—Educational Psychology, and Instructional Services—Special Education.

Courses for Graduate/Undergraduate Credit

760. Parent Education for Preschool
### Lower-Division Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>233</td>
<td>Educational Psychology: Child Development (3). A study of educational and psychological topics as they relate to teaching the elementary school child. Particular emphasis is given to the teaching-learning process and characteristics of child development. Prerequisites: IS 232 and entry into the teacher education program. D 21 233 0 0822</td>
</tr>
</tbody>
</table>

### Upper-Division Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>333</td>
<td>Educational Psychology: Adolescent Development (3). Development during early and middle adolescent years and relation of theory and research to instruction. Prerequisites: IS 232 and entry into the teacher education program. D 21 333 0 0822</td>
</tr>
<tr>
<td>433</td>
<td>Educational Psychology: Learning and Evaluation (3). A study of the learning process and principles related to learning in the classroom. Consideration and study are given to evaluation of the products of learning. Not open to students who have taken IS 534. Prerequisites: IS 232 and 233 or 333. D 21 433 0 0822</td>
</tr>
</tbody>
</table>

### Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>534</td>
<td>Principles of Learning and Evaluation for Teachers (3). For description of course see IS 433. The course is intended for those students not taking IS 433 in the secondary student teaching block. It may be substituted for IS 433 but is not open to students with credit in IS 433. Prerequisite: IS 433. D 21 534 0 0822</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>611</td>
<td>Educational Measurement and Evaluation in the Cognitive, Affective, and Psychomotor Domains. D 21 611 0 0825</td>
</tr>
</tbody>
</table>

### Instructional Services—Elementary Education

#### Lower-Division Course

290. Directed Study in Elementary Education. (1-6). D 21 290 3 0802

### Upper-Division Courses

316. Children's Literature. (3) Books, materials, and activities suitable for use with children in the preschool and elementary grades. Reading and examination of a wide selection of children's books, recordings, poems, and films. Development of evaluative techniques for identifying materials and practice in the use of selection aids. Prerequisite: junior or senior standing or departmental consent. D 21 316 2 0802

319. Language Arts in the Elementary School. (3) Exploring teaching strategies and materials applicable to an elementary school language arts curriculum. Prerequisites: IS 232 and 233. D 21 319 2 0859

321. Science in Elementary Education. (3) Emphasizes the application of development of scientific concepts in children; strategy, tactics, and audiovisual aids in teaching elementary school science; stating objectives, off-campus observation and participation, and introduction to experimental science. Prerequisites: IS 232, 233, and a physical and biological science. D 21 321 2 0834

406. Social Studies in the Elementary School. (3) Objectives, methods of teaching, equipment and resources, and evaluation and measurement in the social studies in the elementary school. The unit method of instruction is stressed. Prerequisites: IS 232 and 233. D 21 406 2 0829

420. Reading in the Elementary School. (3) A survey of the methods of teaching reading, scope and sequence of reading skills, instructional materials, and the organization of learning experiences. Observation and participation in a public school may be required. Prerequisites: IS 232 and 233. D 21 420 0 0830

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R/2L means four hours of lecture and two hours of lab.
421. Teaching Methods and Instructional Materials for Elementary Reading. (3). A comprehensive course with an experiential-study component and a 22-hour practicum experience. Study is conducted in the Robert T. Pate Reading Center. Students refine and develop additional competencies in teaching reading to elementary school children. All hours are on an arranged basis, but the student must have free time at least two days a week from 9 a.m. to 3 p.m. Prerequisites: IS 420. D 21 421 2 0830

444. Mathematics in the Elementary School. (3). A study of the basic methods of instruction, with emphasis given to relating mathematical concepts to cognitive development and teaching. Study includes guided participation in current curriculum, materials, and evaluation techniques. Prerequisites: IS 232, 233, and Math 501. D 21 444 2 0833

446. Elementary Education Student Teaching Seminar. (1-3). Study and discussion of experiences emerging from student teaching. The student teaching program provides full-time participation in the public schools under guidance of a master teacher and a college supervisor. Prerequisites: IS 231, 319, 321, 406, 420 and 444 and concurrent enrollment in IS 447 or 448 and 453. D 21 448 2 0839

447. Student Teaching in the Elementary School. (13). The student teaching program provides full-time participation in the public schools under guidance of a master teacher and a college supervisor. Prerequisites: IS 231, 319, 406, 420 and 444. Students must also be enrolled in IS 446 and 453. Prerequisites may be waived for equivalent experience with departmental consent.

448. Student Teaching in the Elementary/Early Childhood School. (13). The student teaching program provides full-time participation in the elementary (K-6) and half-time in the preschool (three- and four-year-olds) under guidance of a master teacher and a college supervisor. Prerequisites: IS 231, 319, 406, 420 and 444 and nine semester hours of early childhood education. Prerequisites may be waived for equivalent experience with departmental consent. Note: Deadlines for filing an application to enroll in student teaching listed under Student Teaching in the Elementary School. Students must also be enrolled in IS 466 and 453. D 21 448 2 0829

449. Student Teaching in the Elementary School—Physical Education. (13). Prerequisite: physical education major. Application for student teaching must be sent to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. For arrangement of student teaching begins with the opening of the public school calendar for a semester. Prerequisite: IS 231. D 21 449 2 0829


455. Student Teaching in the Elementary School—Art. (3). Prerequisites: art major and IS 231. D 21 459 2 0829

Courses for Graduate/Undergraduate Credit

518. Methods for the Kindergarten Teacher. (3). To acquaint students with all aspects of the kindergarten program and introduce the wide variety of materials available and in use. Prerequisites: IS 232 and 233. D 21 518 2 0863

705. Introduction to the Reading Process. (3). Designed to acquaint students and teachers with all of the aspects of current reading theory and research on thinking about the reading of children. D 21 705 2 0829

734. Affective Approaches to Teaching Reading. (3). The course develops specific methods for developing a literature program with children (preschool—elementary years). Specific topics include: Selection of Speculative, Print and media through the reading environment, language arts, the arts, and creative expression. Prerequisite: Junior, senior, or graduate standing. D 21 734 2 0802

Courses for Graduate Students Only

802. Classroom Reading Diagnosis. (3). Designed to emphasize the understanding of the reading and use of reading survey tests, group diagnostic reading tests, criterion-referenced assessment programs, and appropriate teacher constructed tests. Will include selection, administration, scoring, and interpretation of group reading tests. Contains a diagnostic practicum. Prerequisite: IS 705. D 21 802 2 0830

804. Research in Reading. (3). Designed to allow students to explore areas of interest and controversies concerning reading through the examination of research reviews and the related reading of pertinent reading texts. Prerequisite: IS 705 and any other graduate reading course. D 21 804 2 0800

806. Introduction to Graduate Study in Elementary Education. (3). The field of elementary education is explored; its history and trends, reasons for teaching, criteria of professionalism, program orientation and requirements and options for the student pursuing a degree are delineated. D 21 806 2 0802

821. Classroom Reading Practicum. (3). Designed to provide practicum experience in delivering developmental and corrective reading instruction in the classroom setting. Prerequisite: IS 705 and IS 846, or 802, or equivalent. D 21 821 2 0830

842. Remedial Reading Practicum. (3). Emphasis upon individual corrective treatment of diagnosed reading difficulties; a laboratory practicum in remedial reading instruction is required. Prerequisites: IS 705 and IS 846 or equivalent. D 21 842 2 0830

845. Elementary School Curriculum. (3). Study of the elementary school curriculum includes all of the experiences of children for which the school will assume responsibility. The potential of this broad concept of the curriculum is explored through the evaluation of developing desired elementary learning characteristics. Prerequisite: IS 806. D 21 845 2 0829

846. Remedial Reading Diagnosis. (3). Emphasis upon individual diagnosis. The use of standardized instruments; teacher-made instruments; corrective treatment of reading difficulties; a diagnostic practicum is included. Prerequisite: IS 705 or equivalent. D 21 846 2 0830

849. Seminar in Reading Organization. (3). Designed to examine the organization and administration of reading instruction. Additional time is spent investigating pertinent research in the area of reading instruction. Prerequisite: IS 705 or equivalent. D 21 849 2 0830

852. Improvement of Instruction in Language Arts. (3). Designed to study various changes in the teaching of language skills in elementary and/or middle school grades and in relation to the programs and methods of teaching for special education teachers. Students may select a special emphasis: corrective reading instruction, diagnostic reading instruction, and counseling. Prerequisite: IS 319. D 21 852 2 0830

854. Improvement of Instruction in Social Studies. (3). A study of recent changes in social studies curriculum and instruction designed to investigate strategies and limitations of various approaches taken in teaching for concept development, dealing with value-laden issues, and teaching for inquiry. An inquiry-centered learning environment emphasizes personalizing the social studies curriculum for children. Alternative teaching strategies and complementary evaluation techniques are reviewed and practiced. Prerequisite: IS 406 or equivalent. D 21 854 2 0829

856. Improvement of Instruction in Mathematics. (3). For teachers in service. Consideration of recent trends in subject matter content and teaching. Students improve their understanding of meanings, vocabulary, and mathematical concepts. Prerequisite: IS 444 or equivalent. D 21 856 2 0830

858. Improvement of Instruction in Science. (3). For teachers in service. Designed to identify and explore the principles of science that teachers should recognize, understand, and consider from kindergarten through secondary school. Prerequisite: IS 321 or equivalent. D 21 858 2 0834

859. Seminar in Elementary Education. (3). Prerequisite: IS 806. D 21 859 2 0830

863. Trends in Theories of Instruction. (3). Instructional theory is considered through models of teaching. Study of each model covers theoretical orientation, instructional procedures and effects. Practice of models under supervision is required. Prerequisite: IS 806. D 21 863 2 0829

The following abbreviations are used in the course descriptions: P stands for lecture and L for laboratory. For example, 4R5L means four hours of lecture and two hours of laboratory.
Instructional Services—
Foundations of Education
Low-Division Course
234. Philosophy and History of Education. (2). A study of the major contemporary educational philosophies and the development of American education. Some emphasis is placed on the students’ examination of their philosophies of education. Prerequisite: IS 232 and entry into the teacher education program. D 21 234 0 0821

Upper-Division Courses
428. Social and Cultural Foundations of Education. (2). Attention is given to the contributions of sociology and anthropology to the understanding of the school and its position in relation to contemporary social problems. Prerequisites: IS 232 and entry into the teacher education program. D 21 428 0 0821

Courses for
Graduate/Undergraduate Credit

701. Foundations of Education. (3). A survey of the various foundations areas, including philosophical, historical, social and comparative. This course is prerequisite to subsequent foundations courses. D 21 701 0 0821

777. Selected Topics in Foundations. (3). Explorations into current problems and also less familiar areas of foundations: (A) cultural pluralism, (B) religion and morality, (C) film and fiction, (D) economics and politics, (E) classics in education, (F) other. Enrollment may be repeated for several offerings. Prerequisite: IS 701 or instructor’s consent. D 21 777 0 0821

Courses for
Students Only

807. Philosophy of Education. (3). An introduction to the analysis of concepts, such as mind, experience and knowledge, in their relationship to educational problems and practices and to philosophical systems. Prerequisite: IS 701 or instructor’s consent. D 21 807 0 0821

808. Sociology of Education. (3). An exploration of the relationship between education and society. Prerequisite: IS 701 or instructor’s consent. D 21 808 0 0821

817. Comparative Education. (3). Educational systems of selected nations in terms of their unique structures and pervasive problems. Prerequisite: IS 701 or instructor’s consent. D 21 817 0 0821

818. Anthropology of Education. (3). A cross-cultural examination of the educational process utilizing some of the basic concepts and perspectives of anthropology. Prerequisite: IS 701 or instructor’s consent. D 21 818 0 0821

824. History of Education in the United States. (3). A study of education’s relationship to other institutions (political, religious, etc.) in promoting and inhibiting social change in American history. Prerequisite: IS 701 or instructor’s consent. D 21 824 0 0821

825. History of World Education. (3). A study of the role of education in world civilizations; major educational trends and developments in history; antecedents of current educational practices and problems. Prerequisite: IS 701 or instructor’s consent. D 21 825 0 0821

895. Advanced Studies in Foundations. (3). A course designed for the predoctoral student in any foundational specialty. Prerequisite: nine graduate hours of foundations of education. D 21 895 0 0821

Instructional Services—
Library Science
Students wishing to become school librarians in Kansas must have valid teaching certificates plus specific courses in library science, which may be taken either at the upper-division or graduate level.

Courses for
Graduate/Undergraduate Credit

707. School Library Media Center Cataloging and Classification. (3). The principles of cataloging and classification are studied, and students learn how to apply the Dewey Decimal classification system and Sears subject headings. Descriptive cataloging, types of entry and filing rules also are covered. D 21 707 0 1601

708. School Library Media Center Book Collection. (3). Basic resources for the development and evaluation of a school library media center collection are considered. Emphasis is placed on selection policies and procedures of the school library media specialist’s responsibilities in the selection process and the development of a selection resource file. D 21 708 0 1601

709. School Library Media Center Administration. (3). The course provides a study of national and state standards as well as an investigation of the role of the school library media center in the educational structure. Specific topics explored: goal setting and budgeting, administrative styles and personnel, evaluation of the center and the design and implementation of procedures and policies. D 21 709 0 1601

710. School Library Media Center Reference Materials. (3). Resources and techniques of providing reference service in a school setting are investigated. D 21 710 0 1601

711. School Library Media Center Program. (3). The leadership role of the school library media specialist in the school program is studied. Strategies needed to design and implement an integrated center program are considered as well as special library skills teaching activities. D 21 711 0 1601

712. Current Trends in Librarianship. (3). The course covers the history and development of libraries and their functions, aspects of professional leadership, the study of library literature and current societal and educational changes that have an impact on the school library media center. D 21 712 0 1601

778. Advanced Cataloging. (3). A continuation of ISLS 707, the course stresses the organization of nonbook materials, introduces the Library of Congress classification system and surveys computer-based cataloging services. Prerequisite: ISLS 707. D 21 778 2 1601

779. Practicum/Internship. (3). (A elementary school; B. middle school; C. high school; D. K-12.) Students pursue a professional experience in a school library media center under cooperative supervision of University personnel and an experienced practitioner in the field. Prerequisite: departmental consent. D 21 779 0 1601

Instructional Services—
Secondary Education
Low-Division Course
310. Methods in Physical Education. (3). Presentation and participation in methods of teaching physical education, with emphasis on techniques, skills, organization of activities and classroom procedures. Prerequisite: IS 232 and 333 concurrently. D 21 310 2 0829

Upper-Division Courses
400. Basic Reading Skill Practicum. (3). A course designed to provide prospective secondary and/or elementary teachers with supervised practicum experiences in the delivery of one-to-one basic reading instruction to older youth and adults with severe reading deficits. Prerequisite: instructor’s consent. D 21 400 2 0830

401. Secondary Reading Foundations. (3). A course designed to provide prospective secondary teachers with an understanding of the development of reading skills and to explore instructional approaches for guiding secondary students in those skills and their use in secondary content areas. Prerequisite: instructor’s consent. D 21 401 0 0830

442. Special Methods in Teaching. (4). Prerequisites: IS 232 and 333. B—Field and Laboratory Methods in Biology. The Teaching of Foreign Languages. Methods of teaching foreign languages, based on the audiovisual approach and applied linguistics contrasted with traditional methods. Laboratory techniques, transition into reading and writing and planning, and evaluation of student progress are included. This course is required of all foreign language majors or minors expecting to teach in junior and senior high schools. I—Methods of Teaching Industrial Education. Selection and arrangement of teaching content, methods of teaching, lesson planning, courses of study, testing and grading, shop work, evaluating pupil progress, securing industrial education positions and professional responsibility of the shop teacher. M—Methods of Teaching Music. S—Special Methods of Business Education. Prerequisites: Bus. Ed. 234 or data processing Bus. Ed. 237 and Acctg. 210 and 220. D 21 442 2 0829

454. General Methods of Secondary Teach in. (3). A—Art (may be taken as Art Ed. 516) D—Speech and Dramatic Art E—English J—Social Studies M—Mathematics S—Science Preparation for teaching in secondary schools. Develops skills in lesson planning, methods of teaching and organizing clas-
room activities. Some public school class-
room teaching will be incorporated into this
course. Prerequisites: IS 453, 234 and 428. D
21 454 2 0829

455. Advanced Methods of Secondary
Teaching. (1).
A—Art (may be taken as Art Ed. 516)
D—Speech and Dramatic Art
E—English
J—Social Studies
M—Mathematics
S—Science
Continuation of IS 454. Prerequisite: IS 454. D
21 455 2 0829

*Student Teaching—Secondary
School. The student teaching semester is
required of all students working toward a
secondary certificate and is a full-time as-
signment. Application for approval to enroll in
the program must be made to the coordinator
of laboratory experiences by February 15 for
the fall semester or by September 15 for the
spring semester. In addition, students must
obtain approval from the representative of the
subject area in which they wish to student
Teach before placement can be considered.
It is expected that students will student
Teach in their field of major interest. However,
individuals who are well prepared in more
than one field may apply to student teach in a
second field, but they must take the special
methods course in the second field before
entering the student teaching semester.
The assignment for student teaching begins
with the opening of the public school
calendar and enrollees must arrange to meet
from 8 a.m. to 5 p.m. daily and to be available
for selected evenings programs throughout the
semester.
Prerequisites: senior standing, IS 231, 232,
333 and departmental consent

462. Student Teaching—Art. (4 and
7). Prerequisite: IS 231. D 21 462 2 0829

463. Student Teaching—Biology.
(7). Prerequisite: IS 231. D 21 463 2 0829

464. Student Teaching—Speech and
Dramatic Art. (7). Prerequisite: IS 231. D 21 464
2 0829

465. Student Teaching—English.
(7). Prerequisite: IS 21 465 2 0829

466. Student Teaching—Foreign
Language. (7). Prerequisite: IS 231. D 21 466
2 0829

467. Student Teaching—Industrial
Education. (7). Prerequisite: IS 231. D 21 467
2 0829

468. Student Teaching—Social
Studies. (7). Prerequisite: IS 231. D 21 468
2 0829

469. Student Teaching—Music. (3).
Prerequisite: IS 231. D 21 469 2 0829

470. Student Teaching—Physical
Education. (7). Prerequisite: IS 231. D 21 470
2 0829

471M. Student Teaching—Mathematics.
(7). Prerequisite: IS 231. D 21 471M 2 0829

471S. Student Teaching—Science.
(7). Prerequisite: IS 231. D 21 471S 2 0829

472. Student Teaching—Business
Education. (7). Prerequisite: IS 231. D 21 472
2 0829

Courses for
Graduate/Undergraduate Credit

516. Literature for Adolescents. (3).
Ex-
tensive reading of literature in all genres
consistent with studies of adolescents read-
ing interests, abilities and responses to litera-
ture. Prerequisite: junior standing. D 21 616 2
0829

771. Teaching Reading in the Content
Areas. (3). Emphasis is placed on the
Teaching of reading in the content areas.
Prerequisite: secondary teaching experience
or departmental consent. D 21 771 2 0830

Courses for Graduate
Students Only

803. Secondary Reading Practicum.
(3). Designed to offer reading practicum
experience to reading teachers in a secondary
school setting. Prerequisites: IS 705 or 770,
and 802 or equivalent. D 21 803 2 0830

804. Research in Reading. (3). Designed
to allow students to explore areas of interest
and concern in reading through the examination,
reviewing and sharing of pertinent reading
research. Prerequisites: IS 705 and any other
graduate reading course. D 21 804 9 0830

831. Creating an Effective Classroom.
(3). Designed to create an awareness of
classroom management systems which in-
clude a variety of management tools and
formats. D 21 831 0 0829

(3). Develops the students’ ability to de-
scribe, analyze and evaluate curriculum
models and programs. Particular attention is
paid to the social, psychological and philo-
sophical foundations of curriculum as well as
to current trends in curriculum design. D 21
832 0 0829

834. The Teaching of English. (3). Recent
developments in the teaching of English:
problems, concerns, methods, materials and
research. Excellent for teachers who want an
extensive review of developments during the
past five years. D 21 834 0 0829

835. The Instructional Process. (3).
Focusses on the process of instruction in order
to develop skill in systematic instructional
planning. Includes instructional theory, systems
approach and other recent approaches to
instruction. D 21 835 0 0829

836. The Teaching of Social Studies.
(3). Recent developments in the teaching of
social studies: problems, concerns, methods,
materials, research. Excellent for teachers
who want an extensive review of developments
during the past five years. D 21 836 0
0829

837. The Teaching of Science. (3). Recent
developments in the teaching of science:
problems, concerns, methods, materials,
research. Excellent for teachers who want an
extensive review of developments during the
past five years. D 21 837 0 0834

850. Seminar in Secondary Education.
(3). D 21 850 9 0803

*For specific areas see IS 462 through 472.

Instructional Services—Special Education

Courses for
Graduate/Undergraduate Credit

601. Introduction to Exceptional Child-
ren. (3). This course is designed as a survey
of the characteristics of exceptional learners,
including the handicapped and the gifted.
Service delivery models and current prac-
tices are presented. This course fulfills recer-
tification requirements for teachers and serves
as an introductory course in exception-
tally for special education majors. Prerequi-
tise. IS 233 or 333. D 21 601 0 0811

602. Introduction to the Gifted. (3).
Em-
phasis on recognition and education of the
gifted child. Prerequisite: IS 233 or 333. D 21
602 0 0811

604. Understanding of the Mentally
Retarded. (3). Current research and historical
approaches to the education of the mentally
retarded and survey of the literature in this
field. Prerequisite: IS 601. D 21 604 0 0810

702. Reading for Teachers of
Exceptional Children. (3). Designed to survey
the developmental reading skill needs, diagnostic
tech niques, and instructional techniques perti-
nant to students in special education settings,
particularly LD and EMR. Prerequisite: In-
tuctor’s consent. D 21 702 0 0830

740. Introduction to Early Childhood
Special Education: Infancy and Preschool.
(3). A basic introduction to the emerging field
of early childhood education and the care of
children and their families. Prerequisites: IS
728, 840 (or 601), 761 or permission of instructor. D 21
740 0 0820

742. Learning and Behavior Disorders.
(3). A study of the incidence, classification,
etiology and developmental characteristics of the
learning disabled child. Current research, paren-
tal concerns and historical development of the
educational approaches used to teach and help
behavioral disorders are examined. Prerequi-
tise: instructor’s consent. D 21 742 0 0816

744. Curriculum/Methods for the
Mentally Retarded. (3). Adaptations of the
standard curriculum and innovations that have proven
to be beneficial for the teaching of the men-
tally retarded child. D 21 744 0 0810

749. The Emotionally Disturbed. (3).
A study of the incidence, classification, etiology
and personal, social and developmental charac-
teristics of the emotionally disturbed. Current
research, parental concerns and develop-
mental educational approaches are examined. D 21
749 0 0810

Courses for Graduate
Students Only

805. Seminar for Reading and LD Teach-
ers. (3). Designed to provide a forum for
practicing reading and LD teachers in which
to explore common interests, concerns, re-
search and teaching techniques related to
reading. Prerequisite: certification in reading or
LD. D 21 805 9 0809

840. Psychology of Exceptional Chil-
ren. (3). A study of the conceptual and theoretical
formulations, empirical evidence and re-
search concerning behavioral characteristics of
exceptional children. D 21 840 0 0808

The following abbreviations are used in the course de-
scriptions: L stands for lecture and L for laboratory. For
example, 4HR. 2L means four hours of lecture and two hours of
lab
841. Program Development in Special Education. (3). Examination of factors in classroom management that affect the establishment and operation of programs for exceptional children. Prerequisite: IS 601 or 840. D 21 841 0 0810

844. Occupational Aspects in Mental Retardation. (3). Designed to study in-depth occupational information, curriculum and methods employed by teachers of the mentally retarded in secondary schools. Prerequisite: IS 604 or departmental consent. D 21 844 0 0810

847F and P. Practicum and Internship in Education: Learning Disabilities. (3-6). Preparation for the individualized professional goals for that practicum. Prerequisites: instructor's consent. D 21 847F and P 2 0808

847I and J. Practicum and Internship in Education: Mental Retardation. (3-6). Prerequisite: instructor's consent. D 21 847I and J 2 0808


847M. Practicum and Internship in Education: Gifted. (3). Supervised teaching experiences with gifted learners. Applied teaching approaches are stressed. The course provides organization and apply various theoretical, structural, and technological methodologies related to the education of the gifted learner. Repeatable for a total of six hours. Prerequisite: instructor's consent and IS 603. D 21 847M 2 0808

847R, S and T. Practicum I, II and III: Supervised Clinical Experience and Seminar in Early Childhood Special Education. (2). The three practica in early childhood special education are designed to provide opportunities for the student to develop clinical competencies with handicapped infants, young children and their parents under the supervision of trained professionals in the field. Prior to each practicum experience, each student will be asked to complete a Competency Assessment Basis for developing individualized professional goals for that particular practicum experience. Students are expected to meet all practicum competency criteria by the conclusion of their third practicum. Prerequisites for Practicum I: IS 728, 732, 740, 761, 762, 840 (or 601), 847R, 891 or permission of the instructor. It is recommended that Practicum I be taken simultaneously with (or soon after) IS 891. Prerequisites for Practicum II: IS 728, 732, 740, 761, 762, 840 (or 601), 847R, 891 or permission of the instructor. Prerequisites for Practicum III: IS 728, 732, 740, 761, 762, 840 (or 601), 847R, 891, 892 or permission of instructor. D 21 847R, S and T 2 0808

864. Practicum Seminar: Learning Disabilities. (1). A seminar designed to examine trends and issues related to the learning disabled individual, adaptation of materials for specific needs and critical examination of incidents related to the practicum experience. D 21 864 2 0808

865. Practicum Seminar: Mental Retardation. (1). A seminar designed to examine trends and issues related to the learning disabled individual, adaptation of materials for specific needs and critical examination of incidents related to the practicum experience. D 21 865 2 0808

866. Practicum Seminar: Emotional Disturbance. (1). A seminar designed to examine trends and issues related to the emotionally disturbed individual, adaptation of materials for specific needs and critical examination of incidents related to the practicum experience. Prerequisite: concurrent enrollment in IS 847K and L. D 21 866 2 0808

868. Methods for Teaching the Emotionally Disturbed. (3). Emphasis is on the theoretical and practical aspects of prescriptive instructional techniques and materials for the education of the emotionally disturbed student in the self-contained and resource classroom. D 21 868 0 0808

883. Methods for Teaching the Gifted. (3). Planning for a differentially differentiated curriculum to meet the unique needs of the gifted learner is stressed. A variety of suitable program models, including grouping, acceleration, guidance, and combinations of these, are explored. Prerequisite: IS 602 or instructor's consent. D 21 883 0 0811

885. Curriculum for the Learning Disabled. (3). Curriculum development specific to the disabled learner. Requirements include mastery of specified competencies (reading instruction, behavior management, etc.) at both the elementary and secondary level. Course may be taken in conjunction with LD Practicum. Prerequisites: IS 728 and 888. D 21 885 0 0808

887. Assessment and Analysis of the Learner. (3). The application of standardized and informal evaluation techniques including critical evaluation of standardized tests and their appropriateness for special populations, alternative methods of assessment and intervention techniques based on diagnostic profiles. D 21 887 0 0808

888. Methods for Teaching Learning and Behavior Disabilities. (3). Emphasis is on the development of special competencies in teaching special students including use of data-based instruction, strategies for reading assessment, techniques to improve reading, math, and written language skills and strategies for working with other teachers to facilitate mainstreaming of special students. D 21 888 1 0818

899. Advanced Seminar in Gifted Education. (3). D 21 899 1 0808

901. Identification, Screening and Assessment of Infants and Preschool Children: Models, Materials, Procedures and Clinical Problems. (3). Specialized models, procedures and materials in the early identification, screening and assessment of infants and preschoolers with suspected special needs and the development of educational programs for each infant and preschooler. Concurrent enrollment in an early childhood special education practicum is strongly recommended. D 21 891 0 0820

902. Early Intervention for Young Children with Special Needs: Models, Curricula, Process and Clinical Problems. (3). Emphasis on the structural strategies and materials used cross-categorically with specific categorical groups and across domains in early intervention are demonstrated and discussed. Concurrent enrollment in an early childhood special education practicum is strongly recommended. D 21 892 0 0820

893. Advanced Seminar in Early Intervention: Policy Issues, Research Problems and Future Directions. (3). Topics presented for study include ethical issues associated with biomedical and related scientific advances, clinical research needs, pending and needed legislation, public policy issues, cross-disciplinary and cross-cultural studies, recent developments and current directions in the relationship of early childhood special education to the larger field of special education. D 21 893 0 0820

894. Advanced Topics in Early Childhood Special Education. (1-4). Special topical seminars in early intervention are periodically offered to facilitate opportunities for the in-depth study of critical issues or topical research in this rapidly developing field. Prerequisites: IS 728, 732, 740, 761, 762, 840 (or 601), 847R, 891, 892 or permission of instructor. Repeatable for credit. D 21 894 0 0820

Military Science

Army ROTC

The United States Army Reserve Officers’ Training Corps (ROTC) develops citizen officers for the United States Army, Army Reserve and National Guard. It enables a student to prepare for a position of leadership in either a civilian or military career by earning an army commission while acquiring a baccalaureate degree. Outstanding students are designated Distinguished Military Students and have the opportunity to receive a Regular Army commission. Completion of the ROTC program, coupled with courses in a prescribed field of study, enables college graduates to qualify for various active duty, reserve or National Guard programs in the army.

Students enrolled at nearby colleges not offering United States Army ROTC may enroll in the ROTC program at The Wichita State University as special students and thereby qualify for a commission.

Students enrolled in ROTC may be eligible for scholarships which pay tuition, fees, books and supplies. Also, students who are enrolled in upper-division courses receive $100 per month during the academic year.

Information on these scholarships may be obtained from the Department of Military Science or the Wichita State Office of Financial Aids.

Programs

The Wichita State University offers two elective ROTC programs: the four-year program and the two-year program.
Four-Year Program

The four-year program has a basic course for freshmen and sophomores and an advanced course for juniors and seniors. The basic course consists of one conference hour each week plus a leadership laboratory. Basic course enrollment is limited to students with less than 75 credit hours.

The advanced course requires juniors to attend two conference hours per week in the fall and three conference hours per week in the spring; seniors attend three hours per week in the fall and two conference hours per week in the spring. Juniors and seniors must also attend the equivalent of 24 hours of leadership laboratory each semester. Advanced course students attend a six-week advanced camp between their junior and senior years.

To qualify for enrollment in the advanced course, students must:
1. Complete the basic course, have armed forces active duty service credit or have three years Junior ROTC (high school)
2. Be physically qualified
3. Have a scholastic grade point average of 2.00 or above
4. Successfully complete survey and general screening tests.

The testing and physical examinations are scheduled and arranged by the military science department.

Advanced course students receive $100 per month for approximately 20 months. Attendance at advanced camp is reimbursed by approximately $600, plus travel expenses. Pay and allowances received by an advanced course student total approximately $2,500.

Departmental extracurricular activities are available to students on a voluntary basis. They include intramural athletics, Drill Team and Rifle Team.

Two-Year Program

Although designed basically for transfer students from junior colleges and colleges and universities not offering ROTC, the two-year program enables students who have four semesters of school remaining before qualifying for a degree to enroll in a basic six-week summer camp between their sophomore and junior years. This camp is designed to educate students in the basic military skills they would have acquired during their first two years of the four-year program. Pay for this camp is approximately $500.

Beginning with the junior year, the two-year program students complete the same advanced course as the four-year program students. Prerequisites are the same as those for entry into the four-year program.

Lower-Division Courses

101. Introduction to Marksmanship. (1). 1R; 1/2 L. An introduction to basic marksmanship skills. In addition to range firing, subjects covered include fundamentals of marksmanship, coaching, range safety, range courtesy and weapons maintenance. D 15 101 5 1801

113. United States Defense Establishment. (1). 1R; 1/2 L. An introduction to the national structure and the use of force. Governmental and military structure and decision making and issues in contemporary American military affairs. D 15 113 5 1801

114. Introduction to Leadership and Management. (1). 1R; 1/2 L. An introduction to the leadership role and management functions of planning, organizing, coordinating, directing and controlling as a basis for an understanding of application in military organizations. D 15 114 5 1801

200. ROTC Basic Camp. (4). A six-week training period of classes and field work. Subjects include organization of the U.S. Army, marksmanship, map reading, tactics and operations. Practical experience in leadership is stressed. Course prepares students for ROTC advanced program. Prerequisite: departmental consent. D 15 200 5 1801

223. Fundamentals of Military Training. (1). 1R; 1/2 L. A course developing a proficiency in the use of military maps and an appraisal of terrain for the planning and conduct of military operations. Fundamentals of individual and group military training are included. D 15 223 5 1801

224. Introduction to Tactics. (1). 1R; 1/2 L. The mission, organization and capabilities of small units. Offensive and defensive operations, controlling and leader functions and responsibilities are included. D 15 224 5 1801

Upper-Division Courses

333. Advanced Leadership Development. (2). 2R; 1 1/2 L. A military approach to leadership training. Decision making at the unit level, planning within the military framework and functions and responsibilities of military leaders. Prerequisites: completion of all lower-division courses or service credit and departmental consent. D 15 333 5 1801

334. Advanced Military Tactics. (3). 3R; 1 1/2 L. Organization and capabilities of military units and advanced military tactics; existing communications systems and their use in tactical situations. Prerequisites: MS 333 and departmental consent. D 15 334 5 1804

400. ROTC Advanced Camp. (3). A six-week training period of classes and field work. Subjects include signal communications, land navigation, tactics, weapons, leader's Reaction Course and field problems test. The course provides leadership opportunities in the form of problem analysis, decision making and management experiences. Prerequisites: MS 333 and 334 and departmental consent. D 15 400 5 1801

443. Introduction to Military Law, Correspondence and Training. (3). 3R; 1 1/2 L. An introduction to the philosophy and history of law enforcement and identifying multiple facets of the administration of justice in the military today. Additionally, the student becomes familiar with the process of military writing by writing, revising and evaluating the work of others and how to prepare, conduct and evaluate military training. Prerequisites: MS 333 and 334 and departmental consent. D 15 443 5 1801

444. Seminar in Leadership and Management. (3). 2R; 1 1/2 L. Student indoctrination to staff operations and procedures in preparation for active duty. The student studies the ethical and professional behaviors expected of the commissioned officer as well as the U.S. Army Personnel Management system and the Army's logistical system. The student learns what support is available at the post and installation level and the relationship between the commissioned and noncommissioned officers. Prerequisites: MS 443 and departmental consent. D 15 444 5 1801

Music Education

Mus. Ed. 351, 352, 501, 606, 610, 611 and 706 are specifically available for students in the College of Education. Service courses in special music education are also available. The full description of courses offered in music education is given in the College of Fine Arts, Division of Music section.

Personnel Services

Counseling and School Psychology

Lower Division Courses

150. Workshops in Education. (1-2). D 18 150 2 0826

152. Special Studies in Education. (1-4). This course is designed for undergraduates with an interest in issues related to counseling, guidance and student development. Different preselected areas may be emphasized during a semester. Repeatable with adviser's consent. D 18 152 2 0826

Upper-Division Courses

450. Workshops in Education. (1-4). This course is designed to accommodate a variety of topics related to counseling, guidance and communication issues in helping relationships. Different preselected topics may be emphasized during a semester. Repeatable for credit. D 18 450 2 0826

452. Special Studies in Education. (1-4). This course is designed for upper-division students with an interest in issues related to counseling, guidance and student development. Different preselected areas may be emphasized during a semester. Repeatable with adviser's consent. D 18 452 2 0826

Courses for Graduate/Undergraduate Credit

652. Student Development. (9). Training for students involved as small-group leaders. Prerequisite: DARE student leader. D 18 652 9 0826

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L means four hours of lecture and two hours of lab.
653. Studies in Student Development. (1-2). Designed as a supervised experience for students participating as peer advisers and leaders in developing activities for students entering or assigned to University College. Peer counseling and consulting skills are emphasized. Prerequisites: CSP 652 (former 763H) and DARE student leader. D 18 653 2 0826

655. Studies in Student Services. (1-6). Provides students with training in basic helping skills for professional counseling. The course involves training and periodic seminars. May be repeated for a maximum of six hours credit. Prerequisite: departmental consent. D 18 655 0 0826

732. Counseling: Child Abuse and Neglect. (2). The psychology, symptoms and indicators, treatment and prevention issues of physical abuse and neglect, emotional abuse and neglect and sexual abuse. D 18 732 0 0826

750. Workshop in Education. (1-4). D 18 750 2 0826

752. Special Studies in Education. (1-5). The course is designed for students with personal and guidance interests. Different prescheduled areas may be emphasized during a semester. Repeatable with advisor's consent. Prerequisite: instructor's consent. D 18 752 2 0826

756. Guidance Services for the Preschool Child. (3). A study of the social and emotional needs of the preschool child, including an exploration of theory, techniques and materials useful to persons providing guidance services for preschool children and their significant adults. D 18 756 0 0826

Courses for Graduate Students Only

801; Principles and Philosophy of Guidance. (3). The development of a guidance philosophy, including a study of the helping relationship and the services that are part of school, agency and other institutional settings. D 18 801 0 0826

802. Introduction to Interaction Process. (1). S/U grade only. A laboratory approach to an examination of the counselor's role in the counseling process. The course is designed to assist the prospective counselor increase personal understanding of self as a variable in the counseling process. Prerequisites: CSP majors and instructor's consent. To be taken concurrently with CSP 801. This course may not be taken concurrently with CSP 825. D 18 802 2 0826

803. Counseling Theory. (3). A study of selected theories of counseling. Prerequisite: CSP 801 or concurrent enrollment. D 18 803 0 0826

805. Educating the Poorly Adjusted Individual. (3). Perceptual approach to the problems of emotionally disturbed or deficient children and youth in both elementary and secondary schools. D 18 805 0 0816

806. Children of Poverty. (3). A perceptual approach to children and youth whose adjustment problems appear to be related to poverty in the affluent society. D 18 806 0 0813

810. Elementary School Counseling. (3). The role of the elementary counselor in providing individual and group counseling, group guidance and consultation in the school setting. Prerequisite: CSP 824. D 18 810 0 0826

820. Occupational Information. (2). The classification, collection, evaluation and use of occupational information in a guidance program. Prerequisites: CSP 824 and instructor's consent. D 18 820 0 0826

823. Psychometric Procedures in Counseling. (3). Survey and study of standardized tests and their application in counseling, with an emphasis on their selection, use and interpretation. Study is made of the basic concepts pertaining to the interpretation of psychological tests and inventories, including basic measurement theory and the factors involved in the selection of tests. Prerequisites: CSP 801 or concurrent enrollment. D 18 823 0 0826

824. Techniques of Counseling. (3). Through simulated counseling situations and examination of counseling case studies, techniques of counseling are examined and practiced. Prerequisite: CSP 803. D 18 824 0 0826

825. Group Techniques in Guidance. (2). S/U grade only. Laboratory approach to the study of group formation, process and communication as a tool for guidance services. Prerequisite: CSP 801 or concurrent enrollment. D 18 825 2 0826

830. Introduction to Marriage and Family Counseling. (3). A survey course on marriage and family counseling, including theory, techniques and research in the field. Prerequisite: CSP 803 or departmental consent. D 18 830 0 0826

833. Administration of Guidance Services. (3). Administration theory with emphasis for the CSP major on relating theory to the problem of administration of guidance services. Prerequisite: 15 hours of CSP courses. D 18 833 0 0826

852. Special Studies. (1-4). A course covering 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. D 18 852 2 0826

855. Individual Intelligence Assessment. (2). Use of individual tests for appraisal of intelligence, adaptive behavior and learning styles. Research and clinical theory are considered in a lecture-discussion format, which includes some case simulation activities. Concurrent enrollment in CSP 870 is recommended. Prerequisites: CSP 823 or concurrent enrollment and instructor's consent. D 18 855 0 0825

856. Practicum in Individual Counseling. (3). Supervised practice in individual counseling. Course requirements include at least 60 hours applied experience. Repeatable for credit. Prerequisite: CSP 824 and instructor's consent in the CSP program and instructor's consent. D 18 856 2 0826

857. Seminar in Guidance. (2). Prerequisite: 15 hours in CSP sequence. D 18 857 9 0826

858. Diagnostic Testing. (2). Use of individual tests, rating procedures and behavioral techniques for the appraisal of personal, social, developmental, linguistic development, classroom behavior and academic skills. Assessment theory and research relevant to these areas are considered in a lecture-discussion format, which includes some case simulation activities. Concurrent enrollment in CSP 870 is recommended. Prerequisites: CSP 823 and instructor's consent. D 18 858 2 0825

862. Presentation of Research. (1-2). A project submitted in thesis-manuscript form. Repeatable for a maximum of two hours of credit. Prerequisite: IS 860. D 18 862 4 0826

866. Practicum in Guidance Services. (2-3). Supervised practice in administration, test interpretation, group counseling, and other activities of the guidance department. Prerequisites: CSP 833 and instructor's consent. D 18 866 2 0826

867. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in administration, test interpretation, group counseling, and other activities of the guidance department. Repeatable for three hours of additional credit. The second practicum must be in a different area or have a different focus from that of the first. Prerequisites: CSP 825, 856 and instructor's consent. D 18 867 2 0826

870. Assessment Practicum. (2-6). Supervised experience in the administration, scoring and interpretation of individual assessment techniques. Report writing and case consultation also are considered in terms of the information needs of the client and referral agent. Repeatable to a maximum of six hours. Prerequisites: CSP 823 and concurrent enrollment in an appropriate lecture-discussion assessment course. D 18 870 2 0825

875-876. Master's Thesis. (2-2). D 18 875 4 0826; D 18 876 4 0826

881. Seminar in School Psychology. (1). Current trends and issues within the area of school psychology will be examined. Alternative role models for the school psychologist will also be considered from the standpoint of research and program development. Required areas such as special education, general education and professional psychology. Repeatable to a maximum of four hours. Prerequisite: CSP 823 or concurrent enrollment. D 18 881 9 0826

890. Special Problems in Guidance. (1-4). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent. D 18 890 3 0826

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. D 18 903 0 0826

914. Consultation Techniques. (3). Intensive study of the literature in counseling, social psychology and administration that provides a basis for consultation techniques in the interpersonal context of school and work settings. D 18 914 0 0826

915. Intervention Design. (2). Designed to give the student further experience and skill in utilizing theories of interpersonal relations in creative counseling situations. For experienced Intervention designs for individuals or groups experiencing dysfunctional situations. Individual and organizational effectiveness assessment skills are stressed. D 18 915 0 0826

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 eight hours. Prerequisite: 15 hours of related graduate course work. D 18 926 9 0826
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 eight hours. D 18 928 9 0826

930. Marriage and Family Counseling II. (3) An advanced course on marriage and family counseling, including theory, techniques and research in the field. Prerequisite: CSP 603, CSP 330, 30 graduate hours or permission of instructor. D 18 839 9 0826

934. Personality Assessment. (2) Focus is on theory and interpretation of instruments representing specific approaches to personality assessment: projective techniques, behavioral techniques and personality inventories. Alternative personality assessment approaches and reviews of personality theory and psychopathology are included. Prerequisites: CSP 823, post-master's standing or last six hours of master's program. D 18 934 0 0825

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 three hours of credit. Repeatable for a maximum of six hours. Prerequisites: departmental consent. D 18 946 2 0826

947. Internship: Internal or External. (6-8). The Internal Internship is normally a full-time placement, appropriate to career objectives, in a position within an agency, institution or school. The External Internship is normally a series of planned placement internship experiences in a variety of settings designed to develop expertise in interpersonal consulting. 24 units. D 18 947 2 0826

948. Practicum in Marriage and Family Counseling. (3) Prerequisite: CSP 830 graduate-student status or departmental consent. D 18 948 2 0826

970. Assessment Practicum. (2) Supervised experience in the administration, scoring and interpretation of individual assessment techniques. Focus is on integrating assessment information from several sources. Report writing and case consultation also are considered in terms of the information needs of the client and referral agent. Repeatable to a maximum of six credit. Prerequisites: CSP 823 and concurrent enrollment in an appropriate lecture-discussion assessment course at the post master's level. D 18 970 2 0826

977. Internship in School Psychology. (2) Supervised experience as a school psychologist in a school or agency setting. Requires at least 500 hours of applied experience. Repeatable for a maximum of four hours. Prerequisites: CSP 946 and departmental consent. D 18 977 2 0826

990. Special Problems in Counseling and School Psychology. (1-4). Directed problems in research for specialist degree students under supervision of a graduate instructor. Prerequisites: CSP 801 and instructor's consent. D 18 990 4 0826

Educational Administration and Supervision

Courses for Graduate/Undergraduate Credit

715. Administration of the Community College. (3) Administration and supervision in the community college coupled with implementation of educational services in the community through continued education. Control, methods of finance, facilities, focus on individualized study and evaluation of the entire process are stressed. D 18 715 0 0827

750. Experienced Administrator's Workshop. (1-2). Offers a variety of administrative topics. D 18 750 2 0827

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. D 18 752 0 0827

Courses for Graduate Students Only

801. Educational Administration Theory. (3) An examination of the major theories of administration and application to specific problems. Emphasis is on an overview of administration of the school district, especially problems involving the community and staff. Included is data gathering for self-evaluation of supervisory potential. Open to all College of Education graduate majors. D 18 801 0 0827

804. Supervision and the Improvement of Instruction. (3). The application of curricular theories, psychology and methods of supervision to the problems of improving classroom instruction and teaching methods. D 18 804 0 0827

810. The Principalship. (3) Designed primarily for individuals who are completing a master's program in educational administration and supervision. Course content focuses on the role expectations of building principals at the elementary, middle and high school levels. Specific work is designed for each student's project work level. Prerequisite: EAS 801. D 18 810 0 0827

826. Curriculum Management. (3). A study of curriculum philosophies, theories and developmental processes. Included are the following topics: examination of recent programs and proposals, curriculum development at the building and school system levels and techniques for organization. Prerequisite: EAS 804. D 18 826 0 0828

828. Management and Evaluation of Alternative Programs. (3). A study of the management of organizational patterns appropriate to continuous learning, nontraditional, individualized in scheduling, team teaching, large group instruction, independent study and other current trends in education. Includes evaluation of children's learning progress and accountability for school administrators, supervisors and teachers. Prerequisite: graduate standing. D 18 828 0 0827

836. School Personnel Management. (3). Advanced study of staff problems—selection and recruitment, certification, orientation, in-service training, evaluation, transfer and dismissal and retirement. Prerequisite: master's degree or instructor's consent. D 18 836 0 0827

842. School Law. (3). General concepts of law, interpretations of statutes and court decisions affecting education and legal responsibilities of school personnel. D 18 842 0 0827

843. Kansas School Law. (3). An examination of specific Kansas legislation and court decisions affecting educational institutions and/or national and state issues in school law. Prerequisite: graduate standing. D 18 843 0 0827

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. D 18 852 0 0827

853. School Business Management. (3). School budgeting processes, accounting, risk management, purchasing and data management techniques. Management of custodian, maintenance, food and transportation services. Prerequisite: EAS 801 and 804 or instructor's consent. D 18 853 0 0827

860. Research Seminar in Educational Administration and Supervision. (3). Designed primarily for students in advanced study with a research orientation. Course content and emphasis are varied according to the needs of students as research proposals and studies are developed, conducted and examined. Prerequisite: completion of master's degree or adviser's consent. D 18 860 9 0824

862. Presentation of Research. (1-2). A project submitted in thesis manuscript form Repeatable for a maximum of two hours of credit. Prerequisite: EAS 860. D 18 862 4 0827

871. Group Process for Administrators and Supervisors. (3). A laboratory-based course in which the various aspects of group processing are experienced by class members in small group settings. These experiences for potential and practicing administrators and supervisors have carry-over application to their present and future job responsibilities in an organizational setting. D 18 871 0 0828

872. Conflict Management. (3). This course is designed to study the effect of language, attitudes, beliefs on interpersonal communication and relationships which lead to the types and sources of organizational role and personal conflict. Prerequisites: CSP 823 and concurrent enrollment. D 18 872 0 0827

875-876. Master's Thesis. (2-2). D 18 875 4 0827; D 18 876 4 0827

878. Strategies for School Improvement. (3). An examination of organizational/instructional characteristics of schools as determinants of their effectiveness. This approach is designed to help school personnel improve school effectiveness. Various school improvement models are considered, including programs designed specifically for elementary and secondary schools. Research studies considered examine established correlates for school effectiveness, as well as related teacher effectiveness variables. Prerequisites: EAS 801 and 804. D 18 878 0 0827

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R:2L means four hours of lecture and two hours of lab.
884. School Plant Design and Operation. (3). Planning new educational facilities based on functional programs. The evaluation of existing schools, remodeling and operation and maintenance of present school plant are included. Prerequisite: master's degree or instructor's consent. D 16 884 0 0827

888. Data Management for School Administrators. (3). An advanced course for microcomputer operators. Students will learn the proper use of data base management, data processing, and spreadsheet programs, using Apple computers. D 16 888 0 0827

890. Special Problems in Administration. (1-4). Directed problems in research for master's students primarily under supervision of a graduate instructor. Prerequisite: instructor's consent. D 16 890 3 0827

891. Preservice Building Administrator Practicum. (3). The practicum is designed as a preservice experience for persons who seek building-level administrator certification in Kansas. Emphasis is on the acquisition of knowledge and skill in administrative practice and procedures through a building-level field experience. The student must file an application for the practicum, approved by the supervising EAS faculty member, the cooperating building administrator and the school district coordinator. Prerequisites: EAS 810, equivalent or concurrent enrollment. D 16 891 0 0827

904. Clinical Supervision for Administrators/Supervisors. (3). An examination of theories of clinical supervision and their application by administrators in the supervisory process. Emphasis is on the evaluation of student teaching in terms of the administrative and supervision roles of the school administrator and the cooperating teacher. Prerequisites: EAS 804. D 16 904 0 0827

909. Planning in Educational Administration. (3). Seeking out, analyzing and making appropriate use of information in effective school planning. Examines systems analysis, management information systems in school settings and strategies for long- and short-range planning. D 16 909 0 0827

946, 947, 948, 949. The Internship. (2, 3, 4, 5). Administrative assignment in educational institutions. S/U grading only. Prerequisites: five semester hours of post-master's graduate courses in educational administration and supervision and 3.10 graduate grade point average. Arranged on an individual basis. D 16 946 2 0827; D 16 947 2 0827; D 16 948 2 0827; D 16 949 2 0827

953. Financial Support of Education. (3). Cost of education at local, state and national levels. Emphasis is on methods of taxation, budget preparation and efficient expenditures. Prerequisites: EAS 801 and 804 or instructor's consent. D 16 953 0 0827

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. Projects must be identified, and 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. D 16 955 2 0827

960. Seminar in the Process of Administration. (1-3). Concurrent enrollment in the internship is required. S/U grading only. Arranged on an individual basis. D 16 960 2 0827

963. Politics and Power in Education. (3). An examination of the interaction of society and the school as it relates to the administrative processes. Systems of control, social class, power structure, human relations and group dynamics are studied. D 16 963 0 0827

965. School and Community. (3). A study of the relationships between a school and its community and the administrative responses that show promise of improving relationships between students, staff and sponsors. Students analyze data related to a particular school community to better assess the educational needs of both students and non-students and develop more appropriate organizational responses to those needs. D 16 965 0 0827

990. Special Problems in Administration. (1-4). Directed problems in research for specialists and doctoral degree students under supervision of a graduate instructor. Prerequisite: instructor's consent. D 16 990 3 0827

991. Practicum in Educational Administration and Supervision. (1-2). This course is designed for persons who have been employed in their first administrative position and are seeking certification in Kansas. The course of study is individually designed by an EAS faculty member with the student and his/her school district supervisor. The course addresses the needs of the student and of the district. The thrust is to assist the student to extend basic skills relevant to a particular administrative assignment. The student must register for three hours of credit in EAS 991 to meet certification requirements. S/U grading only. Prerequisites: completion of master's degree and departmental consent. D 16 991 2 0827

Physical Education, Health and Recreation

Physical Education
Physical education majors may select the elementary, secondary or field option specialization. They may select both the elementary and secondary specialization by completing the required hours in both specializations and by student teaching in both areas. Students majoring in physical education must meet all College of Education entrance requirements.

Core requirements. Each major student in the elementary or secondary specialization must complete 35 hours in the physical education core, which includes PE 201A, 201B, 201C, 201D, 105, 107, 111, 117, 229, 270, 328, 360, 530, 533 and 544.

Elementary Specialization. All majors in this specialization must complete the core requirements listed above. Fifteen additional hours must be completed by taking the following courses: PE 200, 325, 326, 327, 515 and 1E 170.

Secondary Specialization. All majors in this specialization must complete the core requirements listed above. Fifteen additional hours must be completed by taking the following courses: PE 206, 254, 311, 312, 337 and two hours within the area of rhythmic activities (PE 515, aerobics, ballet, dance or folk dance of many countries). Individuals in this program must compile a grade point average of 2.50 for all hours taken and in the major field before being admitted to the student teaching block.

Field Option Specialization. Candidates may select one of the approved options: fitness or sport business management.

Fitness: Required courses are PE 105, 106, 107, 111, 115, 117, 229, 270, 328, 331, 360, 481, 530, 533, 544, 547, HS 331, plus at least 29 hours of approved electives.

Sport Business Management. Required courses are PE 111, 117, 210, 229, 280G, 328, 360, 481, 530, 533, 544, and 547, plus at least 31 hours of approved electives. Individuals in this program must compile a grade point average of 2.50 for all hours taken and in their major area before being admitted to the field option internship.

Recreation
Students majoring in recreation must meet all College of Education entrance requirements and fulfill the following program requirements:
1. Complete the core courses—PER 112, 126, 266 and 302.
2. Complete the career program—PER 426, 427.
3. Complete 12 hours approved by the recreation coordinator in two of the following areas: physical education, music, art, dance or theater.
4. Complete 18 hours of integrated studies courses beyond the requirements of the General Education Program and approved by the recreation coordinator. Ten of these hours must be in upper-division courses. Individuals in this program must compile a grade point average of 2.50 for all hours taken and in their major area before being admitted to the recreation internship.

Areas of Certification
State certification—Drivers' Education. (18 hours.) Required are Psych 111 and
PE 210, 300 and 301. Electives consist of six semester hours in the following areas: visual education, auto mechanics, sociology or courses dealing with human relations, such as American democracy, law enforcement, traffic problems, motorcycle safety or court procedures.

State certification—Health. The courses listed must be included in any program which provides state certification endorsement in health. PE 115, Personal and Community Health (3); PE 117, First Aid (2); PE 210, Safety Education (3); PE 229, Applied Human Anatomy (3); PE 280G, Fitness for Life (2); PE 500, Health Education (2-3); PE 502, Applied Health I (2); PE 504, Applied Health II (2); PE 530, Physiology of Exercise (3); PE 752, Special Studies in Health, Physical Education and Recreation (1-3); Biol. 1200, Introduction to Microbiology (4); Chem. 1110, General Chemistry (5); HS 331Q, Principles of Dietetics and Nutrition (3); Psych. 111Q, General Psychology (3); Soc. 2110, Introduction to Sociology (3), ISSE 410, Methods of Physical Education (3); ISSE 470, Student Teaching—Physical Education (3).

The Wichita State University certification—Coaching. The courses listed must be included in any program which provides Wichita State certification in coaching: PE 220, Officiating Techniques (3); PE 331, Athletic Injuries (2); PE 336, Theory and Organization of Basketball (2); PE 337, Theory and Organization of Track and Field (2); PE 530, Physiology of Exercise (3); PE 570, Psychology of Sport (3). Men must add PE 345, Theory and Organization of Football (2).

All students must have at least three hours from the following electives: PE 265, Aquatics (2), PE 254, Body Mechanics and Gymnastics (3); PE 311, Methods and Techniques I (3); PE 312, Methods and Techniques II (3).

All students also must have at least four hours from the following: PE 201A, PE 201B, PE 201C, PE 201D, Introduction to Activities (2 hours each).

**Service Program**

Physical education activity courses carry one hour of credit. They fall into nine areas.

**Lower-Division Courses**

**Physical Education Activity Courses.**

101. Team Activities. (1). D 13 101 5 0835

102. Individual Activities. (1). D 13 102 5 0835

103. Combatives. (1). D 13 103 5 0835

105. Gymnastics. (1). D 13 105 5 0835

106. Fitness Activities. (1). D 13 106 5 0835

107. Aquatics. (1). D 13 107 5 0835

106. Combined Activities. (1). D 13 108 5 0835

110. Varsity Activities. (1). D 13 110 5 0835

**Professional Courses**

Professional courses for physical education, health and recreation are offered in the College of Education and, unless otherwise indicated, are open to both men and women.

**Lower-Division Courses**

111. Introduction to Physical Education. (2). A survey study of physical education and recreation as to their identification, purpose and interrelationship in the total field of education. D 13 111 0 0835

112. Recreation in America. (3). Emphasizes the practical aspects of recreation in the lives of people today as well as providing the theoretical and historical background to allow students to understand the magnitude of recreation as a social phenomenon. The course will also survey the professional opportunities available in the field of recreation. D 13 112 0 0835

115. Personal and Community Health. (3). D 13 115 0 0835

117. First Aid. (2). Standard and/or advanced first aid with certification by the American Red Cross. D 13 117 0 0837

126. Challenge of Leisure. (3). The central objective of this course will be to take a systematic look at the phenomena of leisure and its changing concepts, leisure behavior patterns, leisure delivery systems, leisure's relationships to the community and safety programs. D 13 126 0 0835

150. Workshop. (1-3). D 13 150 2 0835

152. Special Studies in Health, Physical Education and Recreation. (1-3). Group study activities in selected areas of health, physical education or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent. D 13 152 0 0835

200. Observation in Physical Education. (1). A course that provides students with observation experiences in selected elementary schools. D 13 200 1 0835

201A. Introduction to Activities. (2). This course introduces the major student to the basic skills of badminton, tennis, flag football and frisbee. D 13 201A 5 0835

201B. Introduction to Activities. (2). This course introduces the major student to the basic skills of golf, bowling, archery and combatives. D 13 201B 0 0835

201C. Introduction to Activities. (2). This course introduces the major student to the basic skills of softball, volleyball, handball, racquetball and table tennis. D 13 201C 5 0835

201D. Introduction to Activities. (2). This course introduces the major student to the basic skills of soccer, basketball and fitness activities. D 13 201D 5 0835

206. Aquatics. (2). 1R; 2L. An introduction to aquatic techniques and an orientation to all levels of aquatics that enable individuals to manage themselves adequately and satisfactorily in water. Prerequisite: PE 107A or departmental consent. D 13 206 0 0835

210. Safety Education. (3). A general survey of the field of safety. Emphasis is on the philosophical, psychological considerations, concepts safety instruction and safety programs development. Circulates with the different areas of safety concern being analyzed in terms of needs, development and trends. D 13 210 0 0836

220. Officiating Techniques. (3). Theories, rules and mechanics of officiating major sports commonly offered from high school and college athletic programs. D 13 220 1 0835


226. Introduction to Community Recreation. (2). A study of the philosophy, origin and development of community recreation programs. D 13 226 0 0835

229. Applied Human Anatomy. (3). 2R; 1L. A study of the structure and function of the skeletal and muscular systems of the human body, with direct application to body movements in physical activities. D 13 229 1 0835

254. Gymnastics. (3). Principles of body mechanics and application to gymnastics, including free exercise and apparatus. Prerequisite: PE 105A or departmental consent. D 13 254 2 0835

270. Motor Learning. (3). The introduction and examination of the physiological and psychological factors that affect the acquisition of motor skills. D 13 270 1 0835

280G. Fitness for Life. (2). 1R; 2L. The whys and hows behind activities designed to develop and maintain the muscular and cardiorespiratory systems of the human body. Two days per week are spent in a laboratory situation to assess fitness components and participate in an individually designed fitness program. One day per week involves a lecture to enhance understanding of exercise, weight control, cardiovascular disease and fitness parameters. D 13 280G 1 0835

**Upper-Division Courses**

300. Basic Driver Education and Training I. (3). D 13 300 0 0836

301. Advanced Driver Training II. (3). D 13 301 2 0836

302. Urban Recreation. (3). This course exposes students to urban recreation from a philosophical and practical viewpoint. The course investigates the historical relationship of urban recreation to the recreation movement in America. The inner city and its recreational characteristics are examined in light of trends, recreation projects and their adequacy and career opportunities. D 13 302 0 0835

311. Methods and Techniques I. (3). Emphasis upon methods, techniques, teaching progression, analysis and skill development. Activities covered include badminton, tennis, flag football, frisbee, golf, bowling, archery and combative. Prerequisites: PE 102, PE 115.
812. **Advanced Techniques in Physical Education.** (3). Comprehensive coverage of selected physical activities, with special emphasis on class procedures. Laboratory experiences are included. D 13 812 1 0835

815. **Fitness Assessment and Exercise Prescription.** (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. Prerequisites: PE 530 or equivalent and graduate standing. D 13 815 0 0835

825. **Physical Education in Elementary Schools.** (2). New concepts, recent trends, methodology, programming and supervision. This course is designed for the elementary teacher and physical education specialist. D 13 825 0 0835

826. **Movement Education I.** (3). This course is designed to introduce instructional techniques and curricular content utilized in the teaching of movement exploration (educational gymnastics and creative rhythms). The measurable aspects of weight, space, time and flow will be studied to provide insight into the noncompetitive instruction of children when teaching movement skills. D 13 826 2 0835

840. **Seminar in Advanced Methods.** (2). An examination and discussion of the factors that affect the teaching-learning process applicable to physical education. Emphasis is on individual understanding and improvement as students analyze their own teaching effectiveness. D 13 840 9 0835

847. **Internship.** (6-12). Internship in selected areas of specialization in exercise science or sports administration. Prerequisite: departmental consent. D 13 847 2 0835

860. **Research Methods in Health, Physical Education and Recreation.** (3). An introduction to research in health, physical education and recreation. Included in the course content are: (1) importance and meaning of research, (2) a literature search, (3) laboratory and nonlaboratory studies, and (4) the research report. D 13 860 0 0835

875. **Thesis.** (2). Prerequisites: IS 704 and PE 860. D 13 875 4 0835

876. **Thesis.** (2). Prerequisites: IS 704 and PE 860. D 13 876 4 0835

880. **Analysis of Motor Skills.** (3). Movement and sport skills analyzed in terms of mechanical principles by means of films and experimentation. D 13 880 0 0835

890. **Problems in Health, Physical Education and Recreation.** (1-4). Directed reading and research under supervision of a graduate instructor. D 13 890 3 0835

The following abbreviations are used in the course descriptions: L stands for lecture and T for laboratory. For example, 2R 2L means two hours of lecture and two hours of lab.
William J. Wilhelm, PhD, Dean
Modern technological developments in engineering have brought about considerable change in the College of Engineering's curriculum at The 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 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.

The undergraduate curriculum of the aeronautical, electrical, industrial and mechanical engineering departments are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Degrees Offered

Undergraduate
The College of Engineering is organized into several degree-granting departments: aeronautical, electrical, industrial and mechanical. Undergraduate programs in these departments lead to the Bachelor of Science in each of these areas. A degree program for the Bachelor of Science in Engineering (BSE) also allows students to pursue in-depth studies in additional fields, such as computer science, bioengineering, engineering management, as well as other interdisciplinary programs.

The college cooperates with Kansas Newman College in a dual degree program in electrical engineering and mathematics. Inquiries regarding the program should be addressed to the chair of the electrical engineering department.

Graduate
A Master of Science (MS) is offered in aeronautical, electrical and mechanical engineering, and a Master of Science in Engineering Management Science (MSEM) is offered by the industrial engineering department.

A Doctor of Philosophy (PhD) in engineering is offered by the four departments of engineering. Typical fields of specialization include analytical and computational fluid mechanics, applied statistical methods, avionics, biomechanics, communications, computers, control systems, engineering management science, engineering materials, electromagnetic fields, ergonomics/rehabilitation, failure analysis, heat transfer, information systems, manufacturing, mechanical design, production processes, productivity enhancement, propulsion, signal process, structural dynamics, structures and thermodynamics. See The Wichita State University Graduate School Bulletin for more information about the graduate program.

Policies

Admission
Students requesting a transfer to the College of Engineering must satisfy the following admission requirements:
1. An overall 2.00 grade point average and a WSU 2.00 grade point average.
2. Completion of 24 semester credit hours of college-level work.
3. Declaration of a specific engineering major.
4. Completion of each of the following courses with a grade of C or better: (a) English 101; (b) English 102, Speech 111 or Speech 112; (c) Math. 2420 or its equivalent; (d) one required basic science course and (e) Engineering 125.

Engineering students who have not had high school physics are permitted to register for Phys. 313Q if the mathematics prerequisite has been fulfilled. Since most students in Phys. 313Q have had some preparatory physics, students without this background should plan for extra study time in this course. Engineering students who have not had high school physics are permitted to register for Phys. 213Q. These students are then required to take Phys. 314Q when they have fulfilled prerequisites for this course, which are: Math. 243 with a grade of C or better and Phys. 213Q with consent of the physics department.

Probation
Students are placed on academic probation if one or more of the following three grade point averages is less than 2.00 and if they have attempted at least 12 hours in that grade point average at The Wichita State University: (1) overall grade point average, (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, P, W, Cr, NCr, I, S or U. Academic probation is not removed until all three grade point averages are at least 2.00.

Students on academic probation may not enroll for more than 12 semester hours in a 16-week term, six semester hours in an eight-week term or three hours in a four-week term. Exceptions to these limitations may be made on the recommendation of the student's department adviser with the approval of the student's department chairman.

Academic Dismissal
Students are subject to academic dismissal from the College of Engineering when they are on academic probation because of their overall grade point average, WSU grade point average and/or engineering major grade point average and they fail to receive a 2.00 grade point average in the next 12 hours attempted in the affected grade point average(s) after being placed on academic probation.

Other Policies
Students must file an application for degree card in the engineering dean's office two semesters preceding their final semester.

Students are not allowed credit toward graduation for D grade work in excess of one-quarter of their total hours. At midsemester, reports of unsatisfactory grades are sent to the students.

Students enrolled in the College of Engineering may not enroll in more than 20 semester hours of work per semester during the academic year. Summer Session enrollments are limited to a maximum of five hours for each four-week session or ten hours during the eight-week session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.00 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 adviser, reduce their enrollments to a level appropriate to their work load.

In order to insure an equitable distribution of class cards and to aid each student's timely progress toward a degree, a student who drops a course taught by the College of Engineering any time after the first day of classes will not be permitted to preregister for the same course during the semester in which the drop occurs or during the next regular registration period. During the late registration period, class cards will only be issued as available with departmental consent. A student may petition the chairperson of the engineering department where the course is taught for an exception to this rule.

COLLEGE OF ENGINEERING
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, unless the course is designated a general studies course by the University. Because there are legitimate reasons for qualified nonengineering students to enroll in an engineering course at the 300 level or above, the chairperson of the department offering the course will consider petitions for exceptions to the preceding statement.

Graduation Requirements

University Requirements
For new freshmen entering the University, requirements for the College of Engineering are:

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic skills</td>
<td>12</td>
</tr>
<tr>
<td>Humanities and fine arts*</td>
<td>9</td>
</tr>
<tr>
<td>Social and behavioral sciences**</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics and natural sciences</td>
<td>Satisfied by college requirements</td>
</tr>
</tbody>
</table>

Elective distribution courses Satisfied by college requirements

To qualify for graduation, all engineering students must complete each of the following courses with a grade of B or better: English 101, English 102, Speech 111 or 112.

A minimum of 17 hours of humanities and fine arts and social and behavioral sciences are required by the Engineering Accrediting Board. In addition, at least two courses are required in one of the departments in humanities and fine arts or social and behavioral sciences. The two-course sequence must include at least one course numbered 200 and above.

At least nine hours of general studies courses must be taken to satisfy University requirements.

For a complete explanation of the General Education Program, see the Academic Information section of the Catalog.

General Engineering Requirements
All engineering students follow the same general curriculum for the first two years. For administrative purposes, students are requested to choose a departmental curriculum in which to study, but they may change to another curriculum during this period without losing credit toward graduation. All engineering programs are designed to meet ABET accreditation criteria and must include:

1. The equivalent of approximately 2½ years of study in the area of mathematics, science, and engineering. The course work should include at least one year of mathematics beyond trigonometry and basic sciences, one year of engineering sciences and one-half year of engineering design.

2. The equivalent of one-half year as the minimum content in the area of the humanities and social sciences. While the objective of a broad, liberal education is served through independent humanities and social science courses, courses treating such subjects as accounting, industrial management, finance, personnel administration and ROTO studies do not fulfill this objective. Likewise, skills, theory and technical courses in fields such as musicology, linguistics and speech do not fulfill the humanities/social science objective. If there are questions regarding the selection of specific courses, contact the academic records office for assistance and interpretation.

Each of the engineering curricula consists of three parts: (1) the general education requirements of the University, (2) an engineering core program and (3) specialized departmental courses.

To satisfy the general education requirements of the University, the student must complete courses in the following two divisions: (1) Division A, Humanities and Fine Arts and (2) Division B, Social and Behavioral Sciences. A minimum of six hours is required in the social and behavioral sciences and a minimum of nine hours in humanities and fine arts. At least nine hours of General Studies courses must be taken to satisfy University requirements. For a more detailed description of general education requirements, see the Academic Information—General Education Program section of the Catalog.

Every engineering student is required to complete a total of 19 hours of courses from the following engineering core courses. Some of these courses are required as prerequisites for the departmental offerings; the remainder of courses should be selected in consultation with a faculty advisor.

Engineering Core (19 Hours Required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
</tbody>
</table>

AE 323, Engineering Mechanics: Statics | 3    |
AE 323, Engineering Mechanics: Dynamics | 3    |
EE 382, Electrical Dynamics | 4    |
ME 400, Fluid and Heat Flow | 4    |
ME 398, Thermodynamics | 3    |

In addition to the engineering core requirements, students must complete:

1. A minimum of 33-34 hours of engineering science, depending upon curriculum
2. A minimum of 17 hours of design, synthesis or systems engineering
3. A minimum of 24 hours of engineering courses taken outside their major department
4. 26 hours of University requirements as described earlier
5. A minimum of 17 hours of mathematics and 17 hours of natural sciences
6. A minimum of 17 hours of humanities and social sciences.
7. Three to four hours of a natural science elective chosen from the following list in consultation with the departmental adviser: Biol. 203Q, 370Q, 503Q, Chem. 112Q, 546, Geol. 111Q, 302Q, Phys. 551, 555, 621, 714.

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 in the minimum time and can satisfy all University course requirements and prerequisites for engineering students. Students should discuss any desired deviation from this sequence with an engineering faculty adviser.

Students who have a 2.50 overall grade point average may elect to enroll under the A/Pass/Fail option in a total of three regularly graded courses outside their major or supporting minor area. Under this option the grade for the course is recorded as A if class performance is at this level and P if performance is at the B or C level. Failures are recorded as F. Students enrolled before Fall 1973 who have not used up the maximum number of 24 semester hours in the Credit/No Credit option may enroll in a maximum of three courses under the A/Pass/Fail option provided that the total number of hours they have taken under both options does not exceed 24 hours.

Interdisciplinary Fields (Bachelor of Science in Engineering)

The College of Engineering offers special 132- to 135-hour programs designed to help students who wish to pursue studies in interdisciplinary fields. The Bachelor of Science in Engineering (BSE) program permits the development of combinations of specialties while pro-
viding for other fields of knowledge and expertise.

The BSE program is designed to meet the needs of students who wish to pursue studies in specific fields, such as computer science, premedical/biomedical engineering, engineering management, engineering analysis or other special engineering areas. Students in this program meet essentially the same basic requirements as other engineers do in three years of study and then complete courses—either inside or outside of the College of Engineering—for their specialized interests.

The BSE program is administered by a committee with the dean of engineering as chairperson. All applicants for the BSE are referred to this committee, which assigns an engineering faculty advisor for each student. All student programs must be approved by the committee. The Office of Engineering Records has the details for student advising.

The University requirements and engineering course requirements selected must be consistent with the following requirements. The specialty field must have a focus (depth) and consist of a select number of courses for specified areas. All students, in satisfying the academic guidelines, are expected to undertake a senior project during their last year of study. The project should be in the student's chosen field and be co-sponsored by an engineering advisor and an advisor from the student's specially field.

Students can major in computer science while pursuing either the Bachelor of Science in Engineering (BSE) in the College of Engineering or the Bachelor of Science (BS) in the Bachelor of Arts (BA) in Fairmoun College of Liberal Arts and Sciences.

For the BSE, the University requirements and general engineering requirements are the same as described in the two previous sections. Specific program and course requirements for the BSE may be obtained from a check sheet upon request from an engineering faculty advisor.

Cooperative Education Program

The College of Engineering offers a cooperative education program in conjunction with the University Cooperative Education program described in this Catalog.

The co-op plan is a voluntary program in which the student alternates paid professional work periods with classroom periods between the freshman and senior years. The two most typical plans are illustrated in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>Semester</td>
<td>F</td>
<td>S</td>
<td>S</td>
<td>F</td>
<td>S</td>
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<tr>
<td>Plan A</td>
<td>C</td>
<td>C</td>
<td>W</td>
<td>C</td>
<td>W</td>
</tr>
<tr>
<td>Plan B</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>W</td>
<td>C</td>
</tr>
</tbody>
</table>

These plans make it possible for each industrial position to be filled by two students, one from Plan A and one from Plan B.

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 2.50 or higher. Also the student's character and personality must be acceptable to the cooperating employer. Transfer students with the above qualifications will be accepted after one semester of academic residence 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.

Courses

281A. Co-op Education. (1). This course 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. This course is intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Prerequisites: successful completion of 30 hours toward an engineering degree and approval by the appropriate faculty sponsor. May be repeated. Grade is Cr/Ncr. E 10 281 A 2 0901

281P. Co-op Education. (2). This course 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 enrolling in Engr. 281P must enroll concurrently in a minimum of six hours of course work including the course in addition to a minimum of 20 hours per week at their co-op assignment. Prerequisites: successful completion of 30 hours toward an engineering degree and approval by the appropriate faculty sponsor. May be repeated. Grade is Cr/Ncr. E 10 281 P 2 0901

481A. Co-op Education. (1). This course provides the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job during the academic year. Prerequisites: completion of 60 hours toward an engineering degree and approval by the appropriate faculty sponsor and Cooperative Education coordinators. This course is 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. E 10 481 A 2 0901

481P. Co-op Education. (2). This course provides the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job during the academic year. Prerequisites: completion of 60 hours toward an engineering degree and approval by the appropriate faculty sponsor and Cooperative Education coordinators. Students enrolling in Engr. 481P must enroll concurrently in a minimum of 20 hours per week at their co-op assignment. Prerequisites: junior standing and approval by the appropriate faculty sponsor. E 10 481 P 2 0901

Engineering—General Education

The following courses explore general education engineering topics.

Lower-Division Course

125. Introduction to Engineering Concepts. (2). An introduction to the orderly approach to problem solving utilized in engineering by guiding the student through a comprehensive design project. Emphasis is placed on problem formulation and solution techniques as they are required in the design project. Corequisites: Math 242Q and English 101. Not open for enrollment to students with more than 48 hours of credit. E 10 125 1 0901

Upper-Division Courses

300G. Technology and Society. (3). A course to demonstrate and explain—in depth, but without technical jargon—developments in technology. Emphasis is placed upon conceptual understanding of interrelationships between technology and its users. Responsibility of nontechnologists to be familiar with technical developments in order to effectively control technology for survival and enrichment is stressed. Guest lecturers and demonstrations are used extensively. For nonengineering majors; no credit given toward any major in engineering. Prerequisite: upper-division standing. E 10 300G D 0 0901

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R 2L means four hours of lecture and two hours of lab.
Aeronautical Engineering

Aeronautical engineering students at Wichita State acquire competence in professional fields such as aerodynamics, flight mechanics, propulsion, control systems and structures. The aeronautical engineering curriculum offers students opportunity to develop strong fundamental knowledge in mathematics, physics and general engineering sciences. Engineers educated in this field also find challenging careers in other industries where the emphasis is in such areas as engines and propulsion, structures and fluid mechanics.

Both the educational and research programs of the aeronautical engineering department specialize in the study of winged vehicles for flight in the atmosphere. With Wichita a major center of aviation, many upper-division students receive valuable experience working during the summer at the local plants of Beech Aircraft Corporation, Boeing Military Airplane Company, Cessna Aircraft Company and Gates-Learjet Corporation.

Many graduate and undergraduate students also work with professors on research projects supported by such sponsors as NASA or one of the local aviation industries. The well-equipped aeronautic laboratories include the Walter H. Beech Wind Tunnel, which is one of the largest and most modern on any campus in the world.

Bachelor of Science Degree in Aeronautical Engineering

Sequence of Courses

The undergraduate program requires the completion of 133 semester hours for graduation, minus advanced placement credit. The suggested course of study for aeronautical engineering students is given in the accompanying table.

Model Program

Course		Hrs.
---
Eng. 101 and 102, College English I and II.
Chem. 111Q, General Chemistry
Math. 242Q and 243, Calculus I and II.
Phys. 313Q and 315Q, University Physics I.
Engr. 125, Introduction to Engineering Concepts.
AE 110 and 213, Engineering Graphics I and II.

Sophomore

Course		Hrs.
---
Speech 111, Basic Public Speaking.
Math. 311, Introduction to Linear Algebra.
Math. 344, Calculus III.
Math. 550, Ordinary Differential Equations.
Phys. 314Q, University Physics II.
AE 324, Introduction to Aeronautical Engineering.
AE 327, Engineering Digital Computation.
AE 333, Mechanics of Deformable Solids I.
AE 373, Solid Mechanics: Dynamics.
ME 398, Thermodynamics I.
Humanities and fine arts or social and behavioral sciences electives**.

Upper-Division Courses

323. Engineering Mechanics: Statics. (3). Statics is the study of the condition of equilibrium of rigid bodies under the action of forces. Rigid bodies include beams, trusses, frames and machines. Both two and three dimensional bodies are considered. Also included is the study of centroids, centers of gravity and moments of inertia. Corequisites: Math. 243 and Phys. 313Q. E 11 323 0 0902

324. Introduction to Aeronautical Engineering. (2). 1R; 2L. Introductory course in aeronautical engineering. The study of atmosphere, historical development of science of aeronautics, aircraft and aerodynamic nomenclature, nondimensional forces and moments and equilibrium of aircraft in flight. Introduction to aircraft materials, structural analysis and experimental stress analysis. Flow visualization and force measurements in wind tunnel and student participation in flight plane flight demonstrations. Prerequisites: AE 323 and 327. E 11 324 0 0902


333. Mechanics of Deformable Solids I. (3). Deformable solids is the study of mechanical properties of materials, transformation of stresses and strain, stresses and deformations in structural elements of various shape and loading, statically indeterminate structures and buckling. Prerequisites: AE 323 with C or better and Math. 344 which may be taken concurrently. E 11 333 1 0921

400. System Modeling. (3). A consideration of interdisciplinary subjects to analytically develop simple models of real systems. These models are then fully exploited to show similarities between systems performance and analysis techniques. Examples are taken from anthropology, sociology, economics and technology. Senior standing recommended. Prerequisite: instructor's consent. E 10 400 0 0901

Courses for Graduate Students Only

960. Advanced Selected Topics in Engineering. (1-3). New or specialized advanced topics in engineering are presented under this listing. Repeatable for credit when subject material warrants. Prerequisite: instructor's consent. E 10 960 0 0901

976. PhD Dissertation. (1-16). Repeatable for credit when subject material warrants. Prerequisite: instructor's consent. E 10 976 0 0901

600. Integration of Engineering Concepts. (3). A course designed for senior students to integrate their classwork into a coherent concept of major principles, tools and techniques of engineering. Prerequisites: senior standing, preferably taken last semester of undergraduate work. E 11 600 0 0901

Graduate/Undergraduate Credit

Courses for Graduate/Undergraduate Credit

565. Computer Graphics. (3). 2R; 2L. Forms of computer graphics, input-output devices, generation of points, vectors, etc. Included are interactive versus passive graphics and the mathematics of three dimensions, projections and the hidden line problem. Animated movies, computer-aided design and instruction are included as well as applications. Prerequisite: instructor's consent. E 10 565 0 0901

Senior

Course	Hrs.
---
AE 512, Experimental Methods in Aerodynamics.
AE 514, Flight Mechanics.
AE 525 and 625, Flight Structures I and II.
AE 606, Systems Dynamics.
AE 628, Airplane Design.
Humanities and fine arts or social and behavioral sciences electives**.

Technical electives: 12

** Refer to general engineering requirements at the beginning of this section for list of approved courses.
** Refer to graduation requirements at the beginning of this section for details.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>373</td>
<td>Engineering Mechanics: Dynamics I, (3) A study of the laws of motion and the dynamics of particles and systems of particles. Prerequisites: AE 323 with C or better and Math 344. E 11 373 0 0921</td>
<td></td>
<td></td>
</tr>
<tr>
<td>420A</td>
<td>Airplane Aerodynamics I, Qualitative Aspects, (1) Aircraft nomenclature. Structure of the atmosphere. Aircraft forces and moments. Lift and drag calculation. Lifting surface theory. Prerequisite: AE 400 or departmental consent. E 11 420A 0 0902</td>
<td></td>
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</tr>
<tr>
<td>424</td>
<td>Aerodynamic Theory, (4) A study of dynamic compressible and incompressible flow, two- and three-dimensional airfoil theory, viscous flow and drag; an introduction to performance. Prerequisites: Math 550, ME 400, AE 373 and AE 324. E 11 424 0 0902</td>
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</tr>
</tbody>
</table>

Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>512</td>
<td>Experimental Methods in Aerodynamics, (2) 4L A study of experimental methods and test planning. Error analysis and propagation. Oscillography and flow visualization. Use is made of subsonic and supersonic wind tunnels. Prerequisite: AE 424. E 11 512 0 0902</td>
<td></td>
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</tr>
<tr>
<td>514</td>
<td>Flight Mechanics, (3) Fundamentals of analysis of flight vehicle trajectories. Performance, stability and control. Prerequisite: AE 424. E 11 514 0 0902</td>
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</tr>
<tr>
<td>525</td>
<td>Flight Structures I, (3) Stress analysis of flight vehicle components. Prerequisites: AE 324, AE 333, Math 350 and ME 350 both of which may be taken concurrently. E 11 525 0 0902</td>
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</tr>
<tr>
<td>532</td>
<td>Propulsion, (3) Turbojet and turboprop engines. Cycle analysis and performance prediction. Study of inlet and exhaust problems and integration with airflow. Prerequisites: AE 327 and AE 424. May be taken concurrently. E 11 532 0 0902</td>
<td></td>
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</tr>
<tr>
<td>550</td>
<td>Selected Topics in Aeronautical Engineering, (1-3) Prerequisites: departmental consent. E 11 550 0 0902</td>
<td></td>
<td></td>
</tr>
<tr>
<td>568</td>
<td>Systems Dynamics, (3) Lumped parameter modeling and analogies of electrical, mechanical, fluid and thermal systems. Classical, numerical, transform and state model methods of solution. Prerequisites: AE 373, EE 362 and Math. 550. E 11 568 0 0901</td>
<td></td>
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<tr>
<td>568</td>
<td>Airplane Design, (3) Preliminary design procedure and systems analysis. Prerequisite: AE 568. E 11 568 0 0902</td>
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<tr>
<td>533</td>
<td>Mechanics of Deformable Solids I, (3) The course is an extension of AE 333. Typical topics studied are transformation of stress and strain in three dimensions, nonlinear torsional members, curved beams, beams with unsymmetric cross sections, energy methods and the finite element method of analysis. Stress concentration, theories of failure, fracture mechanics, etc. Prerequisite: AE 333. E 11 533 0 0921</td>
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</tr>
<tr>
<td>564</td>
<td>Field Analysis, (3) Potential theory: equations of the applications of Poisson and Helmholtz and of the diffusion and wave equations to three-dimensional continuum potentials. Analysis of representative problems is also made. Prerequisite: ME 400. E 11 564 0 0921</td>
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<tr>
<td>675</td>
<td>Selected Topics in Aeronautical Engineering, (1-3) Prerequisites: departmental consent. E 11 675 0 0902</td>
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<tr>
<td>676</td>
<td>Selected Topics in Engineering Mechanics, (1-3) Prerequisites: departmental consent. E 11 676 0 0902</td>
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<tr>
<td>677</td>
<td>Vibration Analysis, (3) A study of free, forced, damped and undamped vibrations for one and two degrees of freedom, as well as classical, numerical and energy solutions for multidegree freedom systems. An introduction to continuous systems is given. Prerequisites: Math 550 and AE 373. E 11 677 0 0921</td>
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<tr>
<td>700</td>
<td>Structural Dynamics I, (3) Matrix methods for the analysis of the free and forced vibrations of multiple degree of freedom structures. Prerequisite: AE 677. E 11 700 0 0921</td>
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</tr>
<tr>
<td>702</td>
<td>Jet Propulsion, (3) Analysis of jet propulsion devices; study of cycles; effect of operating variables; stress of installation, operation and instrumentation. Prerequisite: AE 532 or equivalent. E 11 702 0 0902</td>
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<tr>
<td>709</td>
<td>Flight Stability and Control, (3) Comprehensive analysis of flight dynamic stability and control and an introduction to the analysis of closed-loop flight systems. Prerequisite: AE 514. E 11 709 0 0902</td>
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<tr>
<td>711</td>
<td>Aerodynamics of Nonviscous Fluids, (3) A study of equations of motion, potential flow, conformal transformations, lifting theory and nonsteady airfoil theory. Prerequisite: AE 424 or 420 or ME 621. E 11 711 0 0902</td>
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<tr>
<td>716</td>
<td>Aerodynamics of Compressible Fluids I, (3) Analysis of compressible fluid flow for one- and two-dimensional cases, moving shock waves, none-dimensional flow with friction and heat addition, linearized potential functions, method of characteristics, conical shocks and subsimilarly similar flows. Prerequisite: AE 424, AE 420, ME 621 or departmental consent. E 11 716 0 0902</td>
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</tr>
<tr>
<td>731</td>
<td>Analysis of Elastic Solids I, (3) The equations of elasticity are developed and used to determine stresses and deformations in two-dimensional (plane stress and plane strain) problems. Additional topics are: analysis of isotropic, orthotropic and composite plates; energy methods of analysis; and numerical methods of analysis such as finite elements, finite differences and collocation. Credit will not be granted for both AE 730 (no longer offered) and 731. Prerequisite: instructor’s consent. E 11 731 0 0921</td>
<td></td>
<td></td>
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<tr>
<td>753</td>
<td>Mechanics of Fiber Composites, (3) An introduction to classical Hooke’s Law for deformable solids; two-dimensional orthotropic and anisotropic stress-strain relations apply to a lamina of fiber composite; stiffness and strength of laminates made of several laminae at different fiber orientations. Simple laminated and filament wound composite products made of advanced fibrous composites such as graphite-epoxy, kevlar-epoxy, boron-epoxy, etc., are designed and analyzed. Prerequisites: AE 333 and Math. 311 or instructor’s consent. E 11 753 0 0921</td>
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<td></td>
</tr>
<tr>
<td>760</td>
<td>Selected Topics in Engineering Mechanics, (1-3) New or special courses are presented under this listing on subject demand. Repeatable for credit when subject matter warrants. Prerequisite: departmental consent. E 11 760 0 0921</td>
<td></td>
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</tr>
<tr>
<td>761</td>
<td>Selected Topics in Aerodynamics and Fluid Mechanics, (1-3) New or special courses are presented under this listing on subject demand. Repeatable for credit when subject matter warrants. Prerequisite: departmental consent. E 11 761 0 0902</td>
<td></td>
<td></td>
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<tr>
<td>752</td>
<td>Selected Topics in Propulsion, (1-3) New or special courses are presented under this listing on subject demand. Repeatable for credit when subject matter warrants. Prerequisite: departmental consent. E 11 752 0 0902</td>
<td></td>
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<tr>
<td>773</td>
<td>Engineering Mechanics: Dynamics II, (3) A study of kinematics and kinematics of particles and rigid bodies for two- and three-dimensional motion, with an introduction to vibratory motion. Lagrange’s equations are included. Prerequisite: AE 373 or equivalent. E 11 773 0 0921</td>
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</tbody>
</table>

The following abbreviations are used in the course descriptions: 1L means one hour of lecture; 1R means one hour of laboratory; 2L means two hours of lecture and 1R means one hour of laboratory. For example, 4R, 2L means four hours of lecture and two hours of lab.
Courses for Graduate Students Only

801. Structural Dynamics II. (3). A study of vibration of strings and membranes, longitudinal, torsional, and lateral vibration of bars; lateral vibration of plates and shells: classical, numerical and energy solutions, and an introduction to problems of aeroelasticity. Prerequisite: AE 677. E 11 812 0 0921

812. Aerodynamics of Viscous Fluids. (3). Viscous flow theory and boundary layers. Prerequisite: AE 424 or 420 or ME 621. E 11 812 0 0902

817. Transonic Aerodynamics. (2). 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, AE 420 or 420 or equivalent; and AE 711 or AE 716. E 11 817 0 0902

822. Finite Element Analysis of Structures. (3). Analysis of structures by the direct stiffness method and comparison of methods and selected finite element analysis. Prerequisites: AE 333 and instructor's consent. E 11 822 0 0902

831. Analysis of Elastic Solids II. (3). The course is a continuation of AE 731 with topics taken from: elastic stability, fracture mechanics, etc. Methods of analysis include: energy methods and numerical methods such as finite elements and collocation. E 11 831 0 0921

883. Random Vibration. (3). Includes characterization, transmission and failure of mechanical systems subjected to random vibration. Analysis and measurement methods for random data are included. Prerequisite: instructor's consent. E 11 838 0 0921

860. Selected Topics in Aeronautical Engineering. (1-3). New or special courses are presented under this listing with sufficient demand. Repeatable for credit when subject matter warrants. Prerequisite: departmental consent. E 11 860 0 0902

876. MS Thesis. (1-4). E 11 876 4 0902

878. Directed Studies. (1-2). A course involving directed study under the supervision of a graduate faculty member. A written report is required. Repeatable toward the MS directed study option up to two hours. Prerequisite: graduate standing. E 11 878 4 0902

913. Aerodynamics of Aeroelasticity. (3). A study of the aerodynamics of wing and missile structures and their flight characteristics. Prerequisites: AE 711 and 677 or instructor's consent. E 11 913 0 0902

916. Aerodynamics of Compressible Fluids II. (3). An exploration of perfect gas laws with emphasis on steady flow and steady flow analysis. Extension to compressible and three-dimensional ducts and modern methods for low aspect ratio lifting surfaces are included. Prerequisites: AE 711 and 677 or instructor's consent. E 11 916 0 0902

936. Theory of Plasticity. (3). Includes criteria of yielding, including plastic stress-strain relationships and stress deformation in thick-walled shells, rotating discs and cylinders, bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Two-dimensional and axially symmetric problems of finite deformation and variational extremum principles are included. Prerequisite: AE 731. E 11 936 0 0921


Electrical Engineering

In the electrical engineering department emphasis is placed on the intensive study of physical laws appropriate to the study of modern electrical devices, including electrical machines. Courses stress the laws governing the individual behavior as well as behavior in the interconnected devices. Analysis and synthesis of electrical networks or systems are of particular concern in specialized courses. The undergraduate program in electrical engineering is flexible enough to allow students to concentrate their electives in communications and signal processing, control systems, computer science, electric power systems, digital systems, electromagnetics and electronics.

Bachelor of Science Degree in Electrical Engineering

Sequence of Courses

Electrical engineering students must have a strong interest in mathematics and physics. As part of the curriculum, senior-level students are required to take a senior project of their own choosing under the supervision of a faculty member. The choice of subject material varies and represents a challenge in judgment and creativity in design. This program requires the completion of 132 semester hours for graduation, minus hours commensurate with advanced placement credit.

Specific requirements and a suggested semester breakdown for the electrical engineering program are given in the accompanying table.

Model Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Phys. 313Q, University Physics Lectures I</td>
<td>4</td>
</tr>
<tr>
<td>Phys. 315Q, University Physics Lab*</td>
<td>1</td>
</tr>
</tbody>
</table>

Speech 111. Basic Public Speaking, or Speech 112. Basic Interpersonal Communication

Engr. 125. Introduction to Engineering Concepts

HUM 126. Introduction to Humanities, and Fine Arts Electives

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>Math. 550, Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 314Q, Classical College Physics Lectures II</td>
<td>4</td>
</tr>
<tr>
<td>AE 373. Engineering Mechanics: Dynamics I</td>
<td>3</td>
</tr>
<tr>
<td>EE 199. Engineering Computing Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ME 398. Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>5</td>
</tr>
<tr>
<td>Technical electives**</td>
<td>2</td>
</tr>
</tbody>
</table>

Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 363, Electromagnetic Field Theory I</td>
<td>3</td>
</tr>
<tr>
<td>EE 488, Electromechanical Energy Converters</td>
<td>4</td>
</tr>
<tr>
<td>EE 492, Electronic Circuits I</td>
<td>3</td>
</tr>
<tr>
<td>EE 580, Transient and Frequency Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ME 400. Fluid and Heat Flow</td>
<td>4</td>
</tr>
<tr>
<td>Math. 671, Probabilistic Models and Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>Natural sciences electives</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral sciences electives</td>
<td>4</td>
</tr>
<tr>
<td>Technical electives**</td>
<td>5</td>
</tr>
</tbody>
</table>

*One of the following must be taken: Phys. 315Q or 316Q or a four-hour course from the basic science elective list

†Outside-department electives may be required to complete the 32-hour department requirement.

‡At least 16 hours must be taken in at least three departments in Division A. Humanities and Fine Arts. At least 16 hours must be taken in at least two departments in Division B. Social and Behavioral Sciences. At least 20 hours of General Studies courses must be taken for these divisions. The remaining courses must be selected such that at least 16 hours are included in one of the departments enumerated above. The two-course sequence must include at least one course in Department 200 or above.

**The following requirements concern technical electives.

1. In every case the program of engineering courses selected must include 33 hours of engineering sciences, 17 hours of design, synthesis, and systems, and 24 hours outside of the electrical engineering department. The student is responsible for seeing that these requirements are met.

2. A minimum of nine credit hours must be within the electrical engineering department. These courses must be selected with the approval of an electrical engineering advisor.
### Lower-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>199. Engineering Computing Fundamentals. (3)</td>
<td></td>
<td>An introductory course in digital computer programming using FORTRAN with applications to elementary engineering problems. Both FORTRAN syntax rules and problem solving approaches are stressed. Laboratory exercises are given for students to gain experience in both batch and interactive computing. Prerequisite: Math. 111 or 112. E 12 199 1 0909</td>
</tr>
<tr>
<td>228. Assembly Language Programming for Engineers. (3)</td>
<td></td>
<td>An introduction to basic concepts of computer organization and operations in both machine and assembly language programming concepts that illustrate basic principles and techniques. Prerequisite: EE 199 or equivalent. E 12 228 1 0909</td>
</tr>
<tr>
<td>382. Electrical Dynamics. (4)</td>
<td>3R</td>
<td>3L Electric circuit analysis with emphasis on the time varying cases: sinusoidal excitation, frequency response, network theorems, coupled circuits and polyphase circuits. Prerequisites: Math. 344, Phys. 314 and EE 199 or AE 327. E 12 382 1 0909</td>
</tr>
<tr>
<td>488. Electromechanical Energy Converters. (4)</td>
<td>3R</td>
<td>3L Theory and analysis of electromechanical energy conversion devices. Prerequisite: EE 382 or departmental consent. E 12 488 2 0909</td>
</tr>
<tr>
<td>492. Electronic Circuits I. (3)</td>
<td>3R</td>
<td>An introduction to semiconductor devices including discrete devices and integrated circuits and the application of these devices to linear and digital circuits. Applications include, but are not limited to, signal conditioning, logic circuits, filtering, and power supplies. Prerequisites: EE 382 and Math. 550. E 12 492 1 0909</td>
</tr>
</tbody>
</table>

### Upper-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>495. Electronic Design Project I. (1)</td>
<td></td>
<td>A design project under faculty supervision chosen according to the student's interest. Prerequisite: departmental consent. May not be counted toward a graduate electrical major. E 12 495 3 0099</td>
</tr>
<tr>
<td>585. Electrical Design Project II. (1)</td>
<td></td>
<td>A design project covering the application of digital techniques and the use of computer aided analysis and design. Prerequisite: EE 585 or departmental consent. May not be counted toward a graduate electrical major. E 12 585 3 0099</td>
</tr>
<tr>
<td>586. Advanced Electromechanical Energy Converters. (3)</td>
<td></td>
<td>A continuation of EE 488 including control computer applications are stressed. Prerequisites: EE 492 and 488. E 12 586 1 0909</td>
</tr>
<tr>
<td>594. Logic Design and Switching Theory. (3)</td>
<td></td>
<td>An introduction to the function and application of digital integrated circuits. Combinational and sequential design techniques, testability, test vector development of logic circuits and digital logic design. Prerequisites: EE 492 and 488. E 12 594 1 0909</td>
</tr>
<tr>
<td>595. Electrical Design Project II. (1)</td>
<td></td>
<td>A design project covering the application of digital integrated circuits. Combinational and sequential design techniques, testability, test vector development of logic circuits and digital logic design. Prerequisites: EE 492 and 488. E 12 595 3 0099</td>
</tr>
<tr>
<td>596. Electric Energy Systems. (3)</td>
<td></td>
<td>Concepts of electric energy systems, high-energy transmission lines, system representation, load-flow analysis, load-flow control, economic operation, symmetrical and unsymmetrical faults, and system stability. Computer applications are stressed. Prerequisite: EE 488. E 12 596 0 0909</td>
</tr>
<tr>
<td>598. Electromechanical Energy Converters. (4)</td>
<td></td>
<td>A study of the theory and application of transmission lines. Both pulsed and steady state sinusoidal signals are treated. Topics include line parameters and equations, signal propagation, effects of loading and resonant lines and stubs. Prerequisite or corequisite: EE 580. May not be counted toward a graduate electrical major. E 12 598 0 0909</td>
</tr>
<tr>
<td>599. Control System Concepts. (3)</td>
<td></td>
<td>An introduction to system modeling and simulation, dynamic response, feedback theory, stability criteria and compensation design. Prerequisite: EE 580. E 12 599 1 0909</td>
</tr>
<tr>
<td>686. Information Processing. (4)</td>
<td>3R</td>
<td>3L Properties of signals and noise, introduction to information theory, and AM, FM, and pulse modulation. Principles of sampling, coding and multiplexing. Prerequisites: EE 580 or departmental consent. E 12 686 1 0909</td>
</tr>
<tr>
<td>688. Advanced Digital Electronics I. (4)</td>
<td></td>
<td>3L This course is designed to provide an understanding and appreciation of small computer capability and the application of these computers to engineering problems. Through hands-on operation, topics such as interfacing to special equipment, graphical and special-purpose programs, Computer-Aided Design, Local Area Networks, organization and programming considerations are studied and applications emphasized. Prerequisites: EE 228 or equivalent and at least one EE course at 500 level or above. E 12 688 0 0909</td>
</tr>
<tr>
<td>695. Probabilistic Methods in Systems. (3)</td>
<td></td>
<td>A study in random processes which is designed to prepare the student for work in communications, controls, computer systems, information theory and signal processing. The course covers basic concepts and useful analytical tools for engineering problems involving discrete and continuous random processes. Applications to system design and digital signal processing, data compression, parameter estimation and related disciplines will be discussed. Prerequisites: EE 580 and EE 354 or departmental consent. E 12 695 0 0909</td>
</tr>
<tr>
<td>696. Digital Computer Design Fundamentals. (3)</td>
<td></td>
<td>An introductory but reasonably detailed study of small computer digital computers from an integrated hardware-software approach. Consideration is given to computer logical design, arithmetic units and operation, large capacity storage systems, input-output units and system organization. Prerequisite: EE 594 or departmental consent. E 12 696 4 0909</td>
</tr>
<tr>
<td>697. Selected Topics in Electrical Engineering. (1-4)</td>
<td></td>
<td>New or special courses are presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 12 697 0 0909</td>
</tr>
</tbody>
</table>

### Courses for Graduate/Undergraduate Credit

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<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>580. Transient and Frequency Analysis. (3)</td>
<td>3R</td>
<td>Review of classical transient analysis and Fourier series. An introduction is made to Laplace and Fourier transforms with emphasis on network response, complex frequency concepts and signal spectra. Prerequisites: EE 382 and Math. 550. May not be counted for credit toward a graduate electrical major. E 12 580 0 0909</td>
</tr>
<tr>
<td>681. Electronic Circuits II. (4)</td>
<td>3R</td>
<td>3L An investigation of the theory and application of discrete-time signals and systems. Time-domain techniques include difference equations and discrete convolution. Z-transform methods, frequency response of discrete-time systems, discrete Fourier transform and fast Fourier transform are covered. Applications in digital signal processing and sampled-data systems are surveyed. Prerequisite: EE 580 or departmental consent. E 12 681 3 0099</td>
</tr>
</tbody>
</table>
| 766. Digital Communication Systems. (3)                             |      | A course designed to cover theoretical and practical aspects of digital information transmission. Topics to be covered include
modeling and analysis of discrete information sources, source coding, baseband PAM data transmission; digital modulation schemes such as ASK, PSK, FSK, DPSK; error control through coding and techniques for digital transmission. Prerequisites: EE 654 and 688 or equivalent. E 12 786 0 0909

790. Independent Study in Electrical Engineering. (1-3). Arranged individual independent study in specialized content areas in electrical engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: departmental consent. E 12 790 0 0909

792. State-Variable Techniques in Systems I. (3). Review of mathematics fundamental to state-space concepts. Formulation of state-variable models for linear and nonlinear continuous and discrete systems and concepts of controllability and observability. Adjoining systems are studied in addition to Liapunov and Lagrange stability and computational and numerical analysis techniques. Prerequisites: EE 580 or departmental consent. E 12 792 0 0909

794. Advanced Digital Systems. (3). A course covering primarily two topics: (1) microprocessors, and (2) microprogramming. The operation and application of microprocessors are presented and a survey of available devices is reviewed. The characteristics of microprogrammable architectures are covered and the techniques of microprogramming are presented. The techniques are applied on the department's microprogrammable minicomputer. Prerequisites: EE 694 and 228 or equivalent. E 12 794 0 0909

Courses for Graduate Students Only

854. Stochastic Control Systems. (3). Review of the pertinent aspects of deterministic system models, stochastic processes and linear dynamic system models with emphasis on linear systems driven by white Gaussian noise; linear estimation and optimal filtering; designs and performance analysis of Kalman filters. Prerequisites: EE 684 and 654. E 12 854 0 0909

876. MS Thesis. (1-3). Repeatable for credit toward the MS thesis option up to six hours. Prerequisite: prior consent of MS thesis advisor. E 12 876 4 0909

877. Special Topics in Electrical Engineering. (3). New or special courses are presented under this heading when sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 12 877 0 0909

878. Directed Studies in Electrical Engineering. (1-4). Repeatable toward the MS directed study option for up to four hours. The student must write a formal presentation on the study made. Prerequisite: departmental consent. E 12 878 4 0909

882. Analog and Digital Filters. (3). A course covering the basic knowledge and the tools of filter design. Both analog and digital filters are treated. Topics include filter approximations, prototype and active filter realizations, sensitivity analysis and digital filter concepts and design methods. Prerequisite: EE 782 or departmental consent. E 12 882 0 0909

884. Discrete-Time Control Systems. (3). Fundamentals of input-output and state-space analysis, difference equations and state-space representations; pole placement and observer design; dynamic programming and discrete minimum principle; linear state-regulator design; constrained control problems. Prerequisites: EE 684 and 782. E 12 884 0 0909

887. Communication Theory. (3). Theory of information and noise, communication of information in presence of noise, channel capacity, modulation and multiplexing, sampling and coding, detection theory, including effects of noise and nonlinear circuits, and correlation methods. Prerequisites: EE 684 and 688 or departmental consent. E 12 887 0 0909

888. Selected Topics in Antennas and Propagation. (3). Determination of characteristics of practical antenna systems; radiation patterns and antenna impedance; diffraction, horns, slots, etc.; and wave propagation in the earth's environment, including tropospheric and ionospheric phenomena. Prerequisite: EE 663. E 12 888 0 0909

889. Advanced Electrical Laboratory. (2). (6L) Training in fundamental experimental technology in some field of electrical specialization. This course consists of selected experiments in various areas of electrical engineering. The general subject area is announced each semester the course is offered. Repeatable for credit. Prerequisite: departmental consent. E 12 889 1 0909

890. Topics in Control Systems. (3). A study of various concepts such as multi-loop systems, multivariable systems and decoupling; nonlinear systems, and sampled-data systems. Repeatable for credit. Prerequisite: EE 684 or departmental consent. E 12 890 0 0909

893. State-Variable Techniques in Systems II. (3). A continuation of the study of state-space concepts in the areas of nonlinear systems and optimal and suboptimal control systems with wide classes of performance measures. Prerequisite: EE 792 or departmental consent. E 12 893 0 0909

895. Nonlinear Control Theory. (3). An introduction to the analysis and design of nonlinear control systems with an emphasis on stability. Topics include: stability definitions, phase-plane methods, linearization, time and frequency domain stability criteria, limit-cycle criteria and exact methods for relay control systems. E 12 895 0 0909

899. Advanced Energy Systems. (3). A continuation of EE 589 with the topics treated in greater depth. Computer applications are stressed. Prerequisite: EE 598 or departmental consent. E 12 899 0 0909


993. Sensitivity Methods in Control Systems Design. (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; least-squares design strategies; state and output feedback design; sensitivity function approach; singular perturbation and modal reduction techniques; adaptive systems with near-optimal control. Prerequisites: EE 893. E 12 993 0 0909

The following abbreviations are used in the course descriptions: I stands for lecture and L for laboratory. For example, 4R 2L means four hours of lecture and two hours of lab.

Industrial Engineering

The industrial engineering department is concerned with instruction and research in design, analysis and operation of integrated systems of men, material, equipment and money.

Students may select 12 hours of technical electives to emphasize their study of operations research, human factors or manufacturing systems. This allows students to specialize in a specific area of industrial engineering, and students' programs are determined by their own interests in consultation with their faculty advisers.

Modern, well-equipped laboratories are available to supplement classroom theory in human factors engineering, manufacturing processes and computer analysis. The industrial engineering department also has modern drafting and computer graphics facilities.

Bachelor of Science Degree in Industrial Engineering

Sequence of Courses

The industrial engineering program requires the completion of 134 semester hours for graduation, minus hours commensurate with advanced placement credit. Specific requirements and a suggested semester breakdown for the industrial engineering program are given in the accompanying table.

Model Program

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Chem 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math 2420 and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Phys 313Q, University Physics I</td>
<td>5</td>
</tr>
<tr>
<td>Phys 315Q, University Physics Lab</td>
<td>1</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Engr 125, Introduction to Engineering Concepts</td>
<td>3</td>
</tr>
<tr>
<td>IE 110, Engineering Graphics I</td>
<td>2</td>
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</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Math 311, Introduction to Linear Algebra</td>
<td>1</td>
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<tr>
<td>Math 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>Math 550, Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>Phys 314Q, Classical College Physics Lectures II</td>
<td>4</td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics Statics</td>
<td>3</td>
</tr>
</tbody>
</table>
213. Engineering Graphics II. (2). 1R; 3L. A study of intersections of solids, surfaces, conic sections and graphical solution of vector problems. Introduction to computer graphics software and hardware and interactive creation and editing of data files. Prerequisite: IE 110. E 13 213 1 0901

250. Topics in Engineering Graphics. (2). 1R; 3L. The application of engineering graphics to the study of special problems and to methods of conversion information. Prerequisite: IE 213. E 13 250 1 0901

Upper-Division Courses

354. Engineering Probability and Statistics. (3). Basic theory of probability and statistics with emphasis on applications to engineering. Prerequisite: EE 199 or AE 327. Prerequisite or corequisite: Math 344. E 13 354 1 0901

355. Engineering Economy. (3). Economic comparisons of engineering alternatives considering the time value of money, taxes and depreciation. Prerequisites: Math 243 and EE 199 or AE 327. E 13 355 0 0913

356. Introduction to Numerical Control. (2). A study of the concepts and techniques of the operation of machine tools from numerical data. Prerequisites: Math 123 and EE 199 or AE 327. E 13 356 1 0913


452. Work Measurement. (3). Work measurement, motion and time study, methods simplification, work sampling, predetermined time standards and time formula derivation. Prerequisites: IE 354 and 355. E 13 452 1 0913


480. Selected Topics in Industrial Engineering. (1-4). New or special course materials are presented based upon sufficient student demand. Repeatable for credit. Prerequisite: departmental consent. E 13 480 0 0913

Courses for Graduate/Undergraduate Credit

549. The Human Factor in Engineering Design. (3). A systematic approach to the optimization of human-environment interaction. Topics include human information processing and limitations, work space design and environmental factors. Prerequisite: IE 354. E 13 549 0 0913


553. Production Control. (3). Techniques of production planning, scheduling and dispatching and applications to automation and computer control. Prerequisite: IE 452. E 13 553 1 0913

554. Statistical Quality Control. (3). Measurement and control of product quality using process control and acceptance sampling techniques. Prerequisite: IE 354. E 13 554 1 0913

556. Introduction to Information Systems. (3). A study of the design, implementation and economic analysis of computer-based information systems. Prerequisite: IE 355. E 13 556 0 0913

558. Manufacturing Methods and Materials. (3). A study of modern manufacturing and fabricating methods employed in industry. Prerequisites: IE 355. E 13 558 0 0913

570. Manufacturing Process Control. (3). A study of control techniques of manufacturing using electrical computers to monitor and control industrial processes. Included topics are sensor characteristics and applications; control techniques; and programming considerations. Prerequisite: EE 199. Corequisite: IE 382. E 13 570 0 0913

580. Modern Techniques in Safety Engineering. (3). An advanced study of the principles and quantitative measures of industrial safety and the Occupational Safety and Health Act. Prerequisite: IE 357. E 13 580 0 0913

590. Senior Projects in Industrial Engineering. (1-3). Selection and research of a thesis project in an industrial engineering topic. Prerequisites or corequisites: IE 452 and 550. E 13 590 0 0913


654. Engineering Probability and Statistics II. (3). A study of hypothesis testing, regression analysis, analysis of variance, correlation analysis and nonparametric statistics with emphasis on applications to engineering. Prerequisite: IE 354. E 13 654 0 0913

665. Management Systems Simulation. (3). The design of simulation methods and techniques for use in managerial decision models, engineering evaluations and other systems too complex to be solved analytically. Emphasis is on general purpose computer simulation languages. Prerequisites: EE 199 and IE 354. E 13 665 1 0913


720. Urban Systems. (3). Cross-listed as LIA 220. This course develops the principles of systems analysis and the tools by which these principles can be applied. Example applications are taken from urban problems. Emphasis is on the development of models and solutions. Computer techniques are used in class as necessary. Prerequisite: departmental consent. E 13 720 0 0913

722. Simulation of Social and Administrative Systems. (3). Designed primarily for non-mathematically oriented persons working in the social and administrative areas who desire a working knowledge of simulation. Case studies are used extensively and faculty in computer simulation language is developed. Prerequisite: departmental consent. E 13 722 1 0901
730. Advanced Linear Programming. (3). A continuation of IE 550. Included topics are the mathematical development of the simplex method, revised simplex, decomposition, bounded variables, parametric, programming and integer programming. Prerequisite: IE 550. E 13 730 0 0913

732. Queuing and Inventory Systems. (3). An analysis of the behavior of queuing and inventory systems and their interactions. Poisson, non-Poisson and imbalanced Markov chain queuing models are discussed. Includes the development of single and multiple item constrained inventory models and periodic and continuous review policies. Prerequisite: IE 650. E 13 732 0 0913

735. Applied Forecasting Methods. (3). Analysis of prediction techniques in forecasting and scheduling by time series and probability models, smoothing techniques and error analysis. Prerequisite: IE 654. E 13 735 0 0913

740. Analysis of Decision Processes. (3). A study of time value of money, economics of equipment selection and replacement, engineering estimates, evaluation of proposals, cost analysis and the solution of economic problems by the analysis of certainty, risk and uncertainty. Prerequisites: IE 354 and 355, E 13 740 0 0913

745. Production Engineering Cases. (3). The organization, design and control of production and associated staff functions. The formulation of manufacturing policies and case studies in production system design are included. Prerequisite: IE 553. E 13 745 0 0913

750. Industrial Engineering Workshops. (1-4). Various topics in industrial engineering. Prerequisite: departmental consent. E 13 750 0 0913

754. Reliability and Maintainability Engineering. (3). Intended to acquaint students with the evolving methodology of reliability which is a design parameter. Problems of quantifying, assessing and verifying reliability are studied. Various factors that determine the stress and strength of components with emphasis on practical applications are presented. Examples and problems cover a broad range of engineering fields, such as mechanical, electrical, industrial, aeronautical, mechanical, computer, structures, automatic control systems. Prerequisite: IE 534, E 13 754 0 0913

Courses for Graduate Students Only

831. Classical Optimization Techniques. (3). An extensive treatment of those optimization techniques that do not require the use of linear programming. A development of variational methods, direct search and numerically based techniques is given. Prerequisite: IE 550. E 13 831 0 0913

842. System Simulation with Digital Computers. (3). Advanced development of the techniques and methods for simulating complex systems. Emphasis is on the design of simulation experiments and on the statistical analysis of results. Prerequisite: IE 665. E 13 842 0 0913

843. Operations Research. (3). A study of the theory and application of nonlinear model-building techniques for the problems found in industry. Included topics are the Jacobian method, Lagrange multipliers, and separable, convex, quadratic, geometric and stochastic programming. Prerequisites: IE 550 and IE 650. E 13 843 1 0913

849. Industrial Engineering Problems. (1-3). Analysis, research and solution of a selected problem. E 13 849 0 0913

870. Flexible Manufacturing Systems. (3). Advanced study of modern, computer integrated manufacturing systems. Topics include integrated CAD/CAM systems, data base in FMS, robots application, interfacing machines, computers and measuring devices. Prerequisite: IE 570 or equivalent. E 13 870 0 0913


879. Seminar in Management Science. (3). Application of management science methods and models to real problems. A special project, original case research, supervised internships or field research is assigned. Prerequisite: departmental consent. E 13 879 9 0913

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. E 13 880 0 0913

Mechanical Engineering

The curriculum in mechanical engineering is versatile, broad based and designed to prepare students for careers in a wide variety of industries. These include energy production, transportation by all modes, manufacturing, consumer products, environmental control and health equipment. Graduates of the program are involved in such activities as design, research, development, production and technical management.

Students are prepared to accept these challenges through an integrated course of study which emphasizes the professional practice of engineering. The program has several components: a basic series of courses in mathematics and natural science, communications, humanities and social sciences; a core of engineering science subjects; a set of required design and application courses; and a group of technical electives. The electives, which are taken during the senior year, permit further study in the fields of mechanical systems, heat transfer, controls, thermodynamics, fluid mechanics and instrumentation and experimentation.

Bachelor of Science Degree in Mechanical Engineering

Sequence of Courses

The program requires the completion of 134 semester hours for graduation, minus hours commensurate with advanced placement credit. Specific requirements and a suggested semester breakdown for the mechanical engineering program are given in the table.
### Courses for Graduate/Undergraduate Credit

The courses numbered 502 through 767 are not automatically applicable toward an advanced degree in engineering. They must be approved by the student’s adviser, the graduate coordinator, and the chairperson of the department.

#### 502. Thermodynamics II. (3). Continuation of ME 398, with emphasis on availability, irreversibility, Maxwell’s equations and thermodynamic property relations. Prerequisites: ME 398. E 14 502 0 0910

#### 503. Mechanical Engineering Laboratory. (2). Selected projects designed to 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. Prerequisites: ME 402, 541, 622. E 14 503 1 0910

#### 504. Instrumentation. (3). 2R; 3L. A more complete treatment of the measurement problem with careful examination of modern instrumentation systems, including dynamic behavior and nonlinearities. Criteria for design, synthesis and selection of instrumentation systems are included. Prerequisites: ME 402. E 14 504 1 0910

#### 504. Instrumentation II. (3). 2R; 3L. Applications of the engineering design principles to the creative design of mechanical equipment. Problem definition, conceptual design, feasibility studies, design calculations, and the preparation of design documentation, and proposal. Criteria for design, synthesis and selection of instrumentation systems are included. Prerequisites: ME 402 and 439 with a grade of ‘C’ or above in both. E 14 541 1 0910

#### 544. Environmental Engineering. (3). Theory, analysis and design of heating, ventilating and air-conditioning systems based on psychrometrics, thermodynamics and heat transfer fundamentals. Emphasis is on design procedures for space air-conditioning and heating and cooling loads in buildings. Prerequisites: ME 400 and 502. E 14 544 0 1910

#### 546. Mechanical Engineering Projects. (1). A design, analysis or research project under faculty supervision. Prerequisites are selected according to student interest. Prerequisites: ME 540 and 402. E 14 546 1 0910

#### 548. Mechanical Engineering Projects. (1). A design, analysis or research project under faculty supervision. Prerequisites are selected according to student interest. Prerequisites: ME 540 and 402. E 14 548 1 0910

#### 621. Fluid Mechanics. (3). Continuation of fluid mechanics staff of ME 400. Analysis of steady and unsteady, incompressible and compressible, multidimensional flow fields and associated mathematical and energy equations. Included are potential flow, boundary layer theory and fluid machinery. Prerequisites: ME 400. E 14 621 0 0910

#### 622. Heat Transfer. (3). A continuation of heat transfer staff of ME 400; steady and transient multidimensional flow fields and associated mathematical and energy equations. Included are potential flow, boundary layer theory and fluid machinery. Prerequisites: ME 400 and 621 (may be taken concurrently). E 14 622 0 0910
### Courses for Graduate Students Only

**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: Math 651 or departmental consent. E 14 801 0 0910

**845. Fracture.** (3). Ductile and brittle fracture: phenomena and mechanisms, linear elastic fracture mechanics, transition temperature approaches, tests for fracture resistance and design methods. Prerequisite: departmental consent. E 14 845 0 0910

**846. Fatigue and Wear.** (3). Fatigue of metals and nonmetals: phenomena, fatigue testing procedures and design methods, survey of wear problems in engineering. Prerequisite: departmental consent. E 14 846 0 0910

**851. Heat Transfer-Conduction.** (3). Theory and measurement, Fourier's equation, steady and unsteady state with and without heat sources and sinks and numerical methods. Prerequisites: Math 651 or departmental consent. E 14 851 0 0910

**852. Heat Transfer-Convection.** (3). Free and forced convection, potential flow and viscous flow phenomena. Analysis and synthesis of heat transfer equipment are included. Prerequisite: Math 652 or departmental consent. E 14 852 0 0910

**853. Heat Transfer-Radiation.** (3). Radiative properties of real surfaces, configuration factor analysis, radiative transfer in participating media, exchange factor analysis, Monte Carlo methods. Prerequisite: Math 652 or departmental consent. E 14 853 0 0910

**856. Advanced Thermodynamics.** (3). Statistical thermodynamics, Boltzmann, Bose-Einstein and Fermi-Dirac statistics, calculation of thermodynamics properties, elementary kinetic theory, introduction to irreversible thermodynamics. Prerequisite: ME 502 or departmental consent. E 14 856 0 0910

**860. Electromechanical Control Systems.** (3). Description, analysis and design of electromechanical control systems, with an emphasis on actual devices. Prerequisite: ME 639 or departmental consent. E 14 860 0 0910

**861. Similitude in Engineering.** (2). Critical analysis of models and analogies as aids to engineering design. Prerequisite: departmental consent. E 14 861 0 0910

**868. Rational Design Methods.** (3). The principles of creativity, decision theory, modeling, optimization and reliability as applied to problems of engineering design. Prerequisite: departmental consent. E 14 868 0 0910

**870. Special Topics in Mechanical Engineering.** (3). New or special courses are presented under this listing. This course may be repeated for credit when subject material warrants. Prerequisite: departmental consent. E 14 870 0 0910

**875. Thesis.** (1-4). E 14 875 4 0910

**878. Directed Studies.** (1-4). Repeatable as approved in the Graduate School plan of study. The student must write a paper. Students selecting the directed study option to fulfill the degree requirement need also to take an oral examination on the study made. Prerequisite: departmental consent. E 14 878 4 0910

Rhoda-Gale Pollack, PhD, Dean

The College of Fine Arts is responsible for instruction and education, creative activity, scholarly inquiry, performance and practice in music, dance and visual arts. The Division of Art and the Division of Music offer professional training programs at both the undergraduate and graduate levels. The Division of Dance joined the College of Fine Arts in July 1978, offering professional performance programs at the undergraduate level.

Students are offered a complete spectrum of artistic endeavors, whether they are interested in professional activities, teaching careers, graduate study or increased knowledge about the arts. Students have the opportunity to explore various art forms with an open mind, thus developing their ability to respond to changes, developments and challenges within the art world of the future. The college strives to develop the new techniques, historical research and information necessary to achieve these ends.

The Division of Music is an accredited member of the National Association of Schools of Music and its requirements for entrance and graduation are in accordance with the association's published regulations.

Degrees Offered

Undergraduate

The College of Fine Arts offers four undergraduate degrees: 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 division programs.

Graduate

The Graduate School offers a program leading to the Master of Fine Arts (MFA) with emphases in ceramics, painting, printmaking and sculpture; the Master of Arts (MA) in art education; a Master of Music Education (MME) with emphases in elementary music, instrumental music, choral music and music in special education and a Master of Music (MM) with emphases in history-literature, performance, piano pedagogy and theory-composition.

For information concerning requirements for entrance and curricula, consult The Wichita State University Graduate School Bulletin.

Special Academic Area

Cooperative Education

The College of Fine Arts participates in the University Cooperative Education
The program is designed to provide relevant paid employment experiences that integrate and complement the students’ academic programs. Degree credit is awarded. Students are placed in a variety of positions including education and business settings in both music and art disciplines. For further information contact the fine arts coordinator in the Cooperative Education Office.

Policies

Admission

All entering freshmen are enrolled in University College. Upon completing 24 semester hours of specified courses with a minimum grade point average of 2.00, students are eligible to enroll in the divisions of art, dance or music.

Transfer students may enroll in the College of Fine Arts if their transcripts indicate they have completed a minimum of 24 semester hours with a minimum grade point average of 2.00 (C). Students with a grade average of at least 1.70, but less than 2.00, may petition for admittance. Transfer students who do not meet the minimum requirements of 24 semester hours and a grade point average of 2.00 are enrolled in University College.

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 grade point average of at least 2.00. Students enrolled in either the music education or art education programs must have a cumulative grade point average of 2.50 prior to enrolling in student teaching.

Students who do not achieve or maintain the required 2.00 grade point average will be placed (or continued) on probation at the conclusion of each semester in which their overall grade point average falls below 2.00. Students on probation are limited to a maximum of 12 credit hours per semester while on probation. Students failing to maintain a current average of 2.00 in each semester in which they are on probation will be dismissed from the University, unless they have not attempted 12 semester hours since the beginning of the probationary period.

Transfer students admitted on probation must complete at least 12 semester hours with a minimum grade point average of 2.00 on work at Wichita State before probation may be lifted. If a grade point average of 2.00 is not achieved for the first attempted 12 hours of Wichita State work, transfer students admitted on probation will be dismissed from the University.

Students who have been dismissed for poor scholarship may be readmitted by the permission of the Curriculum and Policy Committee of their major division in the College of Fine Arts and by the University’s Committee on Admissions and Exceptions.

Division of Art

The Division of Art, a part of the College of Fine Arts, is divided into four departments: art education, art history, graphic design and studio arts—with its four areas of drawing-painting, printmaking, ceramics and sculpture. The departments offer professional courses designed to train and educate art students who are planning careers in the arts and to allow students in other colleges to gain an understanding and appreciation of art.

Art students have excellent facilities in the McKnight Art Center and renovated Herriott Annex. The center provides extensive space for exhibiting student work. The Clayton Staples Gallery, designed specifically for undergraduate and graduate students and invitational shows, was completed January 1978. Under the auspices of 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 also provides programs of guest artists and lecturers of regional, national and international interest.

Policies

Students are not allowed credit toward graduation for D grade work in excess of one-fourth of the total hours. A grade average of 2.00 or better must be earned on all work taken at Wichita State that can be applied to a student’s degree.

The division will accept the transfer of only one credit hour per semester of nonresidential studio work (such as extension or correspondence courses from accredited institutions), totaling no more than six hours of the last 30 or ten hours of the total number of hours required for graduation.

The University’s general education requirements can be satisfied by all art history courses except Art Hist. 426.

The division controls all art work or essays submitted for credit by students and reserves the right to select certain pieces for its permanent collection.

All art materials, with the exception of certain nonexpendable equipment, must be furnished by the students.

Graduation Requirements

Bachelor of Fine Arts

The Division of Art offers a Bachelor of Fine Arts degree (BFA) in art history, graphic design, ceramics, painting, printmaking and sculpture. In addition to the University's scholastic, residence and general education requirements (outlined in the Requirements for Graduation section), candidates for the BFA must complete the specific requirements of the appropriate department. Specific programs for each of the above areas of specialization are described under the appropriate department's heading in the following pages.

Bachelor of Art Education

In addition to meeting the University’s scholastic residence requirements for graduation, candidates for the BAE must complete a minimum of 134 semester hours, with 42 hours in the General Education Program, 64 in the art curriculum and 28 in education. The General Education Program is described in detail in the Academic Information—Requirements for Graduation section in the beginning of the Catalog. Electives must be selected in consultation with an advisor.

The art education program fulfills both the University general education requirements for graduation and the Kansas certification requirements for teaching art at the secondary and elementary levels.

The specific requirements for the BAE are given in the Art Education section of the Catalog.

Departmental Requirements and Course Listings

Art Education

The art education department offers a professional program for students interested in teaching art. The art education structured program prepares majors to teach and supervise at various educational levels and all majors are required to specialize in a studio art, graphic design or art history program.

Outline of Program

A total of 134 hours is required as distributed below:

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>64</td>
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<tr>
<td>Two-dimensional</td>
<td>15</td>
</tr>
<tr>
<td>Three-dimensional</td>
<td>12</td>
</tr>
<tr>
<td>Art education</td>
<td>22</td>
</tr>
</tbody>
</table>
**Art specialization**

**Art history**

**Education (Instructional Services)**

**General Education Program**

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**Student Teaching**

Admission into the student teaching semester requires senior standing (90 hours or 200 credit points); a minimum cumulative grade point average of 2.50 and 2.50 in art courses at the time of application for student teaching; a grade of C or better in English composition (Eng. 101 and 102 or its equivalent); a grade of C or better in oral communication; completion of instructional services and art education prerequisites; satisfactory physical examination; and recommendation by the Department of Art Education following a formal interview. Students must apply for student teaching by midterm of the spring semester prior to the student teaching year. The first semester prior to the student teaching year must include combined Art Ed. 516 and IS 433.

A survey course about exceptional children, reading for secondary students and a multicultural course are included in the teacher certification requirements. Departmental review of course content will be given for transfer of art education credits from other institutions.

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**Art Minor Outside the College of Fine Arts**

Students in the College of Education who wish to minor in art need to complete 18 hours of art. These hours must be distributed as follows: SA (Drawing) 145; Art Ed. 110Q, 210 and 313; one elected studio course; and three hours of Art Hist. 121G or 122G.

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**Lower-Division Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>110Q</td>
<td>Visual Arts (3)</td>
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<tr>
<td>115</td>
<td>Human Experience and the Arts (3)</td>
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<tr>
<td>150</td>
<td>Art Workshop (1-3)</td>
</tr>
<tr>
<td>210</td>
<td>Visual Arts for the Child (3)</td>
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**Courses for Graduate/Undergraduate Credit**

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<td>510Q</td>
<td>Stimulating Creative Behavior (3)</td>
</tr>
<tr>
<td>512</td>
<td>Metal Processes for Jewelry Construction (3)</td>
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<tr>
<td>514Q</td>
<td>Aesthetic Inquiry (3)</td>
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</table>

**Upper-Division Courses**

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<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>311</td>
<td>Art Education Curriculum in the Elementary School (3)</td>
</tr>
<tr>
<td>313</td>
<td>Fiber Exploration for the Classroom (3)</td>
</tr>
<tr>
<td>314</td>
<td>Art Education in the Secondary School (3)</td>
</tr>
<tr>
<td>315</td>
<td>Cooperative Education (1-8)</td>
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**Courses for Graduate Students Only**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>14</td>
<td>Individual Research Problems in Art (1-3)</td>
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**Courses for Graduate Students Only**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>515</td>
<td>Developing Visual Materials for Art Education (3)</td>
</tr>
<tr>
<td>516</td>
<td>Art Education Practicum (3)</td>
</tr>
<tr>
<td>517</td>
<td>Student Teaching Seminar in Art (1)</td>
</tr>
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**Courses for Graduate Students Only**

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>711</td>
<td>Seminar in Art Education (1-3)</td>
</tr>
<tr>
<td>712</td>
<td>Development of Art Understanding in the Educational Program (3)</td>
</tr>
<tr>
<td>713</td>
<td>Fiber and Fabric Processes (1-3)</td>
</tr>
</tbody>
</table>

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**Research Problems in Art Education (3) **

- Orientation in research methods, findings and designs related to the analysis of studies and current problems in art education. Repeatable once for credit. Prerequisite: instructor's consent.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>750</td>
<td>Art Workshop (1-3)</td>
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</tbody>
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**Courses for Graduate Students Only**

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>815</td>
<td>Individual Research Problems in Art Education (1-4)</td>
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**Courses for Graduate Students Only**

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<tr>
<td>816-817</td>
<td>Thesis—Art Education (1-3)</td>
</tr>
<tr>
<td>818-819</td>
<td>Terminal Project—Art Education (1-3)</td>
</tr>
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**Courses for Graduate Students Only**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>91</td>
<td></td>
</tr>
</tbody>
</table>
Art History

The art history program prepares students for activities related to the art of the past: criticism, both college- and secondary-level teaching and conservation. Students are exposed to a view of art from the earliest times to the present. The language of art, as well as the historical framework, is emphasized.

Requirements. A total of 124 hours is required for a major, as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Art Curriculum</th>
<th>Art History</th>
<th>Foreign Language</th>
<th>Elective</th>
<th>General Education Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hrs.</td>
<td>83</td>
<td>33</td>
<td>13</td>
<td>37</td>
<td>41</td>
</tr>
</tbody>
</table>

**Lower-Division Courses**

121G. Survey of Western Art: Paleolithic Through Early Christian. (3). A historical survey of art from prehistoric origins to the Middle Ages. F 15 121G 0 1003

122G. Survey of Western Art: Renaissance and Baroque. (3). A historical survey of art from the Renaissance to the 18th century. F 15 122G 0 1003

124. Survey of Western Art: Medieval. (3). A historical survey of medieval art from the 6th through 15th centuries. F 15 124 0 1003

124. Survey of Western Art: Modern. (3). An introduction to art through the study of selected groups of art objects produced in Europe and America from the 18th century to the present. F 15 124 0 1003

221G. Greek Art. (3). An introductory study of ancient Greek art from the Archaic to Hellenistic periods. The course covers architecture, sculpture, and painting with emphasis on the art of Pericles' Athens. F 15 221G 0 1003

222. Roman Art. (3). An introduction to the art of Rome from the age of Augustus to the age of Constantine. F 15 222 0 1003

223. Northern Renaissance. (3). A study of the art of France, Flemish and German painting from the end of the 14th century to the 17th century. F 15 223 0 1003

281. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. Offered Cr/NCr only. F 15 281 0 1003

**Upper-Division Courses**

321. Medieval Art I. (3). A study of the art of Europe and Byzantium from the time of Constantine to Charlemagne. Emphasis is on style and iconography as it develops in monastic and illuminated manuscripts. F 15 321 0 1003

322. Medieval Art II. (3). A study of Romanesque and Gothic architecture and sculpture with special attention being given to the developments in France. F 15 322 0 1003

324. Northern Baroque. (3). A study of the art of Flanders and Holland during the 17th century. While a variety of artistic expression is shown with examples from many areas, the discussion culminates in an extensive study of the two dominant figures, Peter Paul Rubens and Rembrandt. F 15 324 0 1003

325. Art of the Ancient Near East. (3). Survey of the art of ancient Egypt and Mesopotamia, concluding with a consideration of the influence of Near Eastern art and classical art. F 15 325 0 1003


426. Seminar: Techniques of Art History. (3). A culminating study for seniors majoring in art history, in which the history of the discipline, its research methods and theory are considered. Extensive readings and reports are required. Prerequisite: instructor's consent. F 15 426 9 1003

481. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. Offered Cr/NCr only. F 15 481 2 1003

**Courses for Graduate/Undergraduate Credit**

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. Prerequisite: three hours of art history or departmental consent. F 15 520 9 1003

521G. Italian Renaissance. (3). A study of the architecture, sculpture and painting from the 13th to the 16th century. Emphasis is given to early developments in Florence and Venice and late developments in Rome. F 15 521G 0 1003

522. Italian Baroque. (3). A study of Baroque painting, sculpture and architecture in Rome, Venice, and Bologna from 1600 to 1750 with emphasis on the Carracci, Bernini and Tiepolo. F 15 522 0 1003

523. 18th and 19th Century European Art. (3). A history of European art from Watteau through post-Impressionism. F 15 523 0 1003

524. 18th and 19th Century American Art. (3). A history of American art from the colonial period through the 19th century. F 15 524 0 1003

525. 20th Century Art Before 1945. (3). A history of American and European art in the first half of the 20th century. F 15 525 0 1003

526. Art Since 1945. (3). A study of the art of the United States from 1945 to the present, stressing the relationship between contemporary trends in criticism and artistic practice. F 15 526 0 1003

528. Museum Techniques I. (3). Designed primarily for the graduate student interested in museum work. Included in specialized research related to administrative responsibilities of a museum collection, exhibits, recording, preservation and financial activities. F 15 528 0 1003

529. Modern Architecture. (3). A course designed to offer a survey of the development of modern architecture from its inception in the early 20th century until today. Theoretical connections between architecture and the arts of painting and sculpture as they developed in the United States and Europe are stressed. F 15 529 0 1003

530. The Art of Classical Greece. (3). A study of the painting, sculpture, and architecture of Greece during the 5th and 6th centuries B.C. F 15 530 0 1003

531. The Art of Hellenistic Greece. (3). A study of the painting, sculpture and architecture of Greece during the Hellenistic period, 4th to 1st centuries B.C. F 15 531 0 1003

532. Independent Study in Art History. (1-3). Work in a specialized area of study of art history. Directed readings and projects. Prerequisite: instructor's consent. F 15 532 0 1003

533. Seminar: Topics in Modern Art. (3). Selected readings and problems in art of
the modern era. Course content varies but individual areas are not repeatable for credit. Prerequisite: instructor's consent. 1 F 15 533 9 1003

626. Bibliography and Information Retrieval in Art History. (3). A course to prepare art history majors for research on the graduate school level. The student is introduced to the various research resources, such as bibliographies, indexes, collections, concordances and compilations. Practical assignments for information retrieval provide the experience necessary for mastering research techniques. Prerequisite: nine hours in art history. 1 F 15 626 0 1003

Courses for Graduate Students Only

628. Thesis. (2). 1 F 15 628 4 1003

629. Thesis. (2). 1 F 15 629 4 1003

832. Independent Study. (1-3). Individually supervised work in a specialized area of the study of art history. Directed readings, research and projects. Repeatable for credit. Prerequisite: acceptable preparation for graduate work in art history (e.g., BA or BFA in art history) and instructor's consent. 1 F 15 632 3 1003

Graphic Design—Commercial Art

The graphic design department offers a professional program for students interested in a career in the field of visual communication. The courses emphasize conceptual and practical problem solving in various media—photography, typography, design and drawing—to develop design skills for communication.

Requirements: A minimum total of 126 hours is required for a major as distributed below.

Students with junior standing participate in a Senior Portfolio Review prior to counseling for their senior year.

Area

Art Curriculum (minimum) 85

| Graphic design core | 52 |
| Art electives (100-200 level) | 6 |
| Graphic design electives (300-500 level) | 27 |

or

| Graphic design related electives | 27 |

General Education Program 42

The following are the specific requirements for the art curriculum section:

1. Students must fulfill the requirements of the graphic design core as specified (52 hours): Art Hist. 124, Survey of Western Art; Modern; GD 134, Introduction to Graphic Design; GD 136, Graphic Design Foundation I; GD 137, Graphic Design Foundation II; SA 145, Drawing I; GD 230, Basic Photography (Still); GD 231, Basic Photography (Motion Picture); GD 233, Basic Typography; GD 234, Layout and Production Techniques; GD 236, Drawing for Commercial Art; GD 237, Drawing for Commercial Art II; GD 239, Design II; GD 334, Graphic Design III—Production: Ind. Ed. 390F, Offset Lithography; GD 430, Graphic Design IV—Design Programs; GD 445, Senior Terminal Project; upper division art history courses (Art Hist. 523, 524, 525 or 526); Art Hist. 121G and 122G (counted under general education requirements).

2. Students must elect six hours of lower division art electives from the following: SA 160, Printmaking I; SA 240, Life Drawing (may be repeated for credit); SA 251, Watercolor Painting.

3. A program of 27 hours upper division concentration must be developed from the courses listed under graphic design or graphic design-related electives. The program is developed in consultation with the graphic design faculty.

Graphic design electives: GD 330, Advanced Typography; GD 331, Design Media Studio (repeatable for credit); GD 333, Fashion Illustration (repeatable for credit); GD 335, Graphic Design Theory; GD 337, Advertising Illustration (repeatable for credit); GD 339, Exhibition Design (repeatable for credit); GD 434, Graphic Design Intern; GD 437, Advanced Advertising Illustration (repeatable for credit); GD 438, Color and Design; GD 493, Book Design and Production; GD 730, Graphic Design Seminar (repeatable for credit).

Graphic Design-Related Electives: Journ. 325, Introduction to Advertising; Journ. 525, Advertising Copywriting; Journ. 570, Magazine Journalism; Journ. 611, Media Management; Speech 329, Cinematography, Speech 404, Advanced Television Production and Direction; Bus. 300, Marketing; Bus. 405, Consumer Behavior; Eng. 307, Narrative in Literature and Film; SA 340, Life Drawing; SA 345, Intermediate Drawing; SA 545, Advanced Drawing Studio; Art Ed. 5100, Stimulating Creativity; studio arts elective: discretionary elective.

4. All entering freshmen are enrolled in University College. To enter the graphic design department, the student must have a minimum overall grade point average of 2.00 and have completed the graphic design foundation courses—GD 134, 136 and 137 with an average grade of 3.0.

Transfer students who have earned fewer than nine semester credit hours in studio courses equivalent to the graphic design foundation courses will be enrolled in GD 137.

5. Students must participate in a Junior Portfolio Review during the second semester of their junior year.

6. Students must participate in the Senior Terminal Project during their final two semesters.

Transfer Students

Advanced Standing

Transfer students who have earned fewer than nine semester hours in studio courses equivalent to GD 134, 136, 137 and 239 and SA 145 will be enrolled in appropriate foundation courses.

Students who wish to transfer nine or more semester credit hours in art and design studio courses are required to:

1. Submit transcripts of all previous college enrollments.

2. Submit a portfolio of examples of their work to the chairperson of the graphic design department for faculty evaluation prior to enrollment. The portfolio should represent all college-level studio experiences and must contain original examples. Three-dimensional work should be submitted as slides. Part but not all of the two-dimensional work can be in slide form.

Deadlines for the receipt of transcripts and portfolios are June 20 for the fall semester, December 1 for the spring semester and May 1 for the Summer Session. Personal interviews with the department chairperson are suggested.

Model Program

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Speech 111 or 112</td>
<td>3</td>
</tr>
<tr>
<td>General education</td>
<td>3</td>
</tr>
<tr>
<td>GD 134, Introduction to Graphic Design</td>
<td>1</td>
</tr>
<tr>
<td>GD 136 and 137, Graphic Design Foundation I and II</td>
<td>6</td>
</tr>
<tr>
<td>Art Hist. 121G, Survey of Western Art: Paleolithic Through Early Christian</td>
<td>3</td>
</tr>
<tr>
<td>Art Hist. 122G, Survey of Western Art: Renaissance and Baroque</td>
<td>3</td>
</tr>
<tr>
<td>SA 145, Drawing I</td>
<td></td>
</tr>
</tbody>
</table>

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Hist. 124, Survey of Western Art: Modern</td>
<td>3</td>
</tr>
<tr>
<td>GD 230, Basic Photography (Still)</td>
<td>3</td>
</tr>
<tr>
<td>GD 231, Basic Photography (Motion Picture)</td>
<td>3</td>
</tr>
<tr>
<td>GD 233, Typography</td>
<td>3</td>
</tr>
<tr>
<td>GD 234, Layout and Production</td>
<td>3</td>
</tr>
<tr>
<td>GD 236 and 237, Drawing for Commercial Art I and II</td>
<td>6</td>
</tr>
<tr>
<td>GD 239, Design II</td>
<td>3</td>
</tr>
<tr>
<td>Art Electives</td>
<td>6</td>
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<tr>
<td>General Studies course</td>
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Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 109, 110, 111 or 211</td>
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</tr>
<tr>
<td>Course</td>
<td>Hrs.</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>GO 334, Graphic Design Production</td>
<td>3</td>
</tr>
<tr>
<td>IA 390F, Offset Lithography</td>
<td>3</td>
</tr>
<tr>
<td>Graphic Design Electives (300-700 level)</td>
<td>12</td>
</tr>
<tr>
<td>General education</td>
<td>12</td>
</tr>
<tr>
<td>Junior Portfolio Review</td>
<td>0</td>
</tr>
</tbody>
</table>

### Senior Courses

**Course**

- GO 430 and 435, Graphic Design
- Senior Terminal Project: 3

### Lower-Division Courses

134. Introduction to Graphic Design. (1)

- An overview of the graphic designer’s role in contemporary visual communication. A brief history of visual communication is followed by a review of the designer’s involvement in print, environmental, and media graphics. Lecture course with films, slides, and video. Team taught. Graded Cr/NCr only. F 17 134 1 1009

135. Design I. (3)

- Introduction to the principles of design and practices of design as they relate to formal, Gestalt, and conceptual organization of the two-dimensional surface and the elements of line, shape, texture, space, and value. Prerequisites: graphic design major and GO 134 or concurrent enrollment. F 17 135 1 1009

136. Graphic Design Foundation I. (3)

- A continuation of Foundation I. Concerns with form and structure are applied to information design. A study of color includes vocabulary, pigment mixing, color organization, and a review of the psychological effects of color as they are used for communication ends. Instructional process includes lecture, critique, and supervised laboratory practice. Prerequisites: graphic design major and GO 134 or concurrent enrollment. F 17 136 1 1009

137. Graphic Design Foundation II. (3)

- An introduction to design for visual communication. The studio practices and art production problems. Prerequisites: GO 134, 136 and 137. F 17 234 1 1009

234. Layout and Production Techniques. (3)

- Introduction to advertising theory and visual communication. Fundamentals of respective functions of purpose, copy, art, plans, and media in advertising. A study is made of studio practices and art production problems. Prerequisites: GO 134, 136 and 137. F 17 234 1 1009

236. Drawing for Commercial Art. (3)

- Directed practice in drawing in various media, with emphasis on its application to commercial art. Prerequisite: graphic design major or instructor’s consent. F 17 236 1 1009

237. Drawing for Commercial Art II. (3)

- Directed practice in drawing the figure for editorial and fashion illustration. Prerequisite: GO 236. F 17 237 1 1009

### Upper-Division Courses

300. Advanced Typography. (3)

- Design of typographic symbols and logotypes. The application of type, typographic symbols, and logotypes to two- and three-dimensional formats. Prerequisites: GO 233 and 234. F 17 300 1 1009

330. Design Media Studio. (3)

- Advanced study of photography, cinematography or television. Prerequisites: GO 230 and 231 and instructor’s consent. F 17 330 1 1009

333. Fashion Illustration. (3)

- Fashion drawings of costume designs for newspaper and magazine layouts. Merchandising and fashion designs are analyzed for black and white reproduction. Prerequisite: GO 237. F 17 333 1 1009

334. Graphic Design—Production. (3)

- Introduction to printing processes: letterpress and offset printing. Prerequisites: GO 233 and 234. F 17 334 1 1009

335. Graphic Design—Theory. (3)

- Experiments with visual phenomena and the use of these in design ideas through visual means. Studio practice is coordinated with the discussion of art theory, philosophy, and history of design. F 17 335 1 1009

337. Advertising Illustration. (3)

- Development of skills in pictorial graphics. Their application to the needs of editorial and advertising illustration is studied, as are black and white media. Repeatable for credit. Prerequisite: GO 236. F 17 337 1 1009

339. Exhibition Design. (3)

- The study of visual, acoustic, and kinetic modes of communicating man’s ideas, history, and products via public exhibits. A semester project includes the development and construction of an exhibit. Repeatable for credit. Prerequisites: GO 239 and instructor’s consent. F 17 339 1 1009

430. Graphic Design—Media. (3)

- Application of design media in the applied arts. Repeatable for credit. Prerequisite: GO 233 and 234. F 17 430 1 1009

434. Graphic Design Intern. (3)

- On-the-job supervised practice in an art studio or advertising agency. Prerequisites: GO 233 and 234. F 17 434 1 1009

### Graduate/Undergraduate Credit

730. Seminar in Graphic Design. (3)

- Supervised study and research. Weekly consultation and reports are required. Repeatable for credit. Prerequisite: departmental consent. F 17 730 1 1009

### Studio Arts

Students from the Fairmount College of Liberal Arts and Sciences who wish to major in studio arts must complete 39 hours of art. These hours must include Art Hist. 121G, 122G, nine hours elected from history courses and 24 hours elected from studio courses. Liberal arts students wishing to minor in studio arts must complete 21 hours of art, including Art Hist. 121G, 122G and 15 hours of electives.

### Ceramics

Through their course work, ceramics majors are exposed to their tools: building, throwing, clays and glazes. Students investigate problems of glaze formulation, firing the kiln and characteristics of clays and production.
Requirements. A total of 124 hours is required for the major as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>81</td>
</tr>
<tr>
<td>Art history elective</td>
<td>3</td>
</tr>
<tr>
<td>Ceramics</td>
<td>24</td>
</tr>
<tr>
<td>Drawing</td>
<td>12</td>
</tr>
<tr>
<td>Sculpture</td>
<td>6</td>
</tr>
<tr>
<td>Painting</td>
<td>3</td>
</tr>
<tr>
<td>Printmaking</td>
<td>3</td>
</tr>
<tr>
<td>Art electives</td>
<td>30</td>
</tr>
</tbody>
</table>

General Education Program 43

Model Program

Freshman

Course
Eng. 101 and 102, College English 1 and II 6
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication 3
General education: Art Hist. 121G, 122G or 124 6
General education 3
SA (Drawing) 145, Drawing 3
SA (Printmaking) 160 or 262, Printmaking I or II 3
GD (Graphic Design) 239, Design III 3
SA (Ceramics) 170, Ceramics I 3

Sophomore

Course
General education 17
SA (Drawing) 240, Life Drawing 6
SA (Painting) 250 or 251, Oil Painting or Watercolor Painting 3
SA (Ceramics) 270, Ceramics II 6
SA (Sculpture) 280, Sculpture II 3

Upper-Division Courses

370. Ceramics Studio. (3). Lab fee. Advanced studio problems involving forming methods. Experience is given in glaze formulation and kiln firing. Lecture periods are held on advanced studies of ceramic materials and historical and contemporary pottery. Repeatable for credit. Prerequisite: SA (Ceramics) 270 and SA (Sculpture) 185. F 16 277 1 1009
374. Kiln Methods. (3). The study of kiln design and construction with research in the area of refractory materials. Reading assignments, notebook and laboratory research are included. F 16 374 1 1009

Courses for Graduate/Undergraduate Credit

570. Advanced Ceramics Studio. (3). Lab fee. Advanced studio problems involving forming methods, glaze formulation and firing procedures. Lecture periods are held involving advanced studies of ceramic materials and glaze formulation. Repeatable for credit. Prerequisite: SA (Ceramics) 370. F 16 570 1 1009
574. Advanced Study of Kiln Methods. (3). A study of the kiln design and construction with research in the area of refractory materials. Reading assignments, notebook and laboratory work are required. Prerequisite: SA (Ceramics) 374. F 16 574 1 1009
575. Study of Ceramic Materials I. (3). Lab fee. Lectures and research covering clays, glazes and refractory materials. Reading assignments are made concerning physical and chemical characteristics of pottery materials. F 16 275 0 1009
576. Study of Ceramic Glazes I. (3). The study of glaze formulation and the color and crystalline effects of oxides on glazes. Notebooks and laboratory work required. F 16 276 1 1009

Painting

The painting program thoroughly prepares students in painting and allows them to progress through a structured regimen which leads to the development of their own personal styles. Museums, galleries and traveling shows form the basis of environmental exposure.

Requirements. A total of 124 hours is required for the major as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>82</td>
</tr>
<tr>
<td>Foundation</td>
<td>6</td>
</tr>
<tr>
<td>Art history electives</td>
<td>6</td>
</tr>
<tr>
<td>Painting</td>
<td>24</td>
</tr>
<tr>
<td>Drawing</td>
<td>18</td>
</tr>
<tr>
<td>Printmaking</td>
<td>6</td>
</tr>
<tr>
<td>Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>Art electives</td>
<td>16</td>
</tr>
</tbody>
</table>

Model Program

Freshman

Course
Eng. 101 and 102, College English 1 and II 6
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication 3
General education: Art Hist. 121G, 122G or 124 6
General education 3
SA (Drawing) 145, Drawing I 3
SA (Printmaking) 160, Printmaking I 3
SA (Ceramics) 170, Ceramics I 3
GD (Graphic Design) 239, Design II 3

Lower-Division Courses

171. Beginning Ceramics. (3). Lab fee. An introduction for the beginner in the various ceramic methods with concentrations on the use of the potter's wheel and glazing methods. F 16 171 1 1009
270. Introduction to Ceramics Studio. (3). Lab fee. Experience in handbuilding, wheel throwing, glazing methods. Lecture periods involve general knowledge of clays, glazes, kilns and historical and contemporary pottery. Repeatable for credit. F 16 270 1 1009

Courses for Graduate/Undergraduate Credit

570. Advanced Ceramics Studio. (3). Lab fee. Advanced studio problems involving forming methods, glaze formulation and firing procedures. Lecture periods are held involving advanced studies of ceramic materials and glaze formulation. Repeatable for credit. Prerequisite: SA (Ceramics) 370. F 16 570 1 1009
574. Advanced Study of Kiln Methods. (3). A study of the kiln design and construction with research in the area of refractory materials. Reading assignments, notebook and laboratory work are required. Prerequisite: SA (Ceramics) 374. F 16 574 1 1009
575. Study of Ceramic Materials I. (3). Lab fee. Lectures and research covering clays, glazes and refractory materials. Reading assignments are made concerning physical and chemical characteristics of pottery materials. F 16 275 0 1009
576. Study of Ceramic Glazes I. (3). The study of glaze formulation and the color and crystalline effects of oxides on glazes. Notebooks and laboratory work required. F 16 276 1 1009

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<td>Art Curriculum</td>
<td>82</td>
</tr>
<tr>
<td>Foundation</td>
<td>6</td>
</tr>
<tr>
<td>Art history electives</td>
<td>6</td>
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<tr>
<td>Painting</td>
<td>24</td>
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<tr>
<td>Drawing</td>
<td>18</td>
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<tr>
<td>Printmaking</td>
<td>6</td>
</tr>
<tr>
<td>Ceramics</td>
<td>3</td>
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<tr>
<td>Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>Art electives</td>
<td>16</td>
</tr>
</tbody>
</table>

Model Program

Freshman

Course
Eng. 101 and 102, College English 1 and II 6
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication 3
General education: Art Hist. 121G, 122G or 124 6
General education 3
SA (Drawing) 145, Drawing I 3
SA (Printmaking) 160, Printmaking I 3
SA (Ceramics) 170, Ceramics I 3
GD (Graphic Design) 239, Design II 3

Lower-Division Courses

171. Beginning Ceramics. (3). Lab fee. An introduction for the beginner in the various ceramic methods with concentrations on the use of the potter's wheel and glazing methods. F 16 171 1 1009
Courses for Graduate/Undergraduate Credit

545. Advanced Drawing Studio. (1-3). Drawing with a variety of media. Graphic composition and development are used. Critical opinions are given. Repeatable for credit. Prerequisites: SA (Drawing) 240 or GD 236. F 16 545 1 1002

549. Independent Study. (3). A professional emphasis on technical or aesthetic research in the drawing area. Available only for the advanced drawing student with consent of instructor. Statement of intent must be submitted for faculty approval before registration. Prerequisite: SA (Drawing) 240 or GD 236 and instructor's consent. F 16 549 1 1009

Courses for Graduate Students Only

800. Seminar in Art Topics. (3). Designed to explore areas of common interest in the arts. Supervised study, research and discussion. Repeatable for credit. F 16 800 9 1009

850. Special Problems in Painting. (1-5). Professional and experimental painting with emphasis on the development of maturity, ideas, independent thinking and personal expression. Mediums include oil, watercolor and mixed media. Repeatable for credit with the consent of the faculty. F 16 850 3 1002

855. Methods and Media of Painting. (3). Painting methods from the 12th century to the 20th. History and nature of materials are studied, including encaustic, tempera, oil, watercolor, mixed media, grounds, supports and surface protection. Prerequisite: instructor's consent. F 16 855 0 1002

856-859. Terminal Project—Painting. (3 or 5; 3 or 5). F 16 856 4 1002; F 16 859 4 1002

Printmaking

The printmaking program gives students a broad base of experience in printmaking. Students encounter two primary disciplines, intaglio (drypoint or lithographic) and relief, collagraph and combined techniques in both black and white and color. Emphasis is placed upon creativity and students are encouraged to investigate new or traditional methods.

Requirements. A total of 124 hours is required for the major as described below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
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</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
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<td>Art history electives</td>
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<td>Printmaking</td>
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<td>Art electives</td>
<td>21</td>
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<tr>
<td>General Education Program</td>
<td>40</td>
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</tbody>
</table>

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R 2L means four hours of lecture and two hours of lab.
Model Program

Freshman

Course
Eng. 101 and 102, College English I and II ........................................ 6
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication .......... 3
General education: Art Hist. 121G, 122G or 124 ............................... 6
General education ......................................................... 6
SA (Drawing) 145, Drawing I ........................................ 3
SA (Printmaking) 180, Printmaking I ...................................... 3
SA (Ceramics) 170, Ceramics I ........................................ 3
SA (Printmaking) 262, Printmaking II ..................................... 3
GD (Graphic Design) 239, Design II ....................................... 3

Sophomore

Course
General education ......................................................... 15
SA (Drawing) 240, Life Drawing ........................................ 6
SA (Painting) 250, Oil Painting .......................................... 3
SA (Painting) 251 or 252, Watercolor Painting or Acrylic Painting ................. 3
SA (Printmaking) 265, The Techniques and Materials of Printmaking ................. 3
SA (Printmaking) 364, Printmaking III—Lithography ............................ 3
SA (Printmaking) 365, Graphic Techniques II .................................. 3
SA (Sculpture) 280, Sculpture ........................................... 3

Junior

Course
General education ......................................................... 10
SA (Drawing) 340, Life Drawing Studio ................................... 3
Art history electives ..................................................... 3
Printmaking electives .................................................... 6
Art electives ............................................................... 6

Senior

Course
SA (Drawing) 545, Advanced Drawing Studio ................................ 3
SA (Printmaking) 560, Advanced Printmaking Studio ......................... 3
Art history electives ..................................................... 3
Art electives ............................................................... 15

Lower-Division Courses

160. Printmaking I. (3) An introduction to printmaking. Explorative work is done in intaglio, collagraph and mixed media, woodcut and relief techniques. F 16 160 1 1002

262. Printmaking II. (1-3) Basic intaglio methods (etching, engraving, soft ground, aquatint and mixed techniques). Second semester includes color printing in intaglio, collagraph or mixed techniques. Repeatable for credit once per semester. F 16 262 1 1002

265. The Techniques and Materials of Printmaking. (2-3) Lecture, assigned reading and reports on tools, materials, methods and origins of basic printmaking techniques, including woodcut, relief, intaglio, lithography, collagraph and color printing. F 16 265 1 1002

Upper-Division Courses

354. Printmaking III—Lithography. (3) Introduction to lithography, printing from the stone in black and white. The second semester includes color printing in lithography and combined techniques. Repeatable for credit. Prerequisite: SA (Drawing) 145 or SA (Printmaking) 180. F 16 364 1 1002

355. Graphic Techniques I—Papermaking and Screenprinting. (3) Part I introduces basic screenprinting technology (stencil-block out) and resists, as well as basic photographic methods. Multicolor printing will be emphasized. Second part involves basic papermaking methods (sheet forming and paper cast from a mold). Prerequisite: SA (Drawing) 145, SA 160, GD (Graphic Design) 135 or instructor's consent. F 16 365 1 1002

Courses for Graduate/Undergraduate Credit

560. Advanced Printmaking Studio—Intaglio. (1-3) Intaglio, collagraph and mixed techniques. For the students interested in professional printmaking, the course offers specialization in color printing in black and white. Repeatable for credit. Prerequisites: SA (Printmaking) 160, 262 and 364, F 16 560 1 1002

561. Advanced Printmaking Studio—Lithography. (1-3) Lithography, black and white or color. For the student interested in professional printmaking, this course offers specialization in color printing. Repeatable for credit. Prerequisites: SA (Printmaking) 160, 262 and 364. F 16 561 1 1002

565. Independent Study in Printmaking. (3) A professional emphasis on technical and aesthetic research in the printmaking area. Available only for the advanced printmaking student with consent of instructor. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent. F 16 565 1 1009

765. The Techniques and Materials of Printmaking. (3) Lecture, assigned reading and reports on the tools, materials, methods and origins of basic printmaking techniques, including woodcut, relief, intaglio, lithography, collagraph and color printing. Special art research project required in addition to assigned reading and reports. Prerequisite: six hours of printmaking. F 16 765 1 1002

Courses for Graduate Students Only

800. Seminar in Art Topics. (3) Designed to explore areas of common interest in the arts. Supervised study, research and discussion. Repeatable for credit. F 16 800 9 1009

860. Special Problems in Printmaking—Intaglio. (1 or 3 or 5) Advanced printmaking on an individual basis. Encouragement is given to investigation combined with a craftsman-like approach. Techniques include all intaglio, relief and combined methods, black and white and color. Repeatable for credit. F 16 860 3 1002

862 & 863. Special Problems in Printmaking—Lithography. (1 or 3 or 5, 3 or 5) Advanced printmaking on an individual basis. Encouragement is given to investigation combined with a craftsman-like approach. Included are lithography and allied techniques, black and white and color. Repeatable for credit. F 16 862 3 1002 & F 16 863 3 1002

868-869. Terminal Project—Printmaking. (3 or 5 or 5) F 16 868 4 1002 & F 16 869 4 1002

Sculpture

The sculpture program provides students with a solid grounding in basic techniques and materials and exposes them to the past and present directions in sculpture. A professional attitude is emphasized, with traditional and experimental methods and media being explored.

Requirements. A total of 124 hours is required for the major as described below.

Area

Art Curriculum ......................................................... 62
Art History electives .................................................. 6
Foundation .............................................................. 6
SA 145, Drawing ...................................................... 3
GD 239, Graphic Design III ........................................ 3
Sculpture ................................................................. 24
Drawing ................................................................. 12
Ceramics ................................................................. 6
Painting ................................................................. 10
Printmaking ............................................................ 6
Art electives ............................................................. 19

General Education Program ........................................... 42

Model Program

Freshman

Course
Eng. 101 and 102, College English I and II ........................................ 6
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication .......... 3
General education: Art Hist. 121G, 122G or 124 ............................... 6
General education ......................................................... 6
SA (Drawing) 240, Life Drawing ........................................ 6
SA (Painting) 250 or 251, Oil Painting or Watercolor Painting .................. 3
SA (Sculpture) 280, Sculpture ............................................ 3

Sophomore

Course
General education ......................................................... 15
SA (Drawing) 240, Life Drawing ........................................ 6
SA (Painting) 250 or 251, Oil Painting or Watercolor Painting .................. 3
SA (Sculpture) 280, Sculpture ............................................ 3
Ceramics electives ....................................................... 3
3) Sculpture in any medium, with an emphasis on technical or aesthetic research in the sculpture area. Available only for the advanced sculpture student with consent of instructor. Prerequisite: departmental consent. F 16 585 1 1009

Courses for Graduate Students Only

800. Seminar in Art Topics. (1, 3 or 5). Designed to explore areas of common interest in the arts. Supervised study, research and discussion. Repeatable for credit. F 16 800 9 1009

888-889. Terminal Project—Sculpture. (3 or 5; 3 or 5). F 16 888 4 1002; F 16 889 4 1002

Division of Dance

The Division of Dance offers a Bachelor of Fine Arts degree in dance performance. Major emphasis is placed on modern dance technique with strong supportive classes in ballet. Major course offerings include study in modern dance technique, ballet technique, choreography, dance history, performance and production, music for dance, repertory, lighting, make-up, costume, methods of teaching and practice teaching. Additional courses are offered in jazz, tap, ballroom and other dance forms.

The Mid-America Dance Theatre presents at least two performances annually and offers lecture demonstrations, master classes and informal concerts throughout the year. Membership into the company is by audition only.

Graduation Requirements

Dance majors must complete Dance 501, Modern Dance IV, and Dance 410, Ballet III. A minimum of 42 hours is required in modern dance and ballet with at least 24 of these hours in modern dance technique. All majors must take a minimum of five technique classes per week.

Advancement from one level of technique to the next is not automatic and will be by the instructor's consent or by audition. Students will be placed at the appropriate technical level upon admission to the program.

All majors present a senior concert to include one solo, one duet and one group dance and must perform in two of these three pieces. The total length of time for the senior concert should be between 20 and 25 minutes.

All dance majors are required to take Speech 645, Stage Lighting; Speech 254, Stage Makeup; and Speech 253, Costuming for the Stage. Students are assigned to work with the appropriate dance class to light, make up or costume a specific dance performance.

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; Dance 301, Modern Dance II; Dance 401, Modern Dance III; Dance 501, Modern Dance IV. (Placement and advancement by audition and/or faculty consent only.) ................. 24

Dance 210, Ballet I; Dance 310, Ballet II; Dance 410, Ballet III. (Placement and advancement by audition and/or faculty consent only.) ....... 18

Dance 305, Choreography I; Dance 406, Choreography II .... 8

Dance 325Q, Dance History I; Dance 425Q, Dance History II 6

Dance 315, Music for Dance .......... 3

Dance 505, Dance Performance and Production; Dance 605, Advanced Dance Performance and Production .... 6

Dance 625, Repertory, or Dance 735, Mid-America Dance Theatre .......... 6

Dance 545, Methods of Teaching Dance .......... 3

Dance 645, Practice in Teaching Dance .......... 3

Speech 253, Costuming for the Stage .......... 3

Speech 254, Stage Makeup .......... 1

Speech 645, Stage Lighting .......... 3

Total 84

In addition to the above required courses a minimum of 11 hours should be selected from the following speech, music and art courses outside the dance division to be distributed as shown:

Course Hrs.

Speech 143G, The Art of the Theatre; 243, Acting I; 623, Development of the Theater I; or 624, Development of the Theater II
Lower-Division Courses

120. Jazz I. (1-2). Introduction to jazz technique. Emphasis on improvisation in body isolation, rhythmic patterns and directions, basic steps and history and development of jazz dance in America. Repeatable for credit. F 25 120 5 1008

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. F 25 130 5 1008

150. Dance Workshop. (1-4). Repeatable for credit. F 25 150 2 1008

201. Modern Dance Technique I. (2-3). Introduction to study of basic positions, body alignment, stretches and strengthening exercises; simple movement phrases are emphasized to develop understanding of direction, rhythm and dynamics. Repeatable for credit. F 25 201 5 1008

210. Ballet I. (2-3). Introduction to basic technique, positions, basic steps, proper body alignment, classroom structure and etiquette and ballet vocabulary. Repeatable for credit. F 25 210 5 1008

220. Jazz II. (1-2). Continuation of Dance 120 at intermediate/advanced level. Repeatable for credit. Prerequisite: instructor’s consent or by audition. F 25 220 5 1008

Upper-Division Courses

301. Modern Dance II. (2-3). Continuation of Dance 201 with emphasis on movement phrases. Intermediate level. Repeatable for credit. Prerequisite: instructor’s consent or by audition. F 25 301 5 1008

305. Choreography I. (4). Basic work in creating movement, utilizing varying rhythms, dynamics and designs. Exploration of appropriate accompanying forms of music. Class culminates in a performance of a solo work for an invited audience. Prerequisites: one year of modern dance and equivalent to intermediate technical level. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. F 25 305 5 1008

310. Ballet II. (2-3). Continuation of Dance 210. Intermediate level. Repeatable for credit. Prerequisite: instructor’s consent or by audition. F 25 310 5 1008

315. Music for Dance. (3). Study of tempo, meter and quality of sound as applied to movement. Exploration of appropriate music repertoire for dance. Prerequisite or corequisite. Dance 305. F 25 315 5 1008

320. Performance. (1-3). Perform in choreography composed by students enrolled in choreography and/or performance and production classes. Prerequisite: instructor’s consent or by audition. Credit hours to be determined by instructor. F 25 320 5 1008

325Q. Dance History I. (3). The development of dance up to the 20th century. Study of national origins and period dance movement styles. F 25 325Q 1 1008

401. Modern Dance III. (3). Continuation of Dance 301. Upper intermediate level. Repeatable for credit. Prerequisite: instructor’s consent or by audition. F 25 401 5 1008

405. Choreography II. (4). Further work in composing dances for two, three or more dancers. Apply lighting and costuming ideas to completed dance presented in performance at end of semester. Prerequisites: Dance 305 and concurrent enrollment in appropriate-level modern dance or ballet technique class. F 25 405 5 1008

410. Ballet III. (3). Continuation of Dance 310. Upper intermediate level. Repeatable for credit. Prerequisite: instructor’s consent or by audition. F 25 410 5 1008

425Q. Dance History II. (3). Twentieth century dance emphasizing the emergence of ballet and modern dance. Study of major choreographers, performers and dance companies. F 25 425Q 5 1008

Courses for Graduate/Undergraduate Credit

501. Modern Dance IV. (3). Continuation of Dance 401. Advanced level. Emphasis on professional technique and performance quality. Repeatable for credit. Prerequisite: instructor’s consent or by audition. F 25 501 5 1008

505. Dance Performance and Production. (3). Students receive practical experience in the organization and presentation of a dance concert. Class content may include design and construction of sets and costumes and properties, design and execution of stage lighting and make-up, various areas of publicity, promotion and audio techniques. Students are also required to choreograph and perform and be responsible for all technical aspects of the concert to be performed at the end of the semester. Prerequisites: Dance 405 and concurrent enrollment in appropriate-level modern dance or ballet technique class. F 25 505 5 1008

510. Ballet IV. (3). Continuation of Dance 410. Advanced level. Emphasis on professional technique and performance quality. Repeatable for credit. Prerequisite: instructor’s consent or by audition. F 25 510 5 1008

545. Methods of Teaching Dance. (3). Course in developing teaching skills for elementary schools, high schools, recreational centers, private and professional schools and universities through lesson planning and in-class teaching. Prerequisite: Dance 401 or 410. F 25 545 5 1008

505. Advanced Dance Performance and Production. (3). Further work in the preparation and production of the end-of-the-semester concert. Students are required to choreograph and perform and be responsible for all technical aspects of the concert. Prerequisites. Dance 505 and concurrent enrollment in appropriate-level modern dance or ballet technique class. F 25 505 5 1008

625. Repertory. (3). Study and performance of new choreography or those in repertoire. Cultivation of performance skills in varied dance styles. Repeatable for credit. Prerequisites: instructor’s consent or by audition and concurrent enrollment in appropriate-level modern dance or ballet technique class. F 25 625 5 1008

645. Practice in Teaching Dance. (3). Actual placement in teaching situation with responsibility of teaching ballet, modern and/or jazz in private studios, elementary, high schools, Y’s or recreation centers. Prerequisite: Dance 545. F 25 645 5 1008

690. Special Topics in Dance. (1-6). For individual or group instruction. Repeatable for credit with departmental consent. F 25 690 2 1008

735. Mid-America Dance Theatre. (1-6). The student company performs on campus and in the community and tours as the occasion arises. Prerequisites: Members accepted by audition, which is open to community and university dancers, and concurrent enrollment in appropriate-level modern and ballet technique class is required. Mid-America Dance Theatre is repeatable for credit. F 25 735 5 1008

750. Dance Workshop. (1-4). Repeatable for credit. F 25 750 2 1008

Division of Music

The Division of Music, which includes the Department of Music Education, Department of Music Performance and Department of Musicology-Composition, offers courses, programs and curricula designed to train and educate serious music students who are planning careers in the music profession. In addition, the division’s offerings allow students in other colleges to gain an understanding of music as a humanistic study. Recitals by students, faculty and guests augment the overall community programs in the fine arts.

Students in the Division of Music enjoy the use of extensive facilities in the Duerksen Fine Arts Center, which includes the Lewis and Selma Miller Concert Hall. In addition, Wiedemann Hall has been constructed to house the first Marcuson organ on the North American continent.

Policies

Proficiency Examinations

Students eligible for University enrollment may enter a music degree program. However, majors in music must demonstrate their performance ability on a minimum of one instrument or in voice. After their initial registration, students have their proficiency judged by their
major professor; thereafter, they must perform for a faculty jury each semester to determine their proficiency level and progress. Semester repertoire 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 the area of piano may pass the requirement by special examination. If students pass the examination, they may elect other interest areas or additional private study in piano courses designed for the nonpiano major. Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements.

Transfer students who submit proof of the completion of a comparable piano proficiency examination by official transcript or letter from their former dean are exempt from this requirement.

All proficiency examinations must be passed before students are allowed to student teach.

Applied Music Regulations

Instruction is given in applied media to develop musicianship, performance skills and reading knowledge of music literature. Specific requirements for each level are set by the individual applied areas.

For one semester hour of credit, students receive a one-half-hour lesson each week with a minimum of five hours of practice required per week.

For two semester hours of credit, (majors and special music students only), students receive either (1) a one-half-hour private lesson each week and a one-hour class each week or (2) a one-hour lesson per week or other equivalent arrangements at the option of the instructor. Students are expected to practice a minimum of ten hours each week.

For four semester hours of credit, (majors and special music students only), students receive two one-half-hour lessons and a one-hour class lesson each week or other equivalent arrangements at the option of the instructor. Students are expected to practice a minimum of 20 hours per week.

Students receive academic credit for applied music instruction only when they take instruction on the University campus offered by approved music faculty. Students wishing to drop an applied lesson registration must inform the instructor in person and secure his/her signature on the drop form before approval may be given by the college office.

Applied music students may enroll in the following classifications: freshmen and sophomores, AM 231 and 232; juniors and seniors, AM 431, 432 and 434; and graduates, AM 731, 732 and 734. These applied music courses are repeatable for credit.

Prior to graduation all music majors must achieve a minimum degree of performance proficiency, which is determined by the faculty according to each student's degree program. In addition, students may be required to pass an examination on materials in their chief performing medium.

Recitals

All music majors are required to enroll in five semesters of recital. Students fulfill four of these semesters by enrolling in Mus. Perf. 050, Recital, and attending a minimum of 14 specified recitals and concerts sponsored by the Division of Music. The students' performance of the senior recital fulfills their fifth semester recital requirement; they must be enrolled in Recital (Mus. Perf. 050 for BME and BM theory-composition majors or Mus. Perf. 400 for BM performance majors) during that semester.

All students are required to declare a chief performance medium and in this major area they are required to present a public or jury recital prior to graduation. The decision as to whether the performance will be jury or public is made by an examining committee. Students present to the examining committee a projected senior recital program and the examining committee determines: (1) the suitability of the projected program, (2) the capability of the student to perform the program publicly and (3) whether or not the program should be performed before a faculty jury.

Further recital specifications are found under graduation requirements for Bachelor of Music in Theory-Composition.

Graduation Requirements

Bachelor of Music Requirements

Students receiving the BM choose either a performing medium (piano, organ, voice, strings, wind or percussion) or theory-composition as their major area of concentration.

The general graduation requirements of the University must be met as described in the Catalog under Academic Information—Requirements for Graduation. In addition, certain music requirements must be met for the different departments in the Division of Music.

Bachelor of Music in Theory-Composition

Area                      Hrs
Applied Music             20
Chief performing medium   16
Other performing media    4
or
Chief performing medium   8
Keyboard performing media 8
Other performing media    4
Theory and Composition    40
Mus.-Comp. 1270-1278, 129-130, 227-228, 229-230, 259-260, 523, 559, 560, 561, 641, 659, 660, 661, 671 and 672
History and Literature of Music 11
Mus.-Comp. 1130 and eight hours from Mus.-Comp. 3310, 3320, 3330
Conducting               4
Mus. Perf. 217 or 218, 651 or 691
Ensembles                10
Electives (music or nonmusic courses) 7
Recital attendance (four semesters plus senior recital)
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 ink copies. These ink copies must represent a high quality of music manuscript and must be completed in the candidate's own hand. In addition, students may elect to present a recital in their chief performing medium with the permission of their applied music instructor and achievement of junior proficiency in that instrument.

Bachelor of Music in Performance—Instrumental Major

Area                      Hrs
Applied Music             28
Chief performing medium   24
COLLEGE OF FINE ARTS/DEPARTMENT OF MUSIC

Second performing medium (four semesters) .................................. 4
Theory .......................................................................................... 22
Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661 and 641, 643, 645 or 345
History and Literature of Music ....................................................... 12
Mus.-Comp. 113Q and Mus.-Comp. 331Q, 332Q, 333Q
Conducting .................................................................................. 4
Mus. Perf. 217 or 218 and 651 or 691
Ensembles
Organ majors ................................................................. 10
Piano majors .............................................................. 8
(Four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)
Organ majors (electives) ......................................................... 11
(Must include Mus.-Comp. 597-598 and 4 hours of music electives)

Bachelor of Music in Performance—Keyboard Major

Area Has
Applied Music ................................................................. 28-32
Chief performing medium .................................................... 24
Second performing medium (four semesters) ......................... 4
Mus. Perf. 250 and 251, Applied Piano Concerto (for piano performance majors) (2 semesters) .... 4
Piano accompanying majors: Piano ........................................ 1
Applied accompanying .................................................. 12
(Mus. Perf. 223, 224, 423 and 424)
Theory ...................................................................................... 22-26
Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661, 641, 643 or 645, and for piano accompanying majors only, Mus. Perf. 121, 122, 221, 222
History and Literature of Music ................................................ 9
Mus.-Comp. 113Q and 6 hours from Mus.-Comp. 331Q, 332Q, 333Q or other approved music literature courses (6 hours must be taken in Mus.-Comp. 331Q, 332Q or 333Q)
Conducting ............................................................................ 4
Mus. Perf. 217 or 218 and 651 or 691
Ensembles
Organ majors ................................................................. 10
Piano majors .............................................................. 8
Applying Music required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)
Organ majors (electives) ......................................................... 11
(Must include Mus.-Comp. 597-598 and 4 hours of music electives)

Bachelor of Music in Performance—Vocal Major

Area Has
Applied Music ................................................................. 26
Voice ......................................................................................... 24
Piano (two semesters) ......................................................... 2
Study in another instrument may be substituted if student meets piano proficiency level
Theory ...................................................................................... 18
Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 523 or 661
History and Literature of Music ................................................ 9
Mus.-Comp. 113Q and 6 hours from Mus.-Comp. 331Q, 332Q, 333Q
Conducting ............................................................................ 2
Mus. Perf. 218
Voice Pedagogy and Repertoire .................................................. 9
Mus. Perf. 121, 122, 221, 222, 625 and Mus.-Comp. 626
Ensembles (see degree sheets for specified ensembles) ........... 10
Electives (in upper-division theory, conducting or choral materials) 10
Senior Recital (Mus. Perf. 400) ................................................ 1
Recital attendance (specified number of recitals per semester for four semesters) 6
Foreign Languages (5 hours in each language or 10 hours in one of two languages) ....... 10
Fr. 111-112, Ger. 111-112

Bachelor of Music in Performance with Minor in Business

Area Has
Applied Music ................................................................. 20
Chief performing medium .................................................... 16
Second performing medium (four semesters) ......................... 4
Theory ...................................................................................... 20
Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641, 645 or 643 or 345
History and Literature of Music ................................................ 11
Mus.-Comp. 113Q, 331Q, 332Q, 333Q
Conducting ............................................................................ 4
Mus. Perf. 217 or 218 and 651 or 691
Ensembles (see degree sheets for specified ensembles) ........... 10
Electives (in upper-division theory, conducting or choral materials) 8 or 10
Electives (in upper-division theory, conducting or choral materials) 5
Vocal major required Mus. Perf. 121, 221, 222. Piano majors required Mus. Perf. 580
Senior Recital (Mus. Perf. 400) ................................................ 1
Recital attendance (specified number of recitals per semester for four semesters, Mus. Perf. 050)
Business Requirements ................................................................. 30
Econ. 201 & 202 (6); Acctg. 210 & 220 (6); and any three of the following four courses: Mgmt. 360 (3); Fin. 340 (3), Mktg. 300 (3); DS 350 (3). Also 9 hours of upper-division electives.

Bachelor of Music in Performance with Minor in Theater

Area Has
Applied Music ................................................................. 20
Bachelor of Music in Performance with Minor in Journalism  
(News Editorial Emphasis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>16</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641, 645, 643 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>11</td>
</tr>
<tr>
<td>Mus.-Comp. 113Q, 331Q, 332Q, 333Q</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218 and 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Ensembles (see degree sheets for specified ensembles)</td>
<td>8 or 10</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
<tr>
<td>Vocal majors required Mus. Perf. 121, 221, 222 Piano majors required Mus. Perf. 580</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (Mus. Perf. 400)</td>
<td>1</td>
</tr>
<tr>
<td>Recital attendance (specified number of recitals per semester for four semesters, Mus. Perf. 050)</td>
<td></td>
</tr>
</tbody>
</table>

Bachelor of Music in Performance with Minor in Journalism  
(Advertising/Public Relations Emphasis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>16</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641, 645, 643 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>11</td>
</tr>
<tr>
<td>Mus.-Comp. 113Q, 331Q, 332Q, 333Q</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218 and 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Ensembles (see degree sheets for specified ensembles)</td>
<td>8 or 10</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
<tr>
<td>Vocal majors required Mus. Perf. 121, 221, 222 Piano majors required Mus. Perf. 580</td>
<td></td>
</tr>
</tbody>
</table>

Bachelor of Music Education Requirements

Students receiving the BME must meet the state requirements for the secondary three-year certificate and three-year elementary certificate. Students may select from four options within this degree:

1. Instrumental emphasis offered to satisfy the needs of students whose chief performing medium is instrumental or keyboard and who plan to enter the field of instrumental music teaching in the public schools.
2. Vocal emphasis offered to satisfy the needs of students whose chief performing medium is voice, piano or guitar and who plan to enter the field of vocal and general music teaching in the public schools.
3. Special music education emphasis offered to satisfy the needs of students, either vocal or instrumental specialists, who plan to enter the field of music education for special education children in the public schools.
4. Piano pedagogy emphasis offered to satisfy the needs of students whose chief performing medium is piano and who plan to enter the field of vocal, piano or general music teaching in the public schools and studio piano teaching in the community.

Student Teaching

Admission into the student teaching semester requires a minimum cumulative grade point average of 2.50, a minimum grade point average of 2.50 in music courses; senior standing (90 hours—200 credit points); a grade of C or better in English composition (Eng. 101 or its equivalent and Eng. 102); a grade of C or better in speech 111 or 112; completion of prerequisites in educational psychology, foundations of education and music education methods; successful completion of the piano proficiency exam; successful completion of a physical examination; and a recommendation by the music education department.

Transfer students must satisfy education requirements for prerequisites not taken at Wichita State.

All students must have an application on file with the Admissions Committee of the College of Education and the De-
department of Music Education and receive their approval. Students must file applications with the chairperson of the music education department.

Graduation Requirements
The following program fulfills both the University requirements for graduation and the Kansas certification requirement and must be taken by all Bachelor of Music Education (BME) 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.

General Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills</td>
<td>12</td>
</tr>
<tr>
<td>Eng. 101 and 102</td>
<td>6</td>
</tr>
<tr>
<td>Speech 111 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Math. 109, 111, 112 or 211</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and Fine Arts</td>
<td>9</td>
</tr>
<tr>
<td>Literature required, 3 hrs.</td>
<td></td>
</tr>
<tr>
<td>Mus.-Comp. 1130 required, 2 hrs; 4 hrs. from American studies, art education, art history, foreign languages (excluding basic language courses), history, linguistics, musicology-composition, music education, philosophy or religion</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Psychology 111Q required, 3 hrs; 3 hrs. from sociology, anthropology, economics, geography or political science</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Courses in 2 of the following departments: biological sciences, chemistry, geology, mathematics or physics</td>
<td></td>
</tr>
<tr>
<td>Electives (to make a total of 42 hours)</td>
<td>9</td>
</tr>
<tr>
<td>6 hours required from Mus.-Comp. 3310, 3320, 3330</td>
<td></td>
</tr>
<tr>
<td>Three hours may be taken in any University division (except the student's major department)</td>
<td></td>
</tr>
</tbody>
</table>

Professional Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 233 or 333 and 433</td>
<td>6</td>
</tr>
<tr>
<td>IS 232, 231, 234 and 428</td>
<td>6</td>
</tr>
<tr>
<td>IS 401</td>
<td>3</td>
</tr>
<tr>
<td>IS 456</td>
<td>3</td>
</tr>
<tr>
<td>IS 451*</td>
<td>3</td>
</tr>
<tr>
<td>IS 469*</td>
<td>3</td>
</tr>
</tbody>
</table>

**Additional Courses Required for Instrumental Emphasis**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td></td>
</tr>
<tr>
<td>Instrumental majors</td>
<td>18</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>14</td>
</tr>
<tr>
<td>(chief medium)</td>
<td>2</td>
</tr>
<tr>
<td>(second instrument)</td>
<td>2</td>
</tr>
<tr>
<td>Electric bass majors</td>
<td>10</td>
</tr>
<tr>
<td>(electric bass)</td>
<td>4</td>
</tr>
<tr>
<td>(string bass)</td>
<td>2</td>
</tr>
<tr>
<td>Required for all of the above majors:</td>
<td></td>
</tr>
<tr>
<td>Mus. Ed. 341, 1 hr.; and 342, 1 hr.</td>
<td></td>
</tr>
<tr>
<td>Students must be enrolled in applied music during the semester of their senior recital</td>
<td></td>
</tr>
<tr>
<td>General Music</td>
<td>24-26</td>
</tr>
<tr>
<td>Mus.-Comp. 1270-128, 129-130, 227-228, 229-230, 561, 641 or 645 or 643, Mus. Perf. 217 or 218, 651 or 691. Required for piano majors, Mus. Perf. 307 and 407</td>
<td></td>
</tr>
<tr>
<td>Ensembles</td>
<td>8-10</td>
</tr>
<tr>
<td>Instrumental majors</td>
<td>10</td>
</tr>
<tr>
<td>Piano majors</td>
<td>8</td>
</tr>
<tr>
<td>(see degree sheets for specified ensembles)</td>
<td></td>
</tr>
<tr>
<td>Recital attendance (four semesters plus senior recital-Mus. Perf. 050)</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Courses Required for Vocal (Keyboard) Emphasis**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td></td>
</tr>
<tr>
<td>Vocal majors (voice)</td>
<td>14</td>
</tr>
<tr>
<td>(piano)</td>
<td>2</td>
</tr>
<tr>
<td>Keyboard majors</td>
<td>14</td>
</tr>
<tr>
<td>(piano)</td>
<td>2</td>
</tr>
<tr>
<td>(Mus. Ed. 341 &amp; 342)</td>
<td></td>
</tr>
<tr>
<td>Students must be enrolled in applied music during the semester of their senior recital</td>
<td></td>
</tr>
<tr>
<td>General Music</td>
<td>28</td>
</tr>
<tr>
<td>Mus.-Comp. 1270-128, 129-130, 227-228, 229-230, 561 or 661, 641 or 645 or 643, Mus. Perf. 217 or 218, 651 or 691. Required for vocal majors, Music electives, 4 hrs. Required for piano majors, Mus. Perf. 580 or 581 and Mus. Perf. 307 and 407</td>
<td></td>
</tr>
<tr>
<td>Ensembles</td>
<td>8-10</td>
</tr>
<tr>
<td>Instrumental and vocal majors</td>
<td>10</td>
</tr>
<tr>
<td>Piano majors</td>
<td>8</td>
</tr>
<tr>
<td>(see degree sheets for specified ensembles)</td>
<td></td>
</tr>
<tr>
<td>Recital attendance (four semesters plus senior recital-Mus. Perf. 050)</td>
<td></td>
</tr>
</tbody>
</table>

*These courses must be taken during the student teaching semester.*
Education Requirements

Area  Hrs.
Educational Psychology  6
IS 331 and 433
Foundations of Education  6
IS 231, 232, 234, 238
Recommended for special music education majors, CDS 214, 3 4
Music Education Methods  12-16
Elementary Vocal Emphasis-Mus. Ed. 201, 301, 309, 402, 241, 242
Additional courses for piano pedagogy majors-Mus. Perf. 580 (2 hours) & 690 (4 hours)

Music Major in Fairmount College of Liberal Arts and Sciences

Students in Fairmount College of Liberal Arts and Sciences who wish to major in music are required to elect 41 hours as specified in the following areas and course listings.

Area  Hrs.
Group I  8
Music Literature and History
Mus.-Comp. 113Q and six hours from Mus.-Comp. 331Q, 332Q or 333Q
Group II  16
Music Theory
Mus.-Comp. 127Q-128, 129-130, 227-228, 229 and 523
Group III  2
Counterpoint
Mus.-Comp. 561
Group IV  4
Conducting, Orchestration and Choral Arranging
Mus. Perf. 217 or 218 and Mus.-Comp. 641, 643 or 645
Group V  4
Applied Music (four semesters)
Voice, piano, organ or orchestral instrument
Group VI  3
Ensemble
Select in consultation with advisor

Group VII
Electives from the areas of music, literature, music theory, counterpoint, conducting, orchestration and choral literature  4

Music Minor in Fairmount College of Liberal Arts and Sciences

A music minor in Fairmount College of Liberal Arts and Sciences consists of 18 hours selected from the following: Mus.-Comp. 131Q, 132Q, 139-140, 227-228, 229-230, 331Q, 332Q, 333Q, 523, a maximum of four hours of ensembles, and a maximum of two hours (two semesters) in applied music. Students who choose to utilize two hours of applied music must satisfy freshman proficiency requirements.

Music Education

Noncredit Course
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. Offered Cr/NCr only. Repeatable. F 11 080 2 0832

Lower-Division Courses
150. Music Education Workshop. (1-4). Repeatable for credit. F 11 150 2 0832
201. Fundamentals of Vocal Music for Elementary School. (3). The teaching of music in the elementary school. Consideration of objectives and examination of materials. Designed for students primarily interested in teaching music in elementary schools. The course includes observation in public schools. Includes classroom instruments and recorder, choral arranging and music theater for the public schools. Prerequisite: music education major or instructor's consent. Grades 4-8. F 11 201 0 0832
202. Fundamentals of Instrumental Music for Elementary School. (3). An introductory course with primary emphasis placed on general examination of the instrumental music program in the elementary school. Coverage includes study of current trends and changing concepts in music education as well as an investigation of the activities, materials and organizational considerations related to the teaching of elementary instrumental music. The course provides the opportunity to teach elementary instrumental students on a limited basis in a laboratory school setting. Includes teaching techniques for marching band and jazz ensemble. Prerequisite: music education major or instructor's consent. Grades 4-8. F 11 202 0 0832
203. Fundamentals of Vocal Music for Secondary Schools. (3). The teaching of music in the secondary school. Consideration of objectives and examination of materials. Designed for students primarily interested in teaching music in secondary schools. The course includes observation in public schools. Includes classroom guitar, choro-

204. Fundamentals of Instrumental Music for Secondary Schools. (3). Techniques and materials focused on teaching instrumental music in junior and senior high schools. Emphasis on instrumentation, organization, and administration, laboratory experiences, and the teaching of theoretical and practical aspects of music. Topics covered include: history of the brass and woodwind ensembles, changes in instrument design, and the influence of technology on teaching. Prerequisite: music education major or instructor's consent. Grades 9-12. F 11 204 0 0832

235. Methods of Teaching Orchestral Instruments (Violin and Viola). (1). Procedures and materials for class and private teaching. Performance and fundamentals in first position and theory and reading knowledge of positions two through five are included. Band and orchestra laboratory is included. Grades 4-12. F 11 235 0 0832

236. Methods of Teaching Orchestral Instruments (Cello and String Bass). (1). Procedures and materials for class and private teaching. Fundamental techniques are applied. Knowledge of more difficult positions and special techniques are included. Band and orchestra laboratory is included. Grades 4-12. F 11 236 0 0832

237. Methods of Teaching Band and Orchestral Instruments (Clarinet and Saxophone). (1). Designed to prepare the prospective instrumental music instructor to effectively teach clarinet and saxophone in the public school setting. Included are discussions of teaching techniques, identification of problems peculiar to each instrument, and care and repair, instructional materials, instrument brands and the development of sufficient playing skills. Two class periods per week consisting of one group and one private meeting (Enrollment is limited). Grades 4-12. F 11 237 0 0832

238. Methods of Teaching Band and Orchestral Instruments (Flute and Double Reeds). (1). Designed to prepare the prospective instrumental music instructor to effectively teach flute and double reeds in the public school setting. Included are discussions of teaching techniques, identification of problems peculiar to each instrument, care and repair, instructional materials, instrument brands and the development of sufficient playing skills. Two class periods per week consisting of one group and one private meeting (Enrollment is limited). Grades 4-12. F 11 238 0 0832

239. Methods of Teaching Band and Orchestral Instruments (Brass). (1). Procedures and materials for class and private teaching of all brass instruments. Emphasizing tone qualities, differences in embouchure and necessary techniques for performance. Grades 4-12. F 11 239 0 0832

240. Methods of Teaching Band and Orchestral Instruments (Percussion). (1). Procedures and materials for class and private teaching of percussion instruments. Emphasis on techniques for all percussion instruments are included. Grades 4-12. F 11 240 0 0832

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L, means four hours of lecture and two hours of lab.
241. String Rehearsal Methods. (1). String rehearsal techniques and materials for grades 4 through 12. Required majors on choral/keyboard program and choral/key-
board majors on special music education program. F 11 241 0 0832

242. Wind and Percussion Rehearsal Methods. (1). Wind and percussion tech-
niques and materials for grades 4 through 12. Required majors on choral/keyboard pro-
gram and choral/keyboard majors on special music education program. F 11 242 0 0832

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 enrolled in Co-op 281 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of work in addition to their co-op assignment; alternating, working full-time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisite: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NC only. F 11 281 2 0832

Upper-Division Courses

301. Survey of Vocal Music for Secondary School. (3). An overview of activities in sec-
condary vocal and general music programs. Includes a study of objectives for sec-
condary classes and consideration of materials and methods. Includes classroom guitar and song leading. The course is for students primarily interested in teaching music in the elementary schools. Prerequisite: Mus. Ed. 201. Grades 6-12. F 11 301 0 0832

302. Survey of Secondary School Music. (3). Primarily an examination of instruc-
tion, methods, activities and materials in-
volved in the teaching of instrumental music in the secondary schools. Also included are an examination of classroom teaching tech-
niques and an opportunity for elementary instrument music education majors to teach junior high school instrumental students in a laboratory school setting. Prerequisite: Mus. Ed. 202. Grades 6-12. F 11 302 0 0832

303. Survey of Vocal Music for Elementary Schools. (3). An overview of activities in the elementary general music program. Included are a study of objectives for elementary classes and consideration of materials and methods. Includes classroom and recorder techniques. The course is for students primarily interested in teaching music in the secondary schools. Prerequisite: Mus. Ed. 203. Grades K-8. F 11 303 0 0832

304. Survey of Elementary School Music. (3). A survey of activities in the elementary school music program. Includes an overview of classroom general music program and instrumental instruction. The course is for students primarily interested in teaching instrumental music in the sec-
ondary school. Prerequisite: Mus. Ed. 204. Grades 4-8. F 11 304 0 0832

309. Survey of Music for Special Educa-
tion. (3). Consideration of methods and problems in preparation for student teaching of music with special education students at early childhood, elementary and secondary levels in public schools. Included are musical services designed to meet the needs of the learner in regular and alternative schools and classes. Identification, objectives, appropriate activities, materials and planning and implementing effective techniques of study are observed, demonstration-participation experiences and/or media presentations. This 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 cer-
tification and recertification of music teachers only. Prerequisites: Mus. Ed. 201 or 202, 203 or 204, with instructor's consent. Grades K-12. F 11 309 0 0832

341. Survey of Singing Techniques and Li-
terature. (1). A study of basic techniques of vocal education, emphasis on development of individual voice as a teaching tool. Includes a survey of literature for the solo voice. Required for instrumental, keyboard and special music education majors. Grades K-12. F 11 341 0 0832

342. Survey of Choral Techniques and Li-
terature. (1). A study of basic techniques of vocal education, emphasis on development of individual voice as a teaching tool. Includes a survey of literature for the solo voice. Required for instrumental, keyboard and special music education majors. Grades K-12. F 11 341 0 0832

343. Advanced Techniques of Secondary 
School Music. (1-2). Emphasis on special problems related to preparation for student teaching: consideration of the instrumental, vocal and general music programs at the elementary level. Included are audiovisual in-
struction and materials. Prerequisites: Mus. Ed. 201 and 301 or 202 and 302. To be taken during student teaching semester. Grades K-8. F 11 402 0 0832

problems related to preparation for student teaching: consideration of the instrumental, vocal and general music programs at the secondary level. Included are audiovisual instruction and materials. Prerequisites: Mus. Ed. 203 or 204, and 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. F 11 481 2 0832

Courses for 
Graduate/Undergraduate Credit

606. Music Methods for Early Childhood Education. (3). Methods and materials for teaching music in the preschool and kinder-
garten, with an emphasis on development of the child's musical growth through singing, listening, rhythmic and creative activities; study of materials and techniques of play, movement and conducting skills. F 11 606 0 0832

610A. Music Theater in the Schools. (2). Designed to teach students how to pro-
duce a musical in the secondary schools. Includes selection of music, design of choral arrangements, staging of scenes and directing of performances. F 11 610A 0 0832

611. Music for Special Education. (3). Open to upper-division or graduate stu-
dents and designed for the potential practicing music teacher, classroom teacher or special education teacher. Identification of dysfunctioning children and their problems and current theory and practice in special music education are included. This course satisfies the requirement, effective September 1, 1981, that applicants for initial cer-
tification 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 cer-
tification and recertification of music teachers only. Grades K-12. F 11 611 0 0832

684. String Teaching Seminar. (2). Historical development of string instrumen-
ting and techniques. Open to upper-division and graduate students interested in teaching string instruments. F 11 684 9 0932

685. 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. F 11 686 0 0832

690. Special Topics in Music. (1-4). For indi-
vidual or group instruction. Repeatable with departmen
tal consent. F 11 690 2 0832

732. Music in the Junior High School. (3). Includes administrative structures, the co-curriculum and selection of materials, teaching as behavior and competencies needed for successful teaching of general and choral music grades 6-9. F 11 632 0 0832

737A. Advanced Woodwind Techniques. (2). Open to upper-division and graduate students interested in the teaching of woodwind instruments. F 11 737A 0 0832
The image contains a page from a document that describes various courses offered in music education. The text is related to special education, music education, and specific courses offered in the fall terms, including requirements and prerequisites. It also includes a list of courses offered for graduate students, with details on course descriptions, prerequisites, and course numbers. The text is organized in a structured manner, with each course entry providing necessary information for academic planning and course selection. The page also includes abbreviations for music instruments. The text is clear and readable, with no indication of any errors or discrepancies in the transcription.
148. Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Repeatable for credit. Prerequisite: Mus. Ed. 238 or instructor’s consent. F 12 148 2 1004

150. Music Performance Workshop. (1-4). Repeatable for credit. F 12 150 2 1004

210-211-212-213-214. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Concert Band; Marching Band; Symphony Band; Wichita Community Band; Wind Ensemble; (C) Choral Union; (D) Women’s Glee Club; Men’s Glee Club; (E) A Cappella Choir; University Singers; Concert Chorale; (F) Piano Accompaniment; (K) Opera Theater; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) String Ensemble; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble. Repeatable for credit. Prerequisite: Mus. Ed. 210-1.1 must be formulated. F 12 212 1 1004; F 12 213 1 1004; F 12 214 1 1004

217. Instrumental Conducting. (2). Fundamentals of band technique; elementary score reading and musical leadership. Practical experience in conducting laboratory and classroom groups. F 12 217 0 1004

218. Choral Conducting. (2). Fundamentals of conducting, score reading and rehearsal techniques. Practical experience in conducting classroom groups. Prerequisites: Mus.-Comp. 128 and 130. F 12 218 0 1004

221. German Diction. (1). Designed for the vocal performer, including a comprehensive study of German consonant and vowel sounds. F 12 221 0 1004

222. French Diction. (1). Designed for the vocal performer, including a comprehensive study of French consonant and vowel sounds. F 12 222 0 1004

223-224. Applied Piano Accompanying. (2-2). Individual private study of standard accompaniment literature. Prerequisite: successful completion of two semesters of piano study. F 12 223 0 1004; F 12 224 0 1004

250-251. Applied Piano Concerto. (2-2). Designed to give students concerto performance experience. Prerequisites: sophomore standing and admittance to the BM performance program. F 12 250 0 1004; F 12 251 0 1004

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 enrolled in Co-op 281 may follow one of two scheduling patterns: Parallels, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; Alternating, working full-time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NCr only. F 12 281 2 1004

284. Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Repeatable for credit. Prerequisite: Mus. Ed. 238 or instructor’s consent. F 12 284 2 1004

300. Junior Recital. (1). Required for BM piano majors, performance or accompanying emphasis. Prerequisite: departmental consent. F 12 300 3 1004

307-407. Piano Repertoire. (1-1). Designed to give performing and listening experience to piano majors. Repeatable for credit. F 12 307 2 1004; F 12 407 2 1004

400. Recital. (1). Prerequisite: departmental consent. F 12 400 3 1004

410-411-412-413-414. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Concert Band; Marching Band; Symphony Band; Wichita Community Band; Wind Ensemble; (C) Choral Union; (D) Women’s Glee Club; Men’s Glee Club; (E) A Cappella Choir; University Singers; Concert Chorale; (F) Piano Accompaniment; (K) Opera Theater; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) String Ensemble; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble. Repeatable for credit. F 12 410 1 1004; F 12 411 1 1004; F 12 412 1 1004; F 12 413 1 1004; F 12 414 1 1004

417Y. 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. F 12 417Y 3 1004

423-424. Applied Piano Accompanying. (4-4). Individual private study of standard accompaniment literature. Prerequisite: successful completion of solo recital. F 12 423 0 1004; F 12 424 0 1004

450-451. Accompanying Recital. (1-1). Required for BM piano majors, accompanying emphasis. Prerequisite: departmental consent. F 12 450 3 1004; F 12 451 3 1004

481. Cooperative Education. (1-8). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 481 may follow one of two scheduling patterns: Parallels, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; Alternating, working full-time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NCr only. F 12 481 2 1004

Courses for Graduate/Undergraduate Credit

548. Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Repeatable for credit. Prerequisite: Mus. Ed. 238 or instructor’s consent. F 12 548 2 1004

560. Piano Pedagogy. (2). Primarily concerned with the art and science of teaching. Includes observations of master teachers in the University and community. F 12 560 0 1004

581. Piano Teaching Materials. (2). A survey of teaching methods and materials from beginning through early advanced levels. F 12 581 0 1004

620. String Pedagogy: Violin and Viola. (2). A study of tutorial techniques for violin and viola. Includes contact classes in studies for instructor and class critique. Prerequisite: violin or viola performance capability or consent of instructor. F 12 620 0 1004

625. Voice Pedagogy. (2). Designed to acquaint the voice major with vocal techniques, concepts and materials of private and class instruction. F 12 625 0 1004

627. Music Theater Directing. (2). Coaching, mounting and staging music-drama productions with emphasis on acting and directing techniques. Prerequisite: instructor’s consent. F 12 627 0 1004

651. Advanced Conducting and Score Reading. (2). Baton technique, score reading and music criticism for the advanced student. F 12 651 0 1004

680. Woodwind Pedagogy. (2). A comprehensive study of woodwind instrument techniques, concepts and materials of studio instruction for the advanced student, including the teaching of min-lessons for instructor and class critique. Prerequisite: performance capability on a woodwind instrument or consent of instructor. F 12 680 0 1004

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 min-lessons for instructor and class critique. Prerequisite: performance capability on a brass instrument or consent of instructor. F 12 681 0 1004

690. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent. F 12 690 2 1004

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. Perf. 217 or 218 or equivalent. F 12 691 0 1004

707. Piano Repertoire. (1). Designed to give performing and listening experience to piano performance majors. Repeatable for credit. F 12 707 2 1004

710-711-712-713-714. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Concert Band; Marching Band; Symphony Band; Wichita Community Band; Wind Ensemble; (C) Choral Union; (D) Women’s Glee Club; Men’s Glee Club; (E) A Cappella Choir; University Singers; Concert Chorale; (F) Piano Accompaniment; (K) Opera Theater; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) String Ensemble; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble. Repeatable for credit. F 12 710 1 1004; F 12 711 1 1004; F 12 712 1 1004; F 12 713 1 1004; F 12 714 1 1004

717Y. Voice for Music Theater. (2). Basic repertoire and singing techniques with weekly master class devoted to music theater tech-
Music \& Concepts. Restricted to persons other than vocal majors. F 12 717Y 3 1004

750. Music Performance Workshop. (1-4). Repeatable for credit. F 12 750 0 1004

760. Group Piano Practicum. (2). Supervised group piano teaching for graduate students. Prerequisite: consent of instructor. F 12 760 2 1004

761. Studio Piano Practicum. (2). Supervised studio teaching for graduate students. Prerequisites: Mus. Perf. 580 and 581. F 12 761 2 1004

Courses for Graduate Students Only

841. Special Project in Music. (1-3). Individually supervised study or research with emphasis upon the personal needs of the student. Repeatable for credit. Prerequisite: instructor’s consent. F 12 841 4 1004

842. Special Project in Music. (1-3). Individually supervised study or research with emphasis upon the personal needs of the student. Repeatable for credit. Prerequisite: instructor’s consent. F 12 842 4 1004

843. Piano Pedagogy Seminar. (2). Variable topics, such as (1) advanced techniques in piano literature 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 preparatory piano pedagogy students as needed. Repeatable for credit. Prerequisite: Mus. Perf. 580. F 12 843 4 1004

852. Introduction to Graduate Study. (3). See course listing under musicology-composition department. F 13 852 4 1006

873. Graduate Recital. (2). Performance of a full recital featuring the chief performing medium. Prerequisite: consent of instructors in applied area. F 12 873 4 1004

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. F 12 874 4 1004

Musicology-Composition

Noncredit Course

080. Topics in Music. (1-3). Topics exploring events, conditions, relationships, styles, etc. Resources Schedule of Courses for current listing. Not applicable to degree. Repeatable. F 13 080 2 1006

Lower-Division Courses

113Q. Introduction to Music. (3). Development of skills and techniques used in critical analysis and a comparison of the contrasting styles of music literature. The course is designed for music majors or students with advanced musical background. Must be taken concurrently with Mus.-Comp. 127 or 128. F 13 113Q 0 1006

114. Music Literature Survey. (2). A survey of representative works from the vocal and instrumental repertoire. Prerequisite: Mus.-Comp. 113 or instructor’s consent. F 13 114 0 1006

127Q. Theory I. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), basic orchestration and simple harmonic background and contrapuntal relationships applied to literature from all periods of music. One selected score being performed during the semester by a University ensemble is studied. Prerequisite: concurrent enrollment in Mus.-Comp. 127 or 128. F 13 127Q 0 1006

127H. Theory I Honors. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), simple harmonic relationships and fundamental voice-leading techniques. Prerequisites: concurrent enrollment in Mus.-Comp. 127 and departmental consent. F 13 127H 0 1004

128. Theory II. (2). A continuation of Theory I. Formal expansion includes binary and ternary structures. Basic harmonic structures are further elaborated. Another score being performed by a University ensemble is studied. Prerequisites: Mus.-Comp. 127 and concurrent enrollment in Mus.-Comp. 129 or 130. F 13 128 0 1004

128H. Theory II Honors. (2). Formal expansion includes binary and ternary structures. Basic harmonic structures are further elaborated. Prerequisites: concurrent enrollment in Mus.-Comp. 127 or 128. F 13 128H 0 1004

129. Aural Skills I. (2). Recognition, singing and dictation of melodies from all periods of music, interval training emphasized. F 13 129 0 1004

130. Aural Skills II. (2). Continuation of melodic, harmonic, and rhythmic dictation. Recognition and dictation of diatonic harmonic structures are included. Prerequisite: Mus.-Comp. 129. F 13 130 0 1004

160G. The Heritage of Western Music. (3). Intended to acquaint the nonmajor with the central tradition of Western music. Emphasis on 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. F 13 160G 0 1006

161. Music through the Ages. (3). Open to all students, particularly those involved in alternative scholastic programs. It is designed to help students develop the capacity for critical music listening and an appreciation for all musical styles. F 13 161 0 1005


227. Theory Ill. (2). The study of contrapuntal forms and textures from music of all periods. Melodic, harmonic and rhythmic aspects of this music are explored, as well as basic orchestration techniques related to these textures. Study of an appropriate score being performed by a University ensemble is included. Prerequisite: Mus.-Comp. 128. F 13 227 0 1004

228. Theory IV. (2). Study of the larger homophonic forms (sonata, rondo) using techniques acquired in previous semesters. Analysis of an appropriate score being performed by a University ensemble is included. Prerequisite: Mus.-Comp. 227. F 13 228 0 1004

229. Aural Skills III. (2). Recognition, singing and dictation of contrapuntal textures with continued harmonic practice emphasizing elementary melodic and harmonic content. Prerequisite: Mus.-Comp. 130. F 13 229 0 1004

230. Aural Skills IV. (2). Summation and expansion of previous skills with further emphasis on harmonic chromaticism and atonal contexts. Prerequisite: Mus.-Comp. 229. F 13 230 0 1004

245. Jazz Improvisation. (2). Melodic, harmonic and rhythmic creation with emphasis on the relationship of scale patterns and seventh chords. Repeatable for credit. Prerequisites: Mus.-Comp. 128 and 130 or instructor’s consent. F 13 245 0 1004

259 & 260. Applied Composition. (2-2). Individual study in fundamentals of musical composition with emphasis upon 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.-Comp. 127 or equivalent and instructor’s consent. F 13 259 3 1004 & F 13 260 3 1004

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 may be formulated in consultation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 281 may follow one of two scheduling patterns. Parallel, enrolling concurrently in a minimum of six hours of course work in addition to their career activity, working one full-time semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in another course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered O/N/C only. F 13 281 2 1006

Upper-Division Courses

310. Interrelated Arts. (3). Interdepartmental course presenting an aesthetic analysis of three arts. The course emphasizes style in the arts. F 13 310 1 1005

315. Music of the 20th Century. (2). An aesthetic approach to music of this century, its major composers and stylistic and formal characteristics. It is designed primarily for the nonmusic major who has musical interest and background. F 13 315 1 1005

316. Symphonic Literature. (2). An advanced course in the great orchestral literature covering the development of the symphony orchestra and its music from the 18th century Mannheim school to the present. The course is designed primarily for the nonmusic major who has musical interest and background. F 13 316 1 1005

331Q. History of Music in the Middle Ages and Renaissance. (3). A survey of the evo-
Course for Graduate/Undergraduate Credit

523. Form and Analysis. (2). Extensive analysis of the forms and formal processes of musical literature. Prerequisite: Mus.-Comp. 227. F 13 523 0 1004

531. Introduction to Electronic Music. (2). Basic techniques of electronic music. Instruction is directed toward musicians who wish to use the electronic medium in teaching, performing or communicating in any way with their constituency. F 13 531 0 1004

559-560. Applied Composition. (2-2). Individual study in advanced musical composition with emphasis on writing for small ensembles and the smaller forms. Designed for theory-composition majors. Repeatable. Prerequisites: Mus.-Comp. 260 and consent of theory-composition area faculty and department chairperson to one of each. F 13 559 3 1004; F 13 560 3 1004

561. 18th Century Counterpoint. (2). Counterpointal devices of the 18th century, as found in the works of J. S. Bach. Prerequisite: Mus.-Comp. 228. F 13 561 0 1004

563-564. Collegium Musicum. (1-1). A laboratory in the editing, rehearsal and performing of early music. Prerequisite: instructor's consent. F 13 563 2 1005; F 13 564 2 1005

582-583. Piano Literature. (2-2). Survey of the historical periods of professional piano repertoire. F 13 582 0 1006; F 13 583 0 1006

597-598. Organ Literature and Practice. (1-1). Performing and studying the organ literature for the instrument of all periods, study of organ design and practice in aspects of service playing, such as hymn playing, improvisation and accompanying. Prerequisite: Organ majors. Repeatable. Prerequisite: Mus.-Comp. 228 or instructor's consent. F 13 597 0 1004; F 13 598 0 1004

623. Opera Literature. (3). A comprehensive survey of Italian, German, French, Russian, English, and American opera literature from the 17th century to the present. Prerequisite: Mus.-Comp. 113 is strongly recommended before taking the course. Should be only upperclassmen. Not limited to music majors. F 13 623 0 1006

624. Oratorio and Cantata Literature. (2). A study of the solo vocal literature of the larger sacred and secular forms from the 17th century to the present. Not limited to music majors. F 13 624 0 1006

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.-Comp. 227. F 13 641 0 1004

643. Band Arranging. (2). Fundamental principles of arranging and scoring musical materials for various bands and wind ensembles. Prerequisite: Mus.-Comp. 227. F 13 643 3 1004

645. Choral Arranging. (2). Scoring for women's, men's and mixed choirs. Performance and analysis of student's arrangements in class are included. Prerequisites: Mus.-Comp. 228 and 230. F 13 645 0 1004

652. Choral Literature. (3). An historical survey of choral literature from the Renaissance to the 20th century. F 13 652 0 1006

659-660. Applied Composition. (2-2). Individual study in advanced musical composition with emphasis on writing for both small ensembles and large groups in the larger forms. Repeatable. Prerequisites: Mus.-Comp. 560 and instructor's consent. F 13 659 3 1004; F 13 660 3 1004

661. 16th Century Counterpoint. (2). Analysis and application of the counterpointal techniques of the 16th century. Prerequisite: Mus.-Comp. 227. F 13 661 0 1004

671. Choratic Harmony. (2). Advanced study of harmonic materials of all periods with special attention to the 19th century. Analysis and creative writing are emphasized. Prerequisite: Mus.-Comp. 227. F 13 671 0 1004

672. Contemporary Techniques. (2). Advanced study of music from impressionism to the present with emphasis on related literature and creative writing. Prerequisite: Mus.-Comp. 228. F 13 672 0 1004

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. F 13 665 0 1004

690. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent. F 13 690 2 1006


750. Musicoology-Composition Workshop. (1-4). Repeatable for credit. Prerequisite: instructor's consent. F 13 750 2 1004

755. Basic Musicianship in the Secondary School Curriculum. (2). An examination of approaches to musicianship training at the secondary school level. Including the study of fundamentals through musical analysis and composition in various styles. F 13 755 0 1004

758. Teaching of Theory in the Community Junior College. (2). Designed to prepare the junior college theory teacher. Attention is given to contemporary trends in music theory and their application to planning courses of study, evaluation of texts and pedagogical techniques. F 13 758 0 1004

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 approval by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 781 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; alternating, working full-time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisite: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NC only. F 13 481 2 1006

493G. American Music. (3). A study of music of America from 1620 to the middle of the 20th century. F 13 493G 0 1005
sembles. (B) small ensembles and (C) solo literature. Prerequisites: Mus.-Comp. 671, 672 and 641, or departmental consent. F 13 840A 9 1004; F 13 840B 9 1004; F 13 840C 9 1004

841-842. Special Project in Music: (1-3; 1-3). Individually supervised study or research with emphasis on the professional needs of the student. Repeatable for credit. Prerequisite: instructor's consent. F 13 841 4 1006; F 13 842 4 1006

852. Introduction to Graduate Study. (3). Techniques of research and development of bibliography in music and music education. The course must be elected the first available semester of enrollment. F 13 852 0 1006

859-860. Advanced Composition. (2-2). Original work in the large forms and a continuation and expansion of Mus.-Comp. 659-660. Prerequisite: Mus.-Comp. 660 or equivalent. F 13 859 3 1004; F 13 860 3 1004

875. Thesis Research. (2). F 13 875 4 1006

876. Thesis. (2). F 13 876 4 1006

893. Music of Antiquity Through the Renaissance. (3). F 13 893 0 1006

894. Music of the Baroque Era. (3). F 13 894 0 1006

895. Music of the 18th Century. (3). F 13 895 0 1006

896. Music of the 19th Century. (3). F 13 896 0 1006

897. Music of the 20th Century. (3). F 13 897 0 1006
Sidney D. Rodenberg, PhD, Dean

The College of Health Professions was established in 1970. Fourteen programs of study are offered at the undergraduate and graduate levels.

In addition to the academic departments, the college houses the Center for Continuing Education and the Office of Health Education Research and Development. The Center for Continuing Education provides continuing education opportunities for members of the health professions in Kansas. The Office of Health Education Research and Development with its two major components, Biomedical Communications Production Services and the Independent Study Laboratory, provides opportunities for individualized study and technical and consulting services in graphic arts and the use of microcomputers in instruction.

Departments within the college are accredited through the following agencies: the Council on Dental Education of the American Dental Association, the American Physical Therapy Association Committee on Accreditation in Education, National League for Nursing, the Association of University Programs in Health Administration and the Committee on Allied Health Education and Accreditation of the American Medical Association.

Degrees Offered

Undergraduate

Of the programs offered at the undergraduate level, five lead to the Bachelor of Science (BS) degree—health care administration, medical record administration, medical technology, nursing and physical therapy. Three programs lead to a Bachelor of Health Science (BHS) degree—dental hygiene, physician assistant and respiratory therapy. Students in the BHS may select one of the following emphases (all options are available in each program): (1) education, (2) administration and supervision or (3) natural or clinical sciences with specific preparation in the majors listed above.

In addition, the Associate of Science is awarded in dental hygiene and respiratory therapy. Students in the physician assistant and emergency medical training programs receive a certificate of completion.

Graduate

A graduate program leading to a Master of Health Science (MHS) degree with options for emphasis in administration, education or advanced clinical study is offered. Admission to the MHS program of study requires a bachelor's degree and the fulfillment of additional requirements.

A Master of Nursing program, individualized to meet the needs and professional goals of the student, is offered for part-time (three to six credits) or full-time study. The student selects an area of clinical interest such as adult nursing, maternal and child care and mental health. Role development in administration, teaching or advanced practice is also available.

More information on graduate programs is available in The Wichita State University Graduate School Bulletin.

Policies

Admission

All students desiring admission to any programs offered by the College of Health Professions must:

1. Meet The Wichita State University admission requirements (see the Admission to Wichita State section of the Catalog).
2. Have an overall minimum grade point average of 2.00 in all previous college work.
3. Meet the requirements in one of the following categories:
   a. Category I—Students Seeking Admission to the Associate Degree or Special Programs. Students seeking admission to associate degree or special programs must meet the general admission requirements of the college and the specific admission requirements for each program, as stated in The Wichita State University Catalog.
   b. Category II—Students Seeking a Bachelor’s Degree. In addition to meeting the general admission requirements to the College of Health Professions, each student must meet the college’s 24-hour transfer rule: (1) All students transferring to the College of Health Professions must have completed a minimum of 24 semester hours of credit, of which 12 credit hours must be in any combination of biological sciences, chemistry, physics and/or mathematics and (2) students must maintain a minimum grade point average of 2.00 in the 12 credit hours of science courses.
   c. Category III—Students Seeking a Graduate Program of Study. Students seeking admission to graduate programs within the college should consult the Graduate Bulletin, which may be obtained through the Graduate School in Jardine Hall.

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 The 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.

Students interested in pursuing a career in medicine, osteopathy, dentistry, veterinary medicine, pharmacy, optometry, podiatry or public health should make an appointment with the health professions adviser in Fairmount College of Liberal Arts and Sciences, Room 200, to clarify preprofessional and professional course and admission requirements.

Probation and Dismissal

Students are placed on probation for the next term in which they enroll if their cumulative grade point average falls below 2.00. Students remain on probation even though they earn a 2.00 grade point average in the term during which they are on probation if their cumulative grade point average is not at least 2.00. Probation is removed when a student's cumulative grade point average meets the required academic level.

Students on probation may not enroll for more than 12 semester hours in the fall or spring semester, or five hours in the Summer Session, excluding one hour of military science, physical education or marching band. Exceptions to this limitation may be made on the recommendation of a student's adviser with the approval of the dean of the college.

Students on probation are subject to academic dismissal from the College of Health Professions if their grade point average for the semester during which they are on probation falls below 2.00. Dismissal will not occur until students fail to achieve a 2.00 grade point average for the last 12 hours attempted while on probation.

Students assigned to affiliating health facilities for clinical education will be subject to dismissal from the professional program for failure to comply with the rules, regulations or professional standards governing that facility.

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 department.
   (See the appropriate department's section in the Catalog.)

Exception to these requirements may
be granted to nonmajors by the chairperson of the department offering the course with the approval of the College of Health Professions Admissions-Exceptions Committee and the dean.

Students should check with their departmental advisers 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.

Progression
To progress in the professional sequence, a grade of Cr or C or better must be earned in all professional courses. If students receive an NCR, D or F in only one segment of a course that combines theory and clinical practice, they do not receive credit for the course. Students who receive an NCR, D or F in any professional course may not progress in the professional sequence and may be dismissed from the program. If their overall academic record remains at 2.00 or above and they desire to continue in the program, they may petition the Committee on Admission and Progress in their department to remain in the program.

Exceptions
Students may petition the department, college or University for exception to any requirement. Students are required to discuss all petitions with their college/department adviser prior to submission of the petition. Petitions may or may not be approved by the body to whom the petition was made.

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
Most students are required to purchase for a modest fee professional liability insurance in the amount of not less than $100,000/$300,000 as well as personal health insurance at the beginning of the professional phase of a College of Health Professions program; students in some programs may require additional coverage. Several departments may require evidence of sufficient coverage prior to clinical practice.

Financial Aids
Scholarships and student loan funds are available for students in health professions. Information on these and other scholarships and loans is available from The Wichita State University Office of Financial Aids and the department from which the student is seeking a degree or certificate.

Cooperative Education
The College of Health Professions is one of the participating colleges in the University Cooperative Education Program. This program is designed to provide off-campus paid employment experiences that integrate, complement and enhance the student's regular academic program while providing academic credit. Students are placed for field study experiences in a variety of health settings, including hospitals and community agencies. Individualized field studies are formulated in consultation with the student and the employer and are approved by the departmental faculty sponsors 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 departments in the college; these undergraduate courses may have prerequisites or other specific requirements for enrollment. To enroll in the program or for more information, students should contact the college Cooperative Education coordinator.

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 degrees.

A minimum of 30 credit hours in course work in residence at WSU is required for all students seeking bachelor's degrees. A minimum of 30 unduplicated credit hours in course work in residence at WSU is required for students seeking second bachelor's degrees. 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 departmental sections of the Catalog.

Degree Requirements
and Course Listings

Baccalaureate

Dental Hygiene
The Bachelor of Health Science program in dental hygiene is designed for the individual currently enrolled in The Wichita State University dental hygiene associate degree program or graduates of other accredited dental hygiene programs. The Bachelor of Health Science provides opportunities for dental hygienists to expand their role in education or administration and supervision of dental hygiene.

Admission
Students wishing to work toward baccalaureate degrees should contact the dental hygiene department for individual advising. Students who are registered dental hygienists must:

1. Submit an application by January 31 of the year in which they plan to enroll
2. Meet the admissions requirements of The Wichita State University and the College of Health Professions
3. Submit the results of the National Board Examination for Dental Hygienists and a clinical examination and provide a letter of recommendation from the director of the dental hygiene program they attended.

A personal interview is required and must be initiated through an invitation from the Admissions Committee of the Department of Dental Hygiene. Admission to the program is not a right acquired by meeting minimum admission requirements, but a privilege extended to students who exhibit motive, industry and behavior indicating potential to become dental hygienists of outstanding quality.

Professional Curriculum
The baccalaureate degree program requires completion of a basic program in dental hygiene plus the general requirements of the University. It is a two-track option program providing two interrelated courses of study. Students may select one of the following course options: (1) dental hygiene education or (2) administration and supervision.

Under this program, each student's curriculum is individually structured. A contract thus developed is approved by the department and is signed by the student and the department chairperson before implementation.
Lower-Division Courses

101. Preclinical Dental Hygiene. (5). 3R; 6L. A presentation of the basic philosophy of dentistry and dental hygiene. Consideration is given to measures that can be employed to prevent oral disease and promote dental health. Laboratory instruction is given in instrumentation for removal of deposits from the teeth. Offered only in the fall semester. Prerequisite: departmental consent. H 12 101 1 1213

104. Clinical Dental Hygiene I. (3). 2R; 3L. A presentation of the theory and practice of scaling, exposing, and re-molding X-ray films. The laboratory periods are used to gain proficiency in X-ray techniques. Care of the exposed film is included. Prerequisites: departmental consent. H 12 104 1 1213

201. Dental Hygiene Concepts I. (2). Fundamentals of planning and delivering dental hygiene treatment are presented with an emphasis on patient education for plaque control. Integration and expansion of material presented in preclinical courses and the application of this material to the treatment situation will be stressed. Offered only in the spring semester. Prerequisite: departmental consent. H 12 201 1 1213

202. Clinical Dental Hygiene II. (3). 2R; 3L. This course emphasizes providing patient care in a clinical setting. Basic instrumentation techniques as well as the prevention of dental disease are stressed. Patient evaluation and treatment planning skills are developed. Offered only in the spring semester. Prerequisite: departmental consent. H 12 202 1 1213

205. General and Oral Pathology. (3). A survey of general pathology of tissues and organs of human anatomy. Discussions are held on development of teeth, dental pulp and oral tissues. A consideration of the signs, symptoms and manifestations of oral lesions is accomplished through lectures and visual aids. Offered only in the fall semester. Prerequisite: departmental consent. H 12 205 1 1213

281. Cooperative Education Field Study. (1-8). The goal of this course is to provide 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. Prerequisite: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 12 281 2 1213

280. Embryology, Histology and Oral Anatomy. (3). A study of the development and microscopic anatomy of the elementary tissues and organs. Explanation of tooth development, eruption, arrangement, function, morphology and characteristics. Prerequisite: departmental consent. H 12 280 0 1213

Upper-Division Courses

301. Dental Materials and Expanded Functions. (3). 2R; 3L. Fundamental instruction in practical laboratory phases of modern techniques and the practical application of dental materials and equipment used in dental practice and expanded auxiliary practice. Prerequisite: departmental consent. H 12 301 1 1213

302. Clinical Dental Hygiene III. (2). Continued development of proficiency of clinical techniques emphasizing preventive treatment and care. This course is offered during Summer Session. Prerequisite: departmental consent. H 12 302 0 1213

303. Dental Hygiene Concepts II. (2). Seminar discussion of current and advanced clinical concepts and techniques as well as other topics related to future employment opportunities. Prerequisites: departmental consent. H 12 303 0 1213

304. Dental Hygiene Concepts III. (2). Discussion of dental specialties and explanation of the rationale for treatment prescribed by the dentist. Offered only in the spring semester. Prerequisite: departmental consent. H 12 304 0 1213


307. Ethics and Jurisprudence. (2). A survey of laws governing the practice of dentistry and dental hygiene. Types of professional work for which students may qualify, the economics of the profession, the essentials of banking, bookkeeping, office and personnel management and patient records. Offered only in the spring semester. Prerequisite: departmental consent. H 12 307 0 1213

309. Community Dental Health Education. (2). An introduction to concepts of dental health in the community, epidemiology, health care systems and organization of community services with field work in applying the learned concepts. This course also covers the professional philosophy of dental health education. Students will develop dental health education materials and present them to children, adult and minority groups in the community. Prerequisite: departmental consent. H 12 309 0 1213

323. Clinical Dental Hygiene IV. (3). 2L. Continued development of clinical proficiency and utilization of various scaling techniques and instruments. Offered only in the spring semester. Prerequisite: departmental consent. H 12 323 1 1213

324. Clinical Dental Hygiene IV. (4). 2L. During the final semester of clinical dental hygiene, students are expected to utilize information and skills acquired in previous courses and to continue to demonstrate proficiency and increase their level of competency in all objectives from Clinical Dental Hygiene I, II and III. Offered only in the spring semester. Prerequisite: departmental consent. H 12 324 1 1213

405. Concepts and Principles of Dental Hygiene Administration 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: departmental consent. H 12 405 2 1213

409. Introduction to Research for the Health Professions. (1). An introduction to the scope, format and use of research in the health professions. Development of the ability to be a critical consumer of professional literature and the initiation of research projects. Prerequisite: departmental consent. H 17 409 0 1213

420. Course Development and Methods of Teaching in Dental Hygiene Education. (3). Seminar dealing with the implementation of teaching and learning theory and its application in the formation of a course of instruction. Students will gain experience in teaching undergraduate students in laboratory/classroom settings. Prerequisite: departmental consent. H 12 420 2 1213

455. Personnel Management in Dental Hygiene. (3). Analysis of personnel management in the completion of professional simulation, including job analysis, recruitment, interviewing, testing, job evaluation, welfare determination, training, employee evaluation and career development. Prerequisite: departmental consent. H 12 455 0 1213

462. Special Problems in Dental Hygiene. (3). A practical approach to the application and acquisition of basic research techniques as related to dental hygiene. Included in the course are the study and identification of research problems, review of related literature, development of research hypotheses and research methodology. H 12 462 0 1213

465. Research in Dental Hygiene. (3). A continuation of DH 462. The research proposal which is developed in this course is implemented, data is collected and concerning a special problem in dental hygiene, data analysis is undertaken and conclusions are drawn relative to stated hypotheses. Prerequisite: DH 462. H 12 465 4 1213

481. Cooperative Education Field Study. (1-3). A field placement opportunities will be available for instruction in the clinical/laboratory setting. Prerequisite: departmental consent. H 12 481 2 1213

The following abbreviations are used in the course descriptions: P stands for lecture and L for laboratory. For example, 4R, 2L means four hours of lecture and two hours of lab.
Health Care Administration

The program in health care administration seeks to develop professionally competent individuals to serve in administrative capacities in the health field. Health care administrators are employed in a variety of health facilities and organizations—hospitals, nursing homes, private and public clinics, health insurance organizations, educational institutions and governmental agencies at federal, state and local levels. The program is part of the Department of Health Administration and Education which is an approved member of the Association of University Programs in Health Administration. Upon satisfactory completion of the courses as outlined, plus eight weeks (one summer) of practicum in a selected area, students receive the Bachelor of Science degree. Additional information regarding the selected areas of special emphasis can be obtained from the chairperson of the Department of Health Administration and Education.

Admission

In order to be permitted to enroll in the health care administration curriculum, students must fulfill the following requirements: They must:

1. Be enrolled in or admitted to The Wichita State University
2. Have completed 45 hours in the required lower-division courses
3. Have an overall grade point average of 2.00 or above in all college work completed and no grade lower than "C" in any of the specified required lower-division courses
4. Submit to the chairperson of the health administration department a letter of intent including semester of enrollment. Intent to enroll forms may be obtained from the Department of Health Administration, Room 401, Ahlberg Hall.

Curriculum

Undergraduate

Major: The following courses, totaling 124 hours, are required for a major in health care administration. This curriculum meets both the University's general education and the department's requirements. All undergraduate students are strongly encouraged to take HAE 503 before taking other health administration and education courses.

Course                          Hrs.                          Distribution Courses (30 hours)
                                
Division A, Humanities and Fine Arts (at least nine hours in three different departments and at least two hours in each General Studies course)  
Division B, Social and Behavioral Sciences (at least six hours in two different departments)  
Division C, Math and Natural Sciences (at least six hours in two different departments)  

Other required courses

Acctg. 210, Financial Accounting I 3
Acctg. 220, Managerial Accounting I 3
CS 200, Introduction to Programming 2
CS 206, Basic Language Programming 2
Fin. 340, Finance 3
ISEP 704, Introduction to Educational Statistics 3
Mgmt. 360, Concepts of Administration 3
Mkt. 300, Marketing 3
Pers. 466, Personnel Management 3
Pers. 664, Labor Relations, or Econ. 661, Collective Bargaining and Wage Determination 3
HAE 410, Community Health Concepts 3
HAE 440, Health Care Administration Practice 3
HAE 490, Independent Study in Health Care Administration 3
HAE 503, Organization of the Health Care System 3
HAE 504, Health Economics 3
HAE 505, Politics of Health 3
HAE 507, Health Planning 3
HAE 509, Health Care Operations Analysis 3
HAE 510, Health Finance 3
HAE 590, Legal Aspects of Health Care Administration 3
HAE 605, Health Services Research 3
HAE 685, Computer Applications in Health 3
HAE 686, Seminar in Health Administration 3
Approved electives to complete the 124-hour graduation requirements  
For math requirement, see Division C.

Lower-Division Courses

111Q. Introduction to Community Health. (3). This course concerns itself with modern man and his effort to achieve harmony within the community and an analysis of man's inner and outer ecosystems as they relate to contemporary health issues. H 24 111Q 0 1202

281. Cooperative Education Field Study. (1-8). The goal of this course is to provide 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. H 24 281 2 1201

Upper-Division Courses

410. Community Health Concepts. (3). An introduction to the foundations of public health, biostatistics, epidemiology, ecology, community organizations and organization of health services. Prerequisite: departmental consent. H 24 410 0 1202

440. Health Care Administration Practicum. (6). A course designed to give the student with an opportunity for field experience in the health care system. Students must select, with the consent of an adviser, a specific internship in one of the following special areas: health care administration, nursing home administration, governmental health agency administration, voluntary health agency administration or hospital department administration. A written report is required. Prerequisite: senior standing or departmental consent. H 24 440 2 1202

481. Cooperative Education Field Study. (1-8). The goal of this course is to provide 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. H 24 481 2 1201

490. Independent Study in Health Care Administration. (1-4). Supervised intensive study of special topics and problems relating to health care delivery. Repeatable up to six hours. Prerequisite: departmental consent. H 24 490 3 1203

Courses for
Graduate/Undergraduate Credit

503. Organization and Administration of the Health Care System. (3). Cross-listed as Geront. 503. Analysis of the nature of health care and the input to health and health care delivery. The course discusses general systems
theory and systems analysis in relation to health care. It emphasizes the interrelatedness of economic, political and social aspects of the health services system. Current trends and the role of planning are considered and students are exposed to guest lecturers with professional expertise in relevant areas. Prerequisites: departmental consent. H 24 503 0 1202

504. Health Economics. (3). Cross-listed as Econ. 665. An analysis of health care systems in the United States including the demand for and supply of health care services; the quantity, quality and cost of health care services; the need for insurance; and the role of the government in the health sector. Prerequisite: HAE 503 or Econ. 202. H 24 504 0 1202

505. The Politics of Health. (3). Cross-listed as Pol. Sci. 505. Designed to show how government in the United States makes decisions in the health field. To describe the political forces shaping governmental policy in health and to analyze the arguments for and against an increased governmental role in health. Prerequisite: HAE 503, Pol. Sci. 121 or departmental consent. H 24 505 0 1202

507. Health Planning. (3). Designed to discuss logic of political planning in health services management. Includes a strategic management scheme that will accommodate change and encourage innovation and enhanced productivity. Emphasizes the identification of and adaptation to strategies and options in an anticipatory time frame that provides the organization with protection against the perils of crisis decision-making in traditional entrepreneurial organizations. Prerequisites: junior standing and instructor's consent. H 24 507 0 1202

509. Health Care Operations Analysis. (3). An examination of methods for measuring the operational efficiency and effectiveness of health care and medical care programs. Included are methods to analyze and evaluate current operations and approaches to plan better manpower, facility, technology, financial and management control systems in a health setting. Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360 and junior standing. H 24 509 0 1202

510. Health Finance. (3). An examination of the principles of financial analysis and management for health care institutions. Emphasis is on understanding and applying general financial concepts to the health setting. Financial organization, sources of operating revenues, management of working capital and budgeting are considered utilizing examples for hospitals and other health organizations. Prerequisites: HAE 503 and ACCTG. 210 or equivalent. H 24 510 0 1202

565. Concepts of Quality Assurance in Health Care. (3). This course is for health care personnel which focuses upon current social concerns with assessing quality of health care and appropriate utilization of activities and resources. Prerequisite: departmental consent. H 24 565 0 1202

590. Legal Aspects of Health Care Administration. (3). Cross-listed as Geron. 590. A study of the principles of law as applied to the health fields. Such items as release of information, sub judice, records and testimony, settlement of claims (insurance), doctor-patient-nursing home relationship and legal consents; and other topics are considered. Prerequisite: junior standing or departmental consent. H 24 590 0 1202

605. Health Services Research. (3). Deals with intermediate statistical procedures and research designs that health professionals must understand in order to intelligently analyze research in the health care field and to conduct research themselves. This course covers the designs of experimental, survey and post facto research plus statistical techniques, including correlation coefficients, the t-test, chi square and two-way analysis of variance. Prerequisite, departmental consent. H 24 605 4 1201

684. Health Administration Policy. (3). Cross-listed as Geron. 590. A course designed to give graduating seniors an understanding of the structure of health care organizations, including the various roles and responsibilities managers have within these organizations. Exposure to management, policy making and strategic planning processes is vital if students are to function in administrative positions in health care administration. Prerequisite: departmental consent. H 24 684 0 1202

685. Computer Applications In Health. (3). Data reduction, summarization, editing and analysis using technical assistance of minicomputer for research and administrative purposes. Uses health data bases from hospitals or other agencies such as state health department, PRO agency, HSA are investigated. Less emphasis on microcomputers than larger computers with more statistical and graphical capacity. Prerequisite: HAE 605 or instructor's consent. H 24 685 0 1201

686. Seminar in Health Care Administration. (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. Prerequisites: HAE 503 and at least one other HAE course. H 24 686 9 1202

720. Community Health Organization and Administration. (3). Introduction to the organization and activities in the health system outside the hospital—roles and problems. Introduction to problem-solving as a structured process. Prerequisite: instructor's consent. H 24 720 0 1201

808. Epidemiology of Chronic Disease. (3). The study of the distribution and determinants of chronic diseases and injuries in human populations. The frequencies and types of illnesses and injuries in groups of people and the factors that influence their distribution. Prerequisites: graduate school enrollment, HAE 605 or instructor's consent. H 24 808 0 1201

Medical Record Administration Program

The Bachelor of Science program in Medical Record Administration, offered through the Department of Health Administration and Education, is designed to prepare administrators and health information coordinators for medical record departments. After completing a three-year preprofessional sequence at The Wichita State University, students must transfer to the Department of Medical Record Administration at the University of Kansas Medical Center (KUMC) to complete the professional sequence. The professional sequence includes directed practice and clinical application which may be taken at hospitals or other health institutions that are officially affiliated with the University of Kansas Medical Center and that are approved by the American Medical Record Association. After completing these requirements, students receive the Bachelor of Science (BS) in medical record administration from The Wichita State University and are eligible to become registered by successfully completing the registration examination given by the American Medical Record Association.

Preprofessional Curriculum

Course   Title   Description   Hours

Communications (12 hours)   Eng. 101, College English I   3
Eng. 102, College English II   3
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication   3
Eng. 210, Technical Writing Composition   3

Distribution Courses (30 hours of which at least nine hours must be taken in General Studies courses)

Division A, Humanities and Fine Arts (at least nine hours in three different departments)
Division B, Social and Behavioral Sciences (at least six hours in two different departments)

Econ. 201Q, Principles of Economics   3
Psych. 111Q, General Psychology   3
Psych. 510, Psychology of Illness   3
Soc. 211Q, Introduction to Sociology   3

Division C, Math and Natural Sciences (or six hours in two different departments)
Math. 109, 110, 111, 112 or 211; or completion of another math course for which one of these courses is a prerequisite

Biol. 105G, The Human Organism (4) or any higher level biology course   4
Biol. 225, Human Anatomy (with lab) or   4
Biol. 226, Human Physiology (with lab)   4

Other required courses
Bus. Law 130, introduction to Law   3
IS 704, Introduction to Education Statistics   3

Recommended electives
CS 200, Introduction to Programming   2
CS 206, Basic Language Programming   2
Admission to Professional Curriculum

Students who have taken their college work at The Wichita State University or at another accredited college or university may apply for transfer into the fourth year of the program conducted at the Kansas University Medical Center in Kansas City, Kansas. Applications must be received by October 1 of the student's junior year so that a January review can be made and the student notified of acceptance into the program that begins in June. Each student must:

1. Submit official transcripts of high school and college work from each institution attended.
2. Have a minimum grade point average of 2.00.
3. Be accepted by the KUMC admissions committee.

A total of 138 credit hours, including 90 credit hours in the preprofessional curriculum and 48 credit hours in the professional curriculum, is required for graduation.

Medical Technology

The medical technologist performs a variety of clinical laboratory procedures needed by the physician to give accurate diagnosis, prognosis and proper treatment to the patient. The medical technology program is designed to give students thorough scientific training and education. This knowledge enables them to know not only how to perform a test, but also the theory behind it.

The Bachelor of Science program in medical technology, requiring a total of 133 hours, includes 78 hours of premedical technology curriculum in the basic sciences, social sciences, humanities and communication. The University-based program includes structured lecture and laboratory experiences in the University's student clinical laboratory as well as in the program's affiliated laboratories: St. Joseph Medical Center, Wesley Medical Center, the Wichita Clinic and the Veterans Administration.

Upon successful completion of the program, students are granted the Bachelor of Science in medical technology and are eligible to take several national certification examinations.

Preprofessional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills (12 hours)</td>
<td></td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 102, College English II</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Math 111, College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Division A, Humanities and Fine Arts (9 hours)*</td>
<td></td>
</tr>
<tr>
<td>Nine hours in at least three different departments</td>
<td>9</td>
</tr>
<tr>
<td>Division B, Social and Behavioral Sciences (6 hours)</td>
<td></td>
</tr>
<tr>
<td>Psych. 111Q, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Division C, Natural Sciences and Mathematics (50 hours)</td>
<td></td>
</tr>
<tr>
<td>Biol. 203Q, Introductory Biology I</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 204, Introductory Biology II</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 226, Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 330, General Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 112Q, General and Inorganic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Course coverage in organic chemistry (Chem. 531 and 532, ten hours, or Chem. 533 and 534, five hours)</td>
<td>5-10</td>
</tr>
<tr>
<td>Chem. 561, Introductory Biological Chemistry</td>
<td></td>
</tr>
<tr>
<td>MT 405Q, Medical Immunology</td>
<td>3</td>
</tr>
<tr>
<td>Electives from areas of biological sciences, chemistry, physics, mathematics or others as approved by Department of Medical Technology (including four hours of &quot;G&quot; and/or &quot;Q&quot; courses)</td>
<td>12</td>
</tr>
</tbody>
</table>

* Students may wish to select General Studies courses to satisfy the University graduation requirement of General Studies courses (See Academic Information-General Studies section of the Catalog.)

1. May substitute Chem. 123Q-124Q, General and Analytical Chemistry (10 hours). If prerequisites are met, check with advisor.

Admission to the Professional Curriculum

Applications must be submitted to the Department of Medical Technology by November 1 for fall entry the following year. September 15 for entry in the following spring and February 15 for entry in the following summer.

To qualify as a candidate for admission to the professional phase the student must:
1. Be admitted to The 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 2.00.
6. Complete professional goal statement.

Acceptance into the professional phase of the program is determined by the Medical Technology Admissions Committee.

Professional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT 400, Special Topics</td>
<td>2</td>
</tr>
<tr>
<td>MT 406, Foundations of Laboratory Practice</td>
<td>2</td>
</tr>
<tr>
<td>MT 450, Clinical Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>MT 451, Clinical Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>MT 452, Analysis of Body Fluids</td>
<td>3</td>
</tr>
<tr>
<td>MT 456, Clinical Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>MT 457, Clinical Chemistry II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>MT 459, Applied Clinical Chemistry</td>
<td>2</td>
</tr>
<tr>
<td>MT 460, Hematology I</td>
<td>2</td>
</tr>
<tr>
<td>MT 461, Hematology I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MT 462, Hemostasis</td>
<td>3</td>
</tr>
<tr>
<td>MT 466, Hematology II</td>
<td>2</td>
</tr>
<tr>
<td>MT 467, Hematology II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>MT 469, Applied Hematology</td>
<td>2</td>
</tr>
<tr>
<td>MT 470, Immunohematology I</td>
<td>3</td>
</tr>
<tr>
<td>MT 471, Immunohematology I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MT 476, Immunohematology II</td>
<td>2</td>
</tr>
<tr>
<td>MT 477, Immunohematology II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MT 479, Applied Immunology and Immunohematology</td>
<td>2</td>
</tr>
<tr>
<td>MT 480, Clinical Immunology I</td>
<td>1</td>
</tr>
<tr>
<td>MT 483, Clinical Immunology I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MT 489, Applied Clinical Techniques</td>
<td>1</td>
</tr>
<tr>
<td>MT 490, Clinical Microbiology I</td>
<td>3</td>
</tr>
<tr>
<td>MT 491, Clinical Microbiology I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MT 494, Special Topics in Clinical Microbiology</td>
<td>2</td>
</tr>
<tr>
<td>MT 496, Clinical Microbiology II</td>
<td>3</td>
</tr>
<tr>
<td>MT 497, Clinical Microbiology II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MT 498, Applied Clinical Microbiology</td>
<td>2</td>
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</tbody>
</table>

Other Requirements

Students must purchase laboratory jacket/coat for use during their clinical laboratory assignments and are required to provide their own transportation to the clinical sites. Students are required to }

Mgmt. 360, Concepts of Administration .................................................. 3
Pers. 466, Personnel Management .................................................................. 3
HAE 410, Community Health Concepts ......................................................... 3
HAE 503, Organization and Administration of the Health Care System ............ 3
HAE 504, Health Economics ........................................................................... 3
HAE 505, Politics of Health ........................................................................... 3
HAE 507, Health Planning ............................................................................. 3
HAE 510, Health Finance ................................................................................ 3
HAE 590, Legal Aspects of Health Care Administration .................................. 3

Additional hours of electives to total 90 hours of preprofessional courses
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 and rubella titer, prior to their clinical assignments in the affiliate laboratories.

**Lower-Division Courses**

160Q. Introduction to the Clinical Laboratory Sciences. (2). 1R; 2L. A study of clinical laboratory disciplines, including hematology, immunohematology, chemistry, microbiology, cytology and histology, through an examination of laboratory testing in each discipline with consideration of the role of the clinical laboratory in the health care system. This course is 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. H 14 160Q 1 1223

281. Cooperative Education. (1-8). The goal of this course is to provide the student with 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, satisfactory academic standing prior to the first job assignment. H 14 281 2 1223

310. Clinical Laboratory Services. (2). 2R, 2L. This course is an overview of the services and information provided by the clinical laboratory. Basic procedures and interpretation data will be emphasized. Prerequisite: admission to a professional phase of a CHP program and/or instructor’s consent. H 14 310 2 1223

**Upper-Division Courses**

400. Special Topics. (2). A study of the principles and methodology of laboratory management and supervision and teaching techniques applicable to the clinical laboratory sciences. Prerequisite: departmental consent. H 14 400 2 1223

405Q. Medical Immunology. (3). An introduction to the study of immunological concepts as they apply to the study, prevention and causation of the disease process. Prerequisite: Biol. 226. H 14 405Q 0 1223

406. Foundation of Laboratory Practices. (2). An introduction to clinical laboratory skills and instrumentation. Topics included are laboratory safety, technique and processing, medical terminology and use and care of the microscope. Prerequisite: departmental consent. H 14 406 0 1223

450. Clinical Chemistry I. (3). This course is the study of basic clinical chemistry. It encompasses the study and application of clinical chemistry calculations and quality control and the study of colorimetric, spectrophotometric and titrimetric principles and techniques on serum, plasma and other body fluids for clinically significant substances. H 14 451 1 1223

452. Analysis of Body Fluids. (3). 2R; 1L. Course 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. H 14 452 1 1223

456. Clinical Chemistry II. (3). Included in this course are advanced instrumentation principles and techniques, acid-base balance, advanced enzymology, endocrinology and toxicology. Emphasis is placed on relationships existing between substances of the body and procedural development and evaluation. Prerequisite: MT 450, 451 or departmental approval. H 14 456 0 1223

457. Clinical Chemistry II Laboratory. (2). 6L. A laboratory course encompassing the application of the principles of technique appropriate to the evaluation of methodology, acid-base balance, advanced enzyme quantification, methodology and toxicological requisites. MT 456, concurrent enrollment or department approval. H 14 457 1 1223

459. Applied Clinical Chemistry. (2). Application of clinical chemistry procedures and techniques in the analysis of body fluids in a clinical laboratory setting. Prerequisites: MT 457 and departmental consent. H 14 459 2 1223

460. Hematology I. (2). The course emphasizes the theory underlying basic procedures performed in the hematology laboratory and the relationship between these procedures and their application to existing relationships: Bio. 226 and departmental consent. H 14 460 0 1223

461. Hematology I Laboratory. (2). 3L. The course emphasizes performance of the basic procedures used in the hematology laboratory, including complete blood counts, normal and abnormal differentials and miscellaneous hematology tests. Prerequisite: MT 460 or concurrent enrollment and/or departmental consent. H 14 461 1 1223

462. Hemostasis. (3). 2R; 3L. Examination of the functions and dysfunction of the hematostatic mechanisms and associated diagnostic laboratory procedures utilized in evaluation of various hemostatic disorders. Prerequisites: Biol. 226, MT 460 and departmental consent. H 14 462 1 1223

466. Hematology II. (3). The course emphasizes the clinical significance of laboratory data and its correlation with pathologic conditions. Material covered will include in-depth discussions of anemias and leukemias. Prerequisites: MT 460, 461 and departmental consent. H 14 466 0 1223

467. Hematology II Laboratory. (1). 3L. Emphasis is on special testing procedures used in the hematology laboratory for diagnosis of anemias and various white cell disorders such as leukemias and lupus erythematosus. Prerequisites: MT 460 or concurrent enrollment and departmental consent. H 14 467 1 1223

469. Applied Hematology. (2). Application of the theory and technical skills of hematology in a clinical laboratory. Prerequisites: MT 465, 467 and departmental consent. H 14 469 2 1223

470. Immunohematology I. (3). An introduction to blood banking theory pertinent to the assurance of quality transfusion practices in a donor service, including component analysis, 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: MT 405Q or equivalent or consent of instructor. H 14 470 2 1223

477. Immunohematology II Laboratory. (1). 3L. A laboratory course relevant to performance of a blood banking technologist in a donor or transfusion service. Methodology covered includes blood typing, antibody screening, single antibody identification, compatibility testing, prenatal testing, neonatal testing, Rh immune globulin and quality assurance of immunohematology laboratory procedures. Prerequisites: MT 405Q or equivalent and MT 470 or concurrent enrollment or consent of instructor. H 14 477 1 1223

479. Applied Immunohematology. (2). Application of the theory and technical skill of immunohematology in a clinical laboratory with experiences in prenatal testing, antibody identification, cross matching, provision of safe blood or blood components for transfusion and resolution of discrepancies encountered in performing any of the above procedures. Prerequisites: MT 467, 477 and departmental consent. H 14 479 2 1223

480. Clinical Immunology I. (1). An introduction to serological diagnosis in the clinical laboratory, including rationale of testing, methodologies, comparison of different methods, interpretation of test results and clinical correlations. Prerequisites: MT 405Q or equivalent or consent of instructor. H 14 480 0 1223

481. Cooperative Education. (1-8). The goal of this course is to provide the student with 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 cooperative education coordinators. Prerequisites: basic requirements for admission include successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. Repeatable for credit. H 14 481 2 1223
Nursing
The Bachelor of Science in Nursing program is designed to provide both university education and preparation for the practice of professional nursing. The graduate is prepared for beginning positions in nursing in any health care delivery system and for further study at the master and doctoral levels and for advancement to nursing positions of increasing responsibility and leadership. Nursing students have the opportunity for increased clinical experiences through a cooperative agreement between The Wichita State University and Wesley Medical Center.

Students are admitted to the Department of Nursing at the junior year after completing 60-64 hours of course work. Persons interested in the Bachelor of Science in Nursing may direct inquiries to: Chairperson, Department of Nursing, Wichita State University, Wichita, KS 67208-1595.

Preprofessional Curriculum
Students applying for admission to the Department of Nursing must have completed the following courses. Students should consider taking 16 hours per semester or attending Summer Session.

Courses
Basic Skills (12 hours) Hrs
Math. 109, 110, 111, 112 or 211 3
Eng. 101, College English I 3
Eng. 102, College English II 3
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication 3

Division A — Humanities and Fine Arts (nine hours)
Phil. 121, Introduction to Philosophy, or Phil. 100G, The Meaning of Life 3
Six hours in two other departments (excluding performance and studio arts) 3

Division B — Social and Behavioral Sciences (12 hours)
Psych. 111Q, General Psychology 3
Psych. 334Q, Developmental Psychology 3
Soc. 211Q, Introduction to Sociology 3
One elective in any department in Division B 3

Division C — Natural Sciences and Mathematics (24 hours)
Biol. 105G, The Human Organism (recommended if no previous or minimal high school biology) 4
Biol. 120Q, Introduction to Microbiology 4
Biol. 225, Human Anatomy 3
Biol. 226, Elementary Human Physiology 3
The following courses in the Department of Professional Nursing and Advanced Nursing may demonstrate competency in required nursing courses.

**Admission To Department of Nursing**

Students who have satisfactorily completed two semesters of lower-division courses may request an intent to enroll form from the Department of Nursing. Intent to enroll forms for fall semester admission should be received by January 1; for spring semester, no later than August 1. To qualify as a candidate for admission to the Department of Nursing, students must:

1. Be enrolled in, or admitted to, The Wichita State University
2. Have completed, or have plans to complete, the lower-division 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 a letter of intent including expected semester of enrollment.

Registered nurse students, in addition to the above requirements, must:

1. Submit a photocopy of current license to practice as a registered nurse in Kansas
2. Submit official transcripts of college courses and records from the school of nursing.

Registered nurse students who have met these requirements may obtain information from the Department of Nursing regarding enrollment in the transition course, NURS 334, Dimensions of Professional Nursing, and Advanced Standing Examinations by which they may demonstrate competency in required nursing courses.

**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. Lab fees may be assessed. Students are required to purchase professional liability insurance in the amount of $1 million per single claim/$3 million aggregate per year. The insurance must be renewed annually. Students must provide evidence of personal health insurance and evidence of a completed physical examination prior to clinical laboratory experiences each academic year. Additional costs for instructional materials, testing, lab experiences, etc., may be required throughout the program. CPR certification is required. Information related to these requirements is available from the Department of Nursing.

**Course Descriptions**

**Division A—Humanities and Fine Arts**

A three-hour upper-division course in philosophy/ethics to be selected with Department of Nursing approval.

**Division C—Mathematics and Natural Sciences**

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**Upper-Division Courses**

325. Communication in Health Professions. (3). Elective. Study of selected communication theories and concepts relevant to health care with emphasis on applications of communication concepts to self-actualization, interpersonal relationships, health care delivery, systems, and client-professional interactions. Open to nonnursing majors. H 11 325 0 1203

327. Nursing as a Practice Discipline. (2). An introductory course in the study of nursing within the self-care framework and its use in nursing practice education, research, and administration. The student examines perceptions of nurse, nursing as a practice discipline and as a student of nursing. Prerequisite: admission to the department of nursing or departmental consent. H 11 327 0 1203

330. Technologies I. (2). A series of learning experiences in which the student learns sets of manipulative, discriminative, communicative, and interpersonal skills for use in the design and control of nursing systems for individuals and groups. The student is placed on the scientific and humanistic basis for the various technologies. Prerequisite: admission to the department of nursing. H 11 330 1 1203

3320. Dimensions of Self-Care. (2). Self-care (health) practices and health status of individuals within ranges of wellness are studied. Emphasis is on the determinants which influence how universal self-care requisites are met. Open to nonnursing majors. H 11 3320 0 1203

334. Dimensions of Professional Nursing. (3). A course designed to introduce registered nurses to the study of nursing as a practice discipline and professional nursing roles. Emphasis is placed on the self-care concept of nursing and its use in professional practice, education, and scholarship. Prerequisite: admission to department or departmental consent. H 11 334 0 1203

336. Design of Nursing Systems. (5). 3R; 6L. The study of knowledge, attitudes, and skills for the design and control of nursing systems for individuals and groups. Methods of assistance and evaluation of nursing systems are studied. Prerequisite: admission to department. Prerequisites or corequisites: enrollment in NURS 327 and 3330. H 11 336 1 1203

340. Technologies II. (2). 3L. A continuation of NURS 330 which builds on content presented in the first course. Prerequisite: NURS 330. H 11 340 1 1203

347. Nursing Systems: Organic Disorders. (4). This course is designed to study the diagnosis and control of nursing systems related to organic disorders, focusing on educative-supportive, and partly and wholly compensatory nursing systems appropriate to adults demonstrating major health problems in contemporary society. Prerequisites: NURS 327, 330, 332, 336, 400 or Phase I courses. Corequisites: NURS 340 and 352. H 11 347 0 1203

350. Basic Concepts of Nursing Process. (3). Elective. A course exploring basic concepts of the nursing process as a foundation for professional nursing practice in contemporary society. Emphasis is placed on developing the student's competence and capacity to provide safe and effective care for clients. Open to nonnursing majors, nonmatriculated students. Prerequisite: departmental consent. H 11 350 0 1203
351. Nursing Systems: Behavioral Disorders. (2). Study of design and control of nursing systems for individuals with behavioral disorders focusing on educative-supportive and partly and wholly compensatory nursing systems. Prerequisites: Phase I nursing courses. Corequisites: Nrs. 354. H 11 351 0 1203

352. Nursing Practice I. (3). 9L. This clinical course provides the student opportunity to design and control nursing systems for individuals with organic disorders, focusing on educative-supportive and partly and wholly compensatory nursing systems appropriate for adults, children, and elderly patients, demonstrating the impact on health problems in contemporary society. Prerequisites: Phase I courses. Corequisites: Nrs. 340 and 347. H 11 352 1 1203

352H. Clinical Honors: Nursing Practice. (3). 9L. A clinical honors course for the use and evaluation of nursing theory and research in the role of practitioner of nursing. The major emphasis of the course is the expanded development of nursing agency in clinical nursing. Prerequisites: Phase I nursing courses and departmental consent. H 11 352 1 1203

354. Nursing Practice II. (2). 6L. A clinical course for evaluation and use of nursing theory and research in the role of practitioner of nursing. The major emphasis of the course is the development of nursing agency in clinical nursing situations related to behavioral disorders. Prerequisites: Phase I courses. Corequisites: Nrs. 351. H 11 354 1 1203

400. Introduction to Pathophysiology. (3). 3R; 4L. A course for professional upper-division students enrolled in the College of Health Professions. The course focuses on the essential mechanisms of disordered functions which produce common diseases. Some common diseases are discussed, but as examples of the basic processes covered, not as a part of an extended treatment. The major emphasis of the course is to present the health professional with accessible, usable and practical information he can broadly and quickly apply in hospital or laboratory situations or use as a basic principle in a course before taking the more specific professionally related pathophysiology course. Prerequisite: Admission to professional upper-division level in College of Health Professions or instructor’s consent. H 18 400 0 1201

425-427. Special Projects in Nursing. (1-4). Elective. Individual study of selected topics, didactic and/or clinical, designed to enhance the student’s knowledge base and competency in nursing practice. Repeatable. Prerequisite: departmental consent. H 11 425 2 1203; H 11 427 2 1203

430. 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 non-nursing majors only. Prerequisite: departmental consent. H 11 430 2 1203

432. Educative-Supportive Nursing Systems. (3). 2R; 3L. Elective. This lecture and clinical course focuses on the planning and implementation of patient education. The nurse’s role in patient education includes assisting the patient in decision-making, behavior control and acquiring knowledge and skills. The major emphasis of the course is the development of the nurse’s ability to use teaching methods in clinical nursing situations. This elective course builds upon the previous knowledge and clinical experiences of identified prerequisite courses. The purpose of this course is to enhance the knowledge and abilities of the student to educate individuals and small and large groups in a clinical setting. Prerequisites: Nrs. 340, 347, 352 and instructor’s consent. H 11 432 1 1203

434. Perioperative Clinical Management for the Nurse Agent. (3). 6L. This is an upper division elective which is designed to focus on the needs of individuals in small groups that have various health problems requiring surgery. The focus is the expansion of the nursing student’s power to perform a deliberate action for the benefit and well-being of others in all phases of the surgical process (before, during and after). The major emphasis is on the student’s acquisition of clinical management skills in all phases of the surgical process. Prerequisites: Nrs. 340, 347, 352 or completion of professional nursing program. H 11 434 1 1203

460. Technologies III. (3). 1L. A continuation of Nrs. 330 and 340 which builds on content presented in these courses. Prerequisite: Nrs. 340. Corequisites: Nrs. 465 and 466. H 11 460 1 1203

464. Nursing Systems: Aging Families. (3). 2R; 3L. This course is designed to provide information and experience in the design of nursing systems for clients/patients experiencing specific developmental stages in conjunction with normal and pathological physiological changes. Prerequisites: Nrs. 340, 347, 351, 352 and 354 or permission of the instructor. Open to non-nursing majors who have a license to practice nursing. H 11 464 1 1203

466. Nursing Systems: Young Families. (3). 9L. The study of the design and control of nursing systems for young families in ranges of health states. Educatively-supportive and partly and wholly compensatory systems appropriate for young families. Prerequisites: Nrs. 340, 347, 351, 352 and 354. Corequisites: Nrs. 460 and 466. H 11 466 0 1203

466. Nursing Practice III. (3). 9L. Clinical course for evaluation and use of nursing and nursing-related research in the role of practitioner of nursing. The major emphasis of the course is the development of nursing agency in clinical nursing situations related to young families. Prerequisites: Nrs. 340, 347, 351, 352, Corequisites: Nrs. 460 and 466. H 11 466 1 1203

466H. Clinical Honors: Nursing Systems for Families. (3L). Clinical honors course for the use and evaluation of nursing theory and research in the design and control of nursing systems for families as a client of nursing. The emphasis of the course is the design and control of nursing systems for families experiencing crisis. Prerequisites: Nrs. 340, 347, 351, 352, 354 and departmental consent or instructor’s consent. Corequisites: Nrs. 460, 466 and 468. H 11 466H 1 1203

468. Scholarship Dimensions of Nursing. (2). The study of research methodology in nursing and its use in developing nursing knowledge. Students identify research problems and develop a research proposal. The uses of research findings in practice are discussed. Relations among the roles of practitioner, teacher, leader and scholar are examined. Prerequisites: Nrs. 340, 347, 351, 352 and 354. H 11 468 0 1203

472. Nursing Practice IV. (6). 18L. This practical course emphasizes the complexity of the design and control of nursing systems for individuals and groups with a specified range of self-care deficits. Nursing as a part of a larger health care delivery system is examined with emphasis on organization, administration, change and control technologies. The student concentrates on the study of clinical nursing in a selected health care setting. Prerequisites: Nrs. 473. H 11 472 1 1203

473. Senior Seminar. (3). A course for examination of issues and problems from clinical learning experiences in the clinical courses of the last semester. The student is assisted with the transition from role of student to role of professional nurse practitioner. Prerequisites: Phase II courses and concurrent enrollment in Nrs. 472. H 11 473 0 1203

476. Health Assessment. (3). Designed to help the registered nurse develop skills in health assessment. The complete health history, physical examination, as well as history and physical related to a chief complaint or specific problem, are addressed. The influences of various stages of growth and development on assessment techniques and findings are considered. Emphasis is on the assessment of health status through differentiating between normal, variation, and abnormal findings. Course includes both theory and practice with participants practicing assessment skills on another, under supervision. Prerequisites: registered nurses only. H 11 476 0 1203

478. Nursing Systems: Large Groups. (5). 2R; 9L. The study of nursing to large groups of people with multiple complex health problems. Community health problems are assessed and design and control of nursing systems for large groups of potential patients are practiced. Prerequisites: Phase I and II courses. H 11 478 1 1203

478H. Nursing Systems for Large Groups. (3). 9L. A clinical honors course for the study of nursing for large groups with potential multiproblem states. The focus is health promotion throughout the life span. The major emphasis of the course is the expanded development of nursing agency in clinical nursing situations. Prerequisites: Phase II courses and departmental consent. Corequisites: Nrs. 478. H 11 478H 1 1203

481. Cooperative Education Field Study. (1-6). A field placement which integrates course work with a planned and supervised professional learning experience to complement and enhance the student’s academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 481 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work during the student’s on-campus assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students may not be 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. H 11 481 2 1203
Courses for Graduate/Undergraduate Credit

500. Assessment of Pediatric and Adolescent Clients. (3) 2R 3L. This course provides the student with research and their impact on the investigation of nursing problems, the researcher, the problems studied, and the consumer of research. Prerequisites: statistics course accepted by the Department of Nursing, and the student has met the prerequisites for this course. Prerequisites: corequisites: NURS 103. H 11 705 0 1203

507. Research Seminar. (1). Designed to assist the student to explore theoretical and practical aspects of research. Prerequisites: Research seminar proposal. Prerequisites: research seminar, and departmental consent. H 11 707 0 1201

705. Workshops in Nursing. (1-4). An opportunity for intense study of special topics related to nursing practice, education, or research. Open to nonmajors. H 11 750 0 1201

791. Special Studies in Nursing. (1-6). A course allowing opportunity for students to engage in extensive study of particular content and skills directly or indirectly related to nursing practice. Repeatable. Prerequisite: permission of the department. H 11 791 0 1203

796. Nursing Practicum in Special Settings. (1-6). Opportunity for directed practice in various settings, including clinical specialties, nursing administration, nursing education, and consultation. The student plans, in collaboration with the major advisor and the professional nurse, objectives and evaluative criteria for the experience. Prerequisite: permission of the department. H 11 796 0 1203

799. Directed Readings in Nursing. (1-2). An opportunity for the student in critical search of the literature in areas related to the profession and practice of nursing. Prerequisite: permission of the department. H 11 799 0 1203

Courses for Graduate Students Only

802. Issues in Nursing. (3). Various issues in professional nursing practice are analyzed. Prerequisite: permission of the department. H 11 802 0 1203

804. Nursing Practicum. (2-6). A clinical experience in selected settings that enables the student to apply skills in nursing practice based on current theory, test a clinical study question, and conduct a professional development program. Prerequisite: permission of the department. H 11 804 0 1203

811. Foundations of Nursing Administration. (3). This course is designed to assist the student in understanding the theories and practices of nursing administration and their impact on the investigation of nursing problems, the researcher, the problems studied, and the consumer of research. Prerequisites: statistics course accepted by the Department of Nursing, and the student has met the prerequisites for this course. Prerequisites: corequisites: NURS 103. H 11 705 0 1203

812. Nursing Administration Practicum. (3 or 6). A practicum in nursing administration setting in which the student, under professional guidance, can become directly involved. A seminar accompanies the field experience. Types of experience may include roles in nursing education and service, midlevel nursing administration, staff development, or community health. Prerequisite: departmental consent. Prerequisites: NURS 811. H 11 812 0 1203

813. Foundations of Nursing Education. (3). Designed to assist the student to explore theoretical and practical aspects of curriculum design, development, and teaching of nursing in higher education and continuing education. Prerequisite: departmental consent. Prerequisites: corequisites: NURS 703, 705 and 802. H 11 813 0 1203

814. Nursing Education Practicum. (3 or 6). An experience of nursing education in which the student, under professional guidance, can become directly involved with clinical and classroom teaching, curriculum development, and participation in other faculty functions. Prerequisites: permission of the department. H 11 814 0 1203

815. Foundations of Clinical Concentration. (3). Seminars provide an opportunity for the student to explore current clinical theory and research and identify appropriate nursing systems for selected client populations. Prerequisites: permission of the department. H 11 815 0 1203

816. Clinical Concentration Practicum. (3 or 6). An intensive clinical experience in which the student is expected to study, design, and implement nursing systems for individuals or groups in a specific area of clinical practice. Prerequisite: permission of the department. H 11 816 0 1203

817. Foundations of Clinical Concentration: Diabetes Mellitus. (3). Seminars provide an opportunity for the student to explore current clinical theory and research and identify appropriate nursing systems for individuals or groups in the area of diabetes mellitus nursing management. A seminar accompanies the practicum. Prerequisite: permission of the department. H 11 817 0 1203

818. Clinical Concentration Practicum in Diabetes Mellitus. (3 or 6). An intensive clinical experience in which the student is expected to study, design, and implement nursing systems for individuals or groups in the area of diabetes mellitus. Prerequisites: departmental consent. H 11 818 0 1203

819. Foundations of Clinical Concentration: Mental Health Nursing. (3). Seminars provide an opportunity for the student to explore current clinical theory and research and identify appropriate nursing systems for mental health clients. Prerequisite: departmental consent. H 11 819 0 1203

821. Thesis. (1-6). Graded S/U only. An opportunity for the student, in consultation with the academic advisor, to participate in the design and conduct of a formal research project. Prerequisite: permission of the department. Prerequisites: departmental consent. H 11 821 0 1201

822. Clinical Concentration Practicum in Mental Health Nursing. (3 or 6). An intensive
sive clinical experience in which the student is expected to study, design and implement nursing systems for individuals or groups in a specific area of mental health nursing. A seminar accompanies the practicum. Prerequisites: Nurs. 703, 705, 802 and 819. H 11 823 1 1203

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, historical study, a philosophical paper or other type project developed in conjunction with the student's faculty advisor. Prerequisites: admission to Graduate School and departmental consent. H 11 823 3 1201

825. Independent Study. (1-6). Independent study provides opportunity for the student to develop, in collaboration with a departmental faculty member, objectives and project. Prerequisite: written work related to the practice of nursing. Prerequisites: admission to Graduate School and departmental consent. H 11 825 3 1201

829. Foundations of Maternal-Child Nursing. (3). This course provides the foundation for all courses in the maternal-child clinical concentration. Seminars enable students to investigate major theories, clinical concepts and research studies related to maternal-child nursing. Prerequisites: Nurs. 703, 705 and 802. H 11 829 3 1203

832. Child Nursing. (3). An intensive clinical experience in which the student focuses on the process of systematic assessment of individuals and groups within a family system. A seminar accompanies the practicum. Prerequisite: Nurs. 829. H 11 832 1 1203

833. Adult Nursing. (3). This course will examine clinical concepts and issues related to the maintenance of optimal health states of adults. Emphasis is placed on assessment, measurement and nursing interventions related to these concepts. Prerequisites: Nurs. 703, 705, 802 or instructor's consent. H 11 833 3 1203

834. Adult Nursing Practicum. (3 or 6). An intensive clinical experience in which the student is expected to design, implement and evaluate nursing care for adults. Specialized areas of study include health maintenance or illness care of acutely or chronically ill adults. Practicum sites may include hospitals, extended care facilities, rehabilitation centers, community health agencies. A seminar is included as part of the practicum. Prerequisites: Nurs. 703, 705, 802 or instructor's consent. H 11 834 2 1203

835. Perspectives in Maternal-Child Nursing. (3). This course critically examines health care delivery systems for maternal and child health. The effects of political, economic and social factors on maternal and child health are analyzed. Nursing roles in the delivery of maternal and child health care are examined. Prerequisites: Nurs. 703, 705, 802 and 829. H 11 835 6 1203

836. Maternal-Child Nursing: Practicum II. (3). An intensive clinical experience in which the student analyzes, designs, implements and evaluates nursing systems for individuals and groups within a family system. Prerequisites: Nurs. 703, 705, 802, 829 and 832. Nurs. 835 may be concurrent. H 11 836 2 1203

837. Perspectives in Gerontological Nursing. (3). Emphasizes the synthesis of concepts and theories into a functional theoretical framework of gerontological nursing. This basis is utilized to identify health problems of older adults and to plan appropriate preventive, rehabilitative or restorative approaches to those problems. Attention is given to social, economic, political, ethical and legal aspects as they influence the care of older adults. Prerequisites: Nurs. 833 and 834 or instructor's consent. H 11 837 3 1203

839. Adult Nursing II. (3). This course examines clinical concepts and issues related to major disruptions in the health status of adults. Emphasis is placed on assessment, measurement and interventions related to these concepts. Prerequisites: Nurs. 703, 705 and 802. H 11 839 3 1203

Physical Therapy
The physical therapy professional program prepares students to become health care professionals who work with patients disabled by illness or accident or born with a handicap. Physical therapists also work to prevent functional disability and to maintain health. They evaluate neuromuscular, musculoskeletal, sensorimotor and related functions to determine the degree of muscle strength, motor development, motion, respiratory ventilation and/or peripheral circulatory efficiency.

Physical therapists plan and implement treatment programs based on test findings after a referral from a licensed physician or dentist. Treatments by physical therapists include exercises for increasing strength, endurance, coordination and range of motion; stimuli to facilitate motor activity and learning; instruction in activities of daily living and the use of assistive devices; and the application of physical agents, such as heat, cold, sound and water, to relieve pain or alter physiological status. In addition, they try to motivate patients, their families and others involved in the prevention and treatment of functional disabilities.

The WSU program includes two years of prephysical therapy study in the natural and social sciences, communication and humanities followed by two years (four semesters plus one summer) in advanced sciences, professional study and clinical education. The Bachelor of Science in physical therapy is awarded to those who satisfactorily complete the program including those who enter the professional program with a degree in another field. This program is fully accredited and graduates are eligible to take the examinations required for state licensure.

Preprofessional Curriculum
Students who intend to apply for admission into the physical therapy professional curriculum must complete the following courses: Satisfactory completion of the prephysical therapy curriculum and the professional curriculum also satisfies The Wichita State University's general education graduation requirements for the Bachelor of Science in physical therapy.

Course                                           Hrs.

Communications (nine hours)                      
Eng. 101, College English I                     3
Eng. 102, College English II                    3
Speech 111, Basic Public Speaking, or Speech 112, Interpersonal Communication   3
Division A—Humanities and Fine Arts (nine hours)  
Nine hours in at least three different departments

Division B—Social and Behavioral Sciences (nine hours)
Psych. 110Q, General Psychology                   3
Soc. 211Q, Introductory Sociology                3
Psych. 414, Child Psychology                     3
Psych. 514, Psychology of Aging                  3
Psyc. 404, Psychology of Illness                  3
Soc. 537, Social Consequences of Disability      3

Division C—Natural Sciences and Mathematics (36-37 hours)
Biol. 203Q, Introductory Biology I               5
Biol. 225, Human Anatomy                         5
Biol. 524, Vertebrate Zoology                    3
Biol. 527, Comparative Anatomy                   3
Biol. 226, Elementary Human Physiology           3
Chem. 111Q, General Chemistry I                  5
Chem. 112Q, General and Inorganic Chemistry      5
Math. 111, College Algebra, and 123, College Trigonometry or
Math. 112, Precalculus Mathematics               5

Phys. 213Q, General College Physics I             5
Phys. 214Q, General College Physics II            5

* Students may wish to select General Studies courses in the humanities and fine arts in order to satisfy the University's graduation requirement of nine hours of General Studies courses. See the Academic Information—General Studies section of the Catalog.

Admission to Professional Curriculum
In order to enter the physical therapy professional curriculum, students must:
1. Be admitted to The Wichita State University
2. Have a minimum cumulative grade point average of 3.00 in all college courses, including a minimum 3.00 grade point average in required courses
3. Submit to the Physical Therapy Admissions Committee all application forms, test results, information and fees
requested by the committee by the deadline set each year by the Physical Therapy Admissions Committee.

4. Be able to complete successfully (grade of C or better) all physical therapy prerequisites prior to the beginning of the first semester of the professional program (no more than one required course may be taken during the summer prior to entering the program).

5. Be interviewed and recommended for acceptance by the Physical Therapy Admissions Committee and accepted by the dean of the College of Health Professions.

A $100 nonrefundable tuition deposit is required of all students accepted by the committee.

Students may petition the committee for an exception to one of these requirements provided they are able to show that valid circumstances prevent compliance with that requirement.

Professional Curriculum

The following courses are required of students accepted into the professional phase of the physical therapy program.

Course  Hrs.

Division D---Professional Studies

PT 300, Basic Patient Care Skills  2
PT 302, Clinical Education I  1
PT 312, Clinical Education II  1
PT 320, Applied Biomechanics  3
PT 350, Physical Therapy Evaluation Procedures  2
PT 355, Physical Agents  4
PT 409, Introduction to Research for the Health Professions  1
PT 411, Special Projects  1-1
PT 422, Clinical Education III  2
PT 425, Clinical Education IV  3
PT 440, Prosthetics and Orthotics  2
PT 442, Clinical Internship I  6
PT 445, Physical Therapy Procedures  4
PT 448, Therapeutic Exercise I  3
PT 450, Therapeutic Exercise II  5
PT 452, Clinical Internship II  6
PT 460, The Physical Therapist in Practice  3
PT 485, Topics in Physical Therapy  1
PT 489, Basic Joint Mobilization  2
PT 505, Pathophysiology I  4
PT 605, Pathophysiology II  4
BIOL 470, Applied Human Physiology  4
HS 301, Clinical Pharmacology  3
HS 310, Gross Anatomy  6
HS 511, Neuroanatomy and Neurophysiology  3

Special Requirements

Students are required to purchase uniforms and other apparel needed during clinical learning experiences. Students are also required to purchase professional liability insurance (in the amount of not less than $300,000/$900,000) and health insurance coverage. This must be done on a yearly basis.

Prior to entering the clinical learning experiences in the first year of the professional program, each student must be certified in cardiopulmonary resuscitation (CPR). This may be accomplished through the Red Cross, American Heart Association or the Department of Physical Therapy. Recertification will be needed prior to entry into the second year clinical education courses. In addition, students are required to provide their own transportation to and from the health care facilities used for clinical experiences. During internships assignments outside Wichita, students may be required to pay all living and travel expenses.

Information related to special requirements is available in the office of the Department of Physical Therapy.

Lower-Division Course

281. Cooperative Education Field Study. (1-8). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 281 may follow one of two scheduling patterns: Parallel, enrolling consecutively in a minimum of six hours of course work in addition to their co-op assignment; or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisite: completion of all general education requirements and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 17 281 2 1212

Upper-Division Courses

300. Basic Patient Care Skills. (2). 1R; 2L. Theory and practice of fundamentals of patient care in physical therapy including medical terminology, communications, physical management of the patient and ambulation. Prerequisite: departmental consent. H 17 300 1 1212

302. Clinical Education I. (1). 4P. Introduction to basic patient care in various physical therapy settings. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 302 2 1212

312. Clinical Education II. (1). 4P. Supervised application of the skills acquired in class to patients in various physical therapy settings. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 312 2 1212

320. Applied Biomechanics. (3). 3R; 2L. Analysis of the integration of the systems of the body that produce normal motion and the effects of dysfunction on normal motion. Prerequisite: departmental consent. H 17 320 1 1212

350. Physical Therapy Evaluation Procedures. (2). 1R; 3L. Theory and practice of evaluation procedures; includes sensor and muscle testing, goniometry and posture evaluation. Prerequisite: departmental consent. H 17 350 1 1212

355. Physical Agents. (4). 2R; 4L. The focus of this course is the study of physical agents—thermal, mechanical and electrical. Skill in performance of therapeutic applications of the physical agents will be developed. Prerequisite: departmental consent. H 17 355 1 1212

409. Introduction to Research for the Health Professions. (1). An introduction to the scope, format and use of research in the health professions. Development of ability to be a critical consumer of professional literature and the initiation of research projects. Prerequisite: departmental consent. H 17 409 0 1212

411. Special Projects. (1-2). Arr. An introduction to the performance of a research paper. Offered only to the field of physical therapy students. Must complete two credit hours as a requirement for the major. Prerequisite: PT 409. H 17 411 3 1212

422. Clinical Education III. (2). 8P. Continuation of PT 312. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 422 2 1212

432. Clinical Education IV. (3). 12P. Continuation of PT 422. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 432 2 1212

440. Prosthetics and Orthotics. (2). 1R; 2L. Study of prosthetics and orthotics including basic principles of design, components, alignment and use. Prerequisite: departmental consent. H 17 440 1 1212

442. Clinical Education V. (6). 40P. Supervised part-time assignments to physical therapy settings where the student is responsible for initial patient evaluations, program planning, implementation and assessment of patient progress. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 442 2 1212

445. Physical Therapy Procedures. (4). 2R; 4L. The study of evaluation and treatment procedures used by physical therapists in dealing with patients with such needs as cardiopulmonary resuscitation, child birth education, sports medicine and burn care. Prerequisite: departmental consent. H 17 445 1 1212

448. Therapeutic Exercise I. (3). 1R; 4L. Basic exercise procedures with and without equipment to increase range of motion, strength and endurance. Prerequisite: departmental consent. H 17 448 1 1212

450. Therapeutic Exercise II. (5). 2R; 6L. The major approaches to therapeutic exercise are presented and skill in performance developed. The use of therapeutic exercise equipment is also studied. Activities of daily living are analyzed in order to see the relationship between therapeutic exercise treatment and the patient's functional ability. Prerequisite: departmental consent. H 17 450 1 1212

452. Clinical Education VI. (6). 40P. Continuation of PT 442 at a different physical therapy setting. Offered Cr/NCr only. Prerequisite: PT 442. H 17 452 2 1212

480. The Physical Therapist in Practice.
Physician Assistant

All students completing the 24-month physician assistant program receive a certificate of completion. In addition to meet all University degree requirements, the Bachelor of Health Science (BHS). Nearly all past graduates of the program have met BHS requirements at the completion of the professional program.

As defined by the American Medical Association, the physician assistant is "a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician who is responsible for the performance of that assistant." Graduates of the program are eligible to take the examination given by the National Commission on the Certific
PA 419, Clinical Rotation in Primary Care I 5
PA 422, Clinical Rotation in Internal Medicine 5
or
PA 412, Clinical Rotation in Surgery I 2
PA 430, Clinical Conference I 2
PA 432, Clinical Conference II 3
PA 440, Clinical Preceptorship 6

Recommended Electives (10 hours)
PA 311, Clinical Rotation in Rehabilitation 3
PA 312, Clinical Rotation in Public Health 3
PA 313, Clinical Rotation in Dermatology 3
PA 314, Clinical Rotation in Otorhinolaryngology 3
PA 413, Clinical Rotation in Obstetrics and Gynecology 5
PA 415, Clinical Rotation in Mental Health 5
PA 417, Clinical Rotation in Admitting and Personnel Health Care 5
PA 423, Clinical Rotation in Pediatrics 5
PA 424, Clinical Rotation in Radiology 1-5
PA 425, Clinical Rotation in Surgery II 5
PA 426, Clinical Rotation in Family Practice II 5
PA 427, Clinical Rotation in Primary Care II 5

Graduation Requirements
Students who meet the course requirements specified in the physician assistant curriculum will receive a certificate of completion. In addition, students may qualify for the Bachelor of Health Science with emphasis in physician assistant by completing the physician assistant curriculum and meeting all University graduation requirements with a minimum of 125 hours and a 2.00 grade point average.

Lower-Division Courses
211. Assessment and Management of the Integument. (2). A combined theory, laboratory and clinical course dealing with the skin as a major organ. Special considerations include 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 clinical case through case presentations. H 19 211 0 1299

212. Assessment and Management of the Cardiovascular System. (2). A combined theory, laboratory and clinical course dealing with the cardiovascular system. Special considerations include pathophysiology of the principles of coronary care units and cardiopulmonary resuscitation, management of vascular diseases and cardiovascular emergencies, cardiac rehabilitation and investigation of the resources of the American Heart Association. H 19 212 0 1299

213. Assessment and Management of the Pulmonary System. (2). A theory, laboratory and clinical course dealing with the respiratory system. Special considerations include pulmonary function testing including bio-impedance; respiratory therapy; management of the pulmonary cripple; special pulmonary problems of the newborn; epidemiology of pulmonary disease management; concepts of medical science and special problems of thoracic surgery; roentgenology of the chest and resources of the American Lung Association. H 19 213 0 1299

214. Assessment and Management of the Gastro-Intestinal System. (2). A theory, laboratory and clinical course dealing with the gastrointestinal (GI) system. Special considerations include assessment of diseases of organs in the GI tract; special problems of the newborn; relationships of the autonomic nervous system to GI symptoms; roentgenology of the GI tract; manifestations of psychic disturbances and demonstration of special diagnostic instruments. H 19 214 0 1299

218. Assessment and Management of Obstetrics and Gynecology. (2). A theory, laboratory and clinical course dealing with obstetrics and gynecology. Special considerations include the menstrual cycle, pregnancy, gynecologic diseases, techniques of normal delivery, obstetrical emergencies, abortions, family planning and infertility. H 19 218 0 1299

221. Assessment and Management of the Nervous System. (2). A theory, laboratory and clinical course dealing with the central nervous system. Special considerations include specific diagnostic procedures, neurologic emergencies, head trauma, cerebrovascular diseases and stroke management. H 19 221 0 1299

222. Assessment and Management of the Musculo-Skeletal System. (2). A theory, laboratory and clinical course dealing with the endocrine system. Special considerations include diseases of the pituitary gland and hypothyroidism; diseases of the thyroid, parathyroid and adrenal gland; diabetes mellitus; gastrointestinal procedures; special diets; endocrine emergencies; and the treatment of endocrine diseases. H 19 223 0 1299

223. Assessment and Management of the Endocrine System. (2). A theory, laboratory and clinical course dealing with the endocrine system. Special considerations include diseases of the pituitary gland and hypothyroidism; diseases of the thyroid, parathyroid and adrenal gland; diabetes mellitus; gastrointestinal procedures; special diets; endocrine emergencies; and the treatment of endocrine diseases. H 19 224 0 1299

224. The Medical History and Counseling Techniques. (2). 2R; 1L. The theory and techniques of medical counseling are considered. The basic concepts of the character of historical data and the interpretation of a medical examination are considered. Philosophies of medical counseling are considered with special emphasis on cultural differences. Family counseling, interviewing children and the sexual history. Lecture, role playing and simulation are employed in the course. H 19 224 0 1299

226. Assessment and Management of the Renal and Genito-Urinary Systems. (2). A theory course dealing with the kidneys and ureters, bladder and prostate. Special considerations include electrolyte and fluid balances, hypertension, tumors of the genito-
312. Clinical Rotation in Public Health. (3). A four-week clinical experience in which students are introduced to the resources available at a metropolitan public health department. Special emphasis is placed on communicable disease control. Other services such as sanitation, social work and visiting nurses are also encountered. H 19 312 1 1299

313. Clinical Rotation in Dermatology. (3). A four-week clinical experience in which students participate in the care of dermatologic patients in a variety of settings. Students are allowed to participate in specialized diagnostic testing, such as KOH prep, tissue scrapings and skin biopsies. The students become familiar with therapeutic regimens, their indications, availability, reliability and limitations in the treatment of dermatologic disease. H 19 313 1 1299

314. Clinical Rotation in Otorhinolaryngology. (3). A three-week clinical experience in which students participate in the care of patients in an outpatient medical clinic. Students will be involved in data collection, diagnosis, treatment and follow up of patients with ear, nose and throat problems. Special emphasis will be placed upon the decisional processes involved in treating patients on an outpatient basis. Pre-requisite: departmental consent. H 19 314 1 1299

410. Clinical Rotation in Internal Medicine. (5). A six-week clinical experience in which the students participate in the care of hospitalized patients. During this rotation, students are involved in admitting, taking histories and performing physical examinations. They also participate in staff conferences, recording patients' progress notes, formulating treatment plans, performing special procedures, diagnostic testing and preparing discharge summaries. H 19 410 1 1299

412. Clinical Rotation in Surgery I. (5). A six-week clinical experience in which students participate in the care of the surgical patient. During this rotation, students are involved in admitting, taking histories and performing physical examinations, diagnostic procedures, preoperative and postoperative procedures and assisting in the operating room and with the immediate postoperative care and convalescence of the patient. H 19 412 1 1299

413. Clinical Rotation in Obstetrics and Gynecology. (5). A six-week clinical experience in which students participate in the care of obstetric and gynecologic patients. During this rotation, students are involved in patient assessment, diagnostic procedures and treatment of the gynecology patient. Students follow patients throughout all stages of pregnancy, labor, delivery and postpartum care. Students also counsel patients in family planning and contraception. H 19 413 1 1299

414. Clinical Rotation in Emergency Room. (5). A six-week clinical experience in which students participate in the care of emergency patients as encountered in the emergency room of a metropolitan hospital. Students are involved in patient history, and physical examination, treatment of patient condition, triage, diagnostic testing and emergency procedures. H 19 414 1 1299

415. Clinical Rotation in Mental Health. (5). A six-week clinical experience in which students participate in the care of patients as encountered in a variety of hospitals, during the rotation, students are involved in data collection, assessment and the formulation of treatment plans for patients with a variety of emotional disturbances. Special emphasis is placed upon suicide prevention. H 19 415 1 1299

417. Clinical Rotation in Admission and Personnel Health Care. (5). A six-week clinical experience in which students participate in the care of patients seeking hospitalization. In addition to the daily emergency ward service, students are involved in history and physical examination, assessment and determinations as to whether hospitalization is necessary. Students are also responsible for doing annual examinations of employees as well as participate in employee sick call situations. H 19 417 1 1299

418. Clinical Rotation in Family Practice I. (5). A six-week clinical experience in which students participate in the care of a wide variety of patients, such as those encountered in a family practice residency program. Students are involved in physical evaluation assignments, diagnostic procedures and treatment of these patients. Students also observe the diversity and complexity of the role of the family practitioner. H 19 418 1 1299

419. Clinical Rotation in Primary Care I. (5). A six-week clinical experience in which students participate in the care of a wide variety of patients, such as those encountered in a primary-care physician's practice in a rural area. Students are involved in physical evaluation, assessment, diagnostic procedures and treatment of patients. Students also observe the diversity and complexity of the role of the primary-care physician in rural areas. H 19 419 1 1299

422. Clinical Rotation in Internal Medicine. (5). A six-week clinical experience in which students participate in the care of the morbid adult patient in both an inpatient and outpatient environment. During this rotation the student is involved in obtaining a detailed data base, performing diagnostic and therapeutic procedures, counseling the acute and chronic patient in the disease process and therapy. Students also observe and participate in the preoperative and postoperative procedures experienced by the internal medicine physician. H 19 422 1 1299

423. Clinical Rotation in Pediatrics. (5). A six-week clinical experience in which students participate in the care of the pediatric patient. During this rotation the student is involved in physical assessment, performing diagnostic procedures and treatment of the pediatric patient. The student participates in the daily practice of a pediatrician and is involved in all aspects of pediatric medicine. Special emphasis is placed upon immunization, preventive medicine and developmental milestones. H 19 423 1 1299

424. Clinical Rotation in Radiology. (1-5). A six-week clinical rotation experience in which the students participate in all aspects of radiology as it pertains to patient care. During this rotation the student is involved in taking routine X-rays, fluoroscopy and interpretation. The student has an opportunity to correlate physical and historical findings to radiographic results. Students are also involved in the performance of examinations in urban and rural areas. H 19 424 1 1299

425. Clinical Rotation in Surgery II. (5). A six-week advanced clinical experience in which students participate in the care of the surgical patient. During this rotation students interact with preoperative and postoperative care, and performing physical examinations and diagnostic procedures. Students assist in the operating room and participate in the surgical subspecialties. Students also assist in preoperative and postoperative care of the patient. Prerequisite: department chairperson's consent. H 19 425 1 1299

426. Clinical Rotation in Family Practice II. (5). A six-week advanced clinical experience in which students participate in the care of a wide variety of patients in family practice. Students have the opportunity to improve their skills in physical examination, diagnostic procedures and development of a plan of care. Students are also involved in observing the diversity and complexity of the role of the family practitioner. H 19 426 1 1299

427. Clinical Rotation in Primary Care II. (5). A six-week advanced clinical experience in which students participate in the care of a wide variety of patients in a primary-care physician's practice in a rural area. Students have the opportunity to improve their skills in physical evaluation, diagnostic procedures, development of a plan of care and treatment. Students also observe the diversity and complexity of the primary-care physician in rural areas. Prerequisite: department chairperson's consent. H 19 427 1 1299

430. Clinical Conference I. (2). 1R; 2L. The major focus of this course is clinical research. Students will integrate research activities with clinical assignments and report to faculty. Included are the writing of clinical papers during the course or an analysis of clinical problems encountered in the clinical rotation. This requires competent utilization of the computer patient tracking system at the program and a comprehension of the program regarding his/her strengths and weaknesses in clinical skills. Prerequisites: concurrent enrollment in PA 432 and instructor's consent. H 19 430 1 1299

432. Clinical Conference II. (3). 1R; 3L. The course is offered in the spring semester to clinical physician assistant students. The primary focus of the class is on issues affecting the graduate physician assistant, which include legislative issues, professional associations, reimbursement, malpractice issues, etc. This course includes: review sessions for the National Board Examination utilizing lecture, demonstration and self-instruction. Prerequisites: concurrent enrollment in PA 430 and instructor's consent. H 19 432 1 1299

440. Clinical Preceptorship. (6). An eight-week course designed as a 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, to the extent to which would be encountered by the graduate physician assistant. H 19 440 1 1299

481. Cooperative Education Field Study. (1-8). A field placement which integrates course work with a planned and supervised professional experience designed to com-
Respiratory Therapy

The baccalaureate program in respiratory therapy through a Bachelor of Health Science (BHS) is designed for the individual currently enrolled in The Wichita State University's respiratory therapy associate degree program or graduates of other accredited respiratory therapy programs. This degree provides opportunities for respiratory therapists to expand their role in education, administration or in the clinical sciences.

Curriculum

Students must be admitted by The Wichita State University and the Department of Respiratory Therapy to its Bachelor of Health Science (BHS) program. Students must satisfy general University graduation requirements. They must also successfully complete an Associate of Science degree (or equivalent) program in respiratory therapy with a grade of "C" or better.

Students may select from three emphasis options for their BHS degree. A plan of study contract is fashioned from the recommended courses listed under each option and must be made in consultation with and approved by the respiratory therapy department advisor. This contract for graduation must be completed one semester prior to the expected graduation date. Students must complete 145 credit hours.

Core Requirements (19 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS 230. Thoracic Anatomy ***</td>
<td>1</td>
</tr>
<tr>
<td>HS 301. Clinical Pharmacology **</td>
<td>3</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 200. Introduction to Computer Programming ***</td>
<td>2</td>
</tr>
<tr>
<td>ISEP 704. Introduction to Educational Statistics</td>
<td>3</td>
</tr>
<tr>
<td>RT 360. Pulmonary Rehabilitation ***</td>
<td>3</td>
</tr>
<tr>
<td>HS 510. Departmental Management ***</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS 531. Applied Principles of Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HS 430. Introduction to Fluids and Electrolytes</td>
<td>2</td>
</tr>
<tr>
<td>HS 465. Cardiopulmonary Diagnostic, Preventive and Rehabilitation Methods</td>
<td>5</td>
</tr>
</tbody>
</table>

** Required during the WSU Associate Degree curriculum as scheduled; transfer Associate Degree RT students must complete as soon as possible after admission to the BHS program of study.

*** Required BHS core courses

Management Option (27 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ 2010. Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 360. Concepts of Administration</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 220. Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 466. Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>HAE (HCA) 503. Organization and Administration of Health Care</td>
<td>3</td>
</tr>
<tr>
<td>HAE 590. Legal Aspects of Health Care Administration</td>
<td>3</td>
</tr>
<tr>
<td>HAE 507. Health Planning</td>
<td>3</td>
</tr>
<tr>
<td>HAE 510. Health Finance</td>
<td>3</td>
</tr>
</tbody>
</table>

Clinical Sciences Option (27 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 112. General and Inorganic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 509G. Foundations of Human Heredity</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 618G. Biology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 533. Elementary Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 404. Psychology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 561. Introduction to Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>RT 320. Projects</td>
<td>6</td>
</tr>
</tbody>
</table>

Lower-Division Courses

101. Overview of Respiratory Therapy. (3), An overview of the profession, the cardiorespiratory system and therapy modalities.

102. Cardiopulmonary Resuscitation. (1), Instruction and supervised practice of cardiopulmonary life support plus introduction to basic terminology and principles of circulation and respiration and include psychosocial and emotional support for pregnant women and their families.

111. Introduction to Respiratory Therapy. (1-4), A course to familiarize students with the history and evolution of respiratory therapy, the role of the respiratory therapist in the health care community, major components also include the study of medical terminology and the application of basic scientific principles pertinent to respiratory therapy practice. Prerequisite: departmental consent.

201. Respiratory Therapy Practicum I. (1-5), The course stresses the application of scientific principles pertinent to respiratory therapy practice. Prerequisite: RT 222, H 13 111 0 1 299.

202. Respiratory Therapy Practicum II. (1-5), A continuation of RT 222 but with greater emphasis on the critically ill and diagnostic and treatment areas of respiratory therapy. Prerequisite: RT 202, H 13 203 2 1 299.

212. Respiratory Therapy Procedures. (1-5), This course presents the basic therapeutic and diagnostic skills and techniques used by the respiratory therapist practitioner which can be developed in a skills laboratory. Included are medical gas therapy, humidity and aerosol therapy. Prerequisite: RT 111, H 13 212 1 2 1299.

222. Respiratory Therapy Practicum I. (1-3), A course to the student's first introduction to the clinical environment and practice of basic therapeutic skills that are required of the respiratory therapist. Prerequisite: RT 212, H 13 220 2 1 299.

281. Cooperative Education Field Study. (1-3), This course is designed to complement and enhance the student's academic program. Individualized programs may be formulated in consultation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 281 may follow one of two scheduling patterns: Parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisite: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 13 281 2 1 299.

Upper-Division Courses

301. Seminar I. (2), Discussion of departmental operations. Prerequisite: RT 222, H 13 203 9 1 299.

302. Seminar II. (2), Discussion of advanced skills and techniques involving patients and preparation of case studies. Prerequisite: departmental consent. H 13 203 9 1 299.

310. Respiratory Therapy Practicum III. (1-6), Students practice advanced therapeutic
techniques in the hospital environment. H 13 310 2 1299

320. Clinical Projects. (1-3). Provides an opportunity for the student on an individual basis to select a topic for independent investigation. Repeatable to six hours. H 13 320 4 1299

325. Cardiopulmonary and Renal Physiology. (1-5). An in-depth study of pulmonary and cardiovascular physiology accompanied by an overview of the kidney’s role in fluid, electrolyte and acid-base balance. Emphasis is placed on understanding essential mechanisms of normal function; within this context, knowledge is applied in interpreting diagnostic studies and in understanding disordered function. Prerequisite: departmental consent. H 13 325 1 1299

330. Blood Gases: Clinical Applications, Instrumentation and Quality Control. (1-3). A study of pulmonary and cardiovascular physiology accompanied by an overview of the kidney’s role in fluid, electrolyte and acid-base balance. Emphasis is placed on understanding essential mechanisms of normal function; within this context, knowledge is applied in interpreting diagnostic studies and in understanding disordered function. Prerequisite: departmental consent. H 13 330 0 1299

340. Pulmonary Rehabilitation. (1-5). Objectives, methods and expected results are presented and discussed. The patient's response to exercise testing, patient and family education, bronchial hygiene, breathing rettaining, biofeedback, physical reconditioning and home care, are described and discussed. Prerequisite: departmental consent. H 13 340 0 1299

426. Cardiopulmonary Disorders and Management. (1-6). A study of the diagnosis, treatment and management of cardiopulmonary disorders. Emphasis is placed on (1) interpretation of diagnostic tests, (2) applying these interpretations to the treatment and management of the disease and (3) understanding essential mechanisms of disordered function. Pathogenesis and case study approaches are used. Prerequisite: RT 222. H 13 426 0 1299

435. Ventilators and Applied Critical Care. (1-6). A study of mechanical ventilators and applied critical care, including monitoring techniques, criteria for ventilatory support and aspects of critical care. Prerequisite: departmental consent. H 13 435 1 1299

465. Cardiopulmonary Diagnostic, Preventive and Rehabilitative Methods. (5). Study of cardiopulmonary diagnostic procedures, disease prevention and intervention. Emphasis includes exercise physiology and home care concepts are practiced in lab and clinical practicum. Prerequisite: administration of program or departmental consent. H 13 465 3 1299

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 enrolled in a cooperative work program must follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisite: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 13 481 2 1299

**Associate of Science Programs**

The College of Health Professions offers the Associate of Science in dental hygiene and respiratory therapy.

**Dental Hygiene**

The associate program in dental hygiene provides students with a knowledge of the social, dental and clinical sciences and competencies needed by the dental hygienist in contributing to the attainment of good oral health for all people. Upon successful completion of the five-semester program (including one summer), students are eligible to take the national, regional and state examinations for licensure as dental hygienists. The Wichita State University program is accredited by the 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 Department of Dental Hygiene. Acceptance into the College of Health Professions does not guarantee admission into the dental hygiene program. Persons interested in the dental hygiene program are required to attend one of the orientation sessions at the Wichita State University, Wichita, KS 67208-1595. To qualify for admission to the dental hygiene program, applicants must be high school graduates or have passed the General Education Development (GED) test and demonstrate a minimum of one semester of college or a total of 14 semester hours.

Students must meet the following admission criteria:

1. Have taken or be enrolled in Biol. 225, Human Anatomy; Chem. 103C, General Chemistry; Eng. 101, College English I; Psych. 111Q, General Psychology

2. Maintain a minimum grade point average of 2.00 in all college work

3. Complete The Wichita State University and College of Health Professions general admission requirements.

Students must also be interviewed in person and their admission approved by the department's committee on admissions. The interview is used to determine a student's motivation and interest, neatness and cleanliness, general understanding of the scope of the dental hygiene program and of the dental hygiene profession and ability to communicate and listen.

If possible, students should obtain experience and observe in a dental office prior to or concomitant with their application to the dental hygiene program.

Curriculum. The following courses, totaling 79 to 84 hours, must be taken by dental hygiene students. For course descriptions see the dental hygiene baccalaureate program section of the Catalog.

**Course**

- Prerequisite courses for admission to the dental hygiene program:
  - Biol. 225, Human Anatomy
  - Chem. 103C, General Chemistry
  - Eng. 101, College English I
  - Psych. 111Q, General Psychology

- Plus the following:
  - Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication
  - Soc. 211Q, Introduction to Sociology
  - Biol. 120Q, Introduction to Microbiology
  - Biol. 226, Human Physiology
  - DH 101, Preclinical Dental Hygiene
  - DH 104, Clinical Radiology
  - DH 201, Dental Hygiene Concepts I
  - DH 202, Clinical Dental Hygiene Concepts I
  - DH 206, General and Oral Pathology
  - DH 290, Embryology, Histology and Oral Anatomy
  - DH 301, Dental Materials and Expanded Functions
  - DH 302, Clinical Dental Hygiene Concepts II
  - DH 303, Dental Hygiene Concepts III
  - DH 304, Dental Hygiene Concepts IV
  - DH 305, Periodontics
  - DH 307, Ethics and Jurisprudence
  - DH 309, Community Dental Hygiene
  - DH 311, Dental Health Education
  - DH 323, Clinical Dental Hygiene Concepts I
  - DH 324, Clinical Dental Hygiene Concepts II
  - DH 409, Introduction to Research for the Health Professions
  - HS 301, Pharmacology
  - HS 315, Head and Neck Anatomy
  - HS 331Q, Nutrition
  - RT 102, Cardiopulmonary Resuscitation

**Special Requirements**

Students are required to purchase uni-
forms and instruments needed during clinical learning experiences. Students are also required to purchase professional liability insurance in the amount of not less than $200,000/$600,000. This must be done on a yearly 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 Department of Dental Hygiene, The Wichita State University, Wichita, KS 67208-1595.

Respiratory Therapy

Respiratory therapy is an allied health specialty employed in the treatment, management, control and care of patients with deficiencies and abnormalities associated with the respiratory system.

It encompasses the therapeutic use of medical gases; air and oxygen administration apparatus; environmental control systems; humidification and aerosols; drugs and medications; ventilatory assistance and ventilatory control; postural drainage; chest physiotherapy and breathing exercises; respiration rehabilitation; assistance with cardiopulmonary resuscitation; and maintenance of natural, artificial, and mechanical airways. Specific testing techniques can be employed in respiratory therapy to assist in diagnosis, monitoring, treatment and research, including measurement of ventilatory volumes, pressure and flows and blood gas analysis.

The Department of Respiratory Therapy has an American Medical Association-approved program for the education of respiratory therapists. Following completion of the professional program, students meet the educational requirements for examination by the National Board for Respiratory Care for RRT registration.

Preprofessional Curriculum

The respiratory therapy curriculum consists of both classroom and clinical courses. The majority of the classroom courses are taught on the Wichita State campus while the clinical courses are taught in clinical affiliations.

The following courses should be taken by respiratory therapy students desiring an Associate of Science in respiratory therapy. Due to course scheduling and/or availability, students may or may not complete all requirements for the Associate of Science degree in two years.

Admission to the Professional Curriculum

Students submitting application to the professional program are eligible for consideration after they have met Wichita State and College of Health Professions general admission requirements with a minimum grade of C in the prerequisites and have a grade point average of at least 2.00. Admittance to the program must be requested through an application submitted to the Department of Respiratory Therapy.

Professional Curriculum *

The following courses are required in the professional curriculum. For course descriptions see the respiratory therapy baccalaureate program section of the Catalog. For current program requirements and admission dates see departmental adviser.

Special Requirements

Students are required to purchase uniforms and other items needed during clinical learning experiences. Students are also required to purchase professional liability insurance. For specific information, please contact your department adviser each semester. 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 Department of Respiratory Therapy, The Wichita State University, Wichita, KS 67208-1595.

Special Certificate Programs

The College of Health Professions offers certificate programs in basic emergency care training and physician assistant. It cooperates with the College of Education in offering a certification program for school nurses.
Basic Emergency Medical Care Training
A certificate in basic emergency medical care training is offered by the Department of Health Science. The certificate is obtained with successful completion of HS 110, described under the heading Service Departments—Health Science. Students who would like to enroll in this course must fulfill all requirements for admission to The Wichita State University and be at least 18 years old. An application to the Emergency Medical Training Admissions Committee must also be submitted. HS 110 classroom instruction encompasses anatomy and physiology, pathophysiology, emergency recognition and care of medical emergencies and trauma-related injuries. In addition, students spend ten hours of in-hospital observation in such areas as the emergency room, surgery, critical care units and the obstetric and psychiatric departments. A simulated automobile accident provides students with field experience in auto extrication. Successful completion of the five-credit-hour course meets the educational prerequisite for taking the state and/or national registry examinations for emergency medical technicians.

School Nurse
The following curriculum plan is recommended for registered nurses who desire school nurse certification but who do not wish to pursue a degree.

In the College of Education, students must take three courses: ISEE 428, Social and Cultural Foundations of Education (two hours), or ISEE 701, Foundations of Education (three hours); ISEE 601, Introduction to Exceptional Child (three hours); and ISEE 490 or 790, Independent Study (one hour).

In addition, students must take courses in the College of Health Professions: Nurs. 500, Assessment of Pediatric and Adolescent Clients (three hours), or an equivalent course determined by the Department of Nursing; Nurs. 501, Health Maintenance of the School Age Child (three hours); Nurs. 504, Organization and Management in School Nurse Setting (three hours); and Nurs. 503, School Nurse Practicum (two hours), optional.

The total program requires 15-18 credit hours.

Physician Assistant
The Physician Assistant Program is a 24-month program designed to train primary care physician assistants. As defined by the American Medical Association, the physician assistant is a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician who is responsible for the performance of that assistant. All students completing the two-year course of study receive a certificate of completion. Students who have completed all university requirements in addition to physician assistant requirements receive the Bachelor of Health Science. A full description of the program is found under the baccalaureate program listings.

Service Departments
Within the College of Health Professions there are two service departments, health administration and education and health science.

Health Administration and Education
The Department of Health Administration and Education, in addition to providing bachelor programs in health care administration and medical record administration, is responsible for providing public and community health education courses required by professional programs within the College of Health Professions.

Lower-Division Courses
111Q. Introduction to Community Health. (3). H 24 1110 0 1202
281. Cooperative Education Field Study. (1-8). Prerequisite: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 24 281 2 1201

Upper-Division Courses
410. Community Health Concepts. (3). Prerequisite: departmental consent. H 24 410 0 1202
440. Health Care Administration Practicum. (6). 40P. Prerequisite: senior standing or departmental consent. H 24 440 2 1202
481. Cooperative Education Field Study. (1-8). Prerequisite: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 24 481 2 1201
490. Independent Study in Health Care Administration. (1-4). Prerequisite: departmental consent. H 24 490 3 1202

Courses for Graduate/Undergraduate Credit
503. Organization and Administration of the Health Care System. (3). Prerequisite: departmental consent. H 24 503 0 1202
504. Health Economics. (3). Cross-listed as Econ 665. Prerequisite: HAE 503 or Econ 202. H 24 504 0 1202
507. Health Planning. (3). Prerequisite: departmental consent. H 24 507 0 1202
509. Health Care Operations Analysis. (3). Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360 and junior standing. H 24 509 0 1202
510. Health Finance. (3). Prerequisites: HAE 503 and Accptg. 210 or equivalent. H 24 510 0 1202
590. Legal Aspects of Health Care Administration. (3). Cross-listed as Goron. 590. Prerequisite: junior standing or departmental consent. H 24 590 0 1202
605. Health Services Research. (3). Prerequisite: departmental consent. H 24 605 0 1201
684. Health Administration Policy. (3). Cross-listed as Mgmt. 684. Prerequisite: departmental consent. H 24 684 0 1202
685. Computer Applications in Health. (3). Prerequisite: HAE 605 or instructor’s consent. H 24 685 0 1201
686. Seminar in Health Care Administration. (3). May be repeated for credit. Prerequisite: HAE 605 and at least one other HAE course. H 24 686 9 1201
720. Community Health Organization and Administration. (3). Prerequisite: instructor’s consent. H 24 720 2 1201
808. Epidemiology of Chronic Disease. (3). Prerequisites: graduate school enrollment, HAE 605 or instructor’s consent. H 24 808 0 1201

* For complete course descriptions see Health Care Administration Program in the Catalog

Health Science
The Department of Health Science offers a variety of applied/clinical courses in the basic health sciences. These courses are applicable to several departments within the college at the undergraduate and graduate levels.

Lower-Division Courses
101. Emergency Care: First Responder. (3). This course is designed specifically to meet the needs of the general public who respond to the initial care of emergency situations in the home or in public areas. Participants learn to provide vital, stabilizing and often urgent life support care prior to the arrival of ambulance personnel. Also, students are certified in basic cardiopulmonary resuscitation according to the standards of the American Heart Association. Prerequisites: departmental consent. H 16 101 2 1201
110. Basic Emergency Medical Care Training. (5). 4R; 2L. Principles of basic emergency medical care are identified. Classroom instruction includes anatomy, physiology and emergency recognition and care of medical emergencies and trauma-related injuries. Practicum and discussion provide the opportunity to apply these principles. Students also spend ten hours in hospit
315. Health Care Team Concepts. (3-4). An examination of the health team concept, the role and relationship of the various providers of health care and the criteria for the selection of a health career. Emphasis is placed on the health team concept. H 18 201 0 1201

230. Clinical Anatomy of the Thorax. (1). 1R; 2L. Fall semester. Presents the structure and mechanisms of the thorax, including neuromuscular, skeletal, cardiovascular and respiratory systems. Laboratory includes use of human cadavers and models. Prerequisites: respiratory therapy major and instructor's consent. H 18 230 1 0412

231G. Current Issues in Food and Nutrition. (3). A survey course that examines the various controversies, fads and misconceptions surrounding nutrition and health, the cultural aspects of food, diet patterns in America and the political aspects of food and farm policy. The course includes the basic nutrition principles that are needed to fully understand the issues discussed. H 18 231G 0 0424

Upper-Division Courses

301. Clinical Pharmacology. (3). A survey of therapeutic terms, drug actions, dosage, toxicology and application of drugs in the clinical setting. H 18 301 0 1201

310. Gross Anatomy, Section A: (3). Section B: (6). 3R; 9L. A study of the structure of the human body with major emphasis on the skeletal and muscular systems. Laboratory (Section B) includes dissection of human cadavers. Open to nonpharmacology majors. Prerequisite: departmental consent. H 18 310 1 0412

315. Head and Neck Anatomy. (2). An indepth study of the landmarks, muscles, nerves, vascular supply, etc, of the head and neck region. H 18 315 0 1201

331Q. Principles of Dietetics and Nutrition. (3). A study of human dietetic and nutritional needs in the clinical setting. Composition and classification of foods, vitamins and their function; food and public health laws; and nutrition under special conditions are covered. A detailed application of dietetic and nutritional knowledge applied to various clinical conditions is given. H 18 331Q 0 0424

385. Health Care Team Concepts. (1-6). A seminar and practicum course designed to provide opportunity for health professionals to share experiences as members of the health care team. Students select the number of credit hours needed for students within their program. Prerequisite: instructor's consent. H 18 385 2 1201

388. Clinical Anatomy. (3). Fall semester. A course designed to further the understanding of the health professional in a comprehensive and/or specific area of human anatomy. Emphasis is placed on the human anatomy of the thorax, abdomen, pelvis, head and neck. Prerequisites: Biol 225 or equivalent, instructor's consent and enrollment in one of the professional programs. H 18 388 0 0412

389. Clinical Anatomy. (3). Spring semester. A continuation of HS 388. Emphasis on the human anatomy of the genital-urinary, neuromusculoskeletal system and nervous system. Prerequisites: HS 388, instructor's consent and enrollment in one of the professional programs. H 18 389 0 0412

390. Clinical Physiology. (1-2). A course designed to further 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. Departments select the number of credit hours needed for their program and offer them under this course number with a designated subsection. Prerequisites: instructor's consent and enrollment in one of the professional programs. H 18 390 0 0410

400. Introduction to Pathophysiology. (3). Cross-listed as Nurs 400. A course for professional upper-division students enrolled in the health sciences. The course focuses on the human anatomy, physiology and pathophysiology of the body systems with an emphasis on the cardiovascular system. Prerequisites: instructor's consent and enrollment in upper-division CHP professional courses. H 18 400 0 1201

401. Advanced Clinical Pharmacology. (3). An advanced study of clinical pharmacology, pharmacodynamics and pharmacodynamics that includes drug synergies and side effects. Prerequisites: HS 301 and instructor's consent. H 18 401 0 1201


421. Applied Clinical Pharmacology I. (3). A course designed to provide the student with a practical knowledge of pharmacotherapeutics. Emphasis is placed on the pharmacokinetic and toxicologic properties of therapeutic agents and on the outcome of the cardiovascular and autonomic nervous systems. Prerequisites: current enrollment in HS 388 and instructor's consent. H 18 421 0 1201

422. Applied Clinical Pharmacology II. (3). A continuation of HS 421 with emphasis on drugs affecting the exocrine, endocrine and central nervous systems. Prerequisites: HS 421 and instructor's consent. H 18 422 0 1201

430. Introduction to Fluids and Electrolytes. (2). An indepth study of nutrition, fluid and electrolyte balance in health and disease. Included are discussions of clinical cases of diagnostic and therapeutic interest. Prerequisites: Chem 103Q, Biol 225 or equivalent and departmental consent. H 18 430 0 1201

450. Workshop in Health Sciences. (1-4). H 18 450 2 1201

Courses for Graduate/Undergraduate Credit

501. Health Education Curriculum Development. (3). A course designed to assist health professionals in constructing health education curriculum. Emphasis is given to identifying various curriculum models and applying educational principles, writing behavioral objectives and the acquisition of supplementary materials. Special emphasis is placed on the importance of knowledge and training in health education. Prerequisites: junior, senior or graduate standing in one of the professional programs or instructor's consent. H 18 501 0 1201

506. Teaching and Learning Strategies in Health Science. (3). A course examining the various methods of teaching knowledge and coupled with these teaching strategies with the audiences and taking special courses in related areas. The purpose of the course is to provide the health professional with accessible, up-to-date knowledge of teaching and learning strategies. Prerequisites: departmental consent. H 18 506 0 1202

510. Clinical Departmental Management. (3). Concepts and methods of clinical departmental management are presented through lectures, discussion and interaction. The course is designed to assist students in managing and managing the clinical departmental management. Prerequisites: departmental consent and enrollment in upper-division CHP professional courses. H 18 510 0 1202

511. Neuromuscular and Neurophysiology. (3). 2R; 2L. Study of the structure, physiology and functions of the central and peripheral nervous systems. Prerequisite: HS 310 or CDS 214. H 18 511 1 0425

521. Independent Study. (1-6). Offers reading and conference experience to complete a course requirement or provide enrichment in a specific area. Prerequisite: upper-division or graduate standing or department chairperson's consent. H 18 521 3 1201

531. Applied Principles of Nutritional Support and Therapy. (3). A study of the principles of nutritional support and diet therapy. The dietary concerns of a variety of clinical disorders are examined. These include gastrointestinal disorders, diabetes mellitus, cancer, burns, obesity and weight loss, kidney and cardiovascular disease, parenteral and enteral nutrition and surgical conditions. Nutritional assessment, data interpretation, patient teaching, record keeping and client communications are discussed. Prerequisites: HS 331 or instructor consent. H 18 531 0 0424
701. Issues in Health Care. (3). An in-depth look at current issues facing health professionals. Topics may be presented in lecture, small groups, simulation, and with guest speakers. Trends in health care, ethics, consumerism and current research findings are presented and include disease prevention and health promotion, ethics, consumerism and current research findings as they relate to current trends in the health professions. Prerequisite: graduate standing. H 18 701 0 1201

703. Evaluation in the Health Professions. (3). This course presents the background and methods for evaluating performance in the health professions. The planning, development and use of evaluation tools in the clinical setting are emphasized as well as the planning and use of evaluation tools in educational and professional settings. H 18 703 0 1201

704. Continuing Education in the Health Professions. (3). Planning, implementation, and evaluation of continuing education programs for the health professions. Review of existing continuing education models and consideration of alternative systems. H 18 704 0 1201

705. Health Services Research. (3). An examination of statistical research methods used by health care professionals and organizations. Topics include presentation of information, measures of location and variation, probability, expectation, sampling distributions, hypothesis testing, analysis of variance and simple research designs. Prerequisite: upper-division statistics course or consent of MHS graduate coordinator. H 18 705 0 1201

710. Research Methods in Health Professions. (3). Examination of research methodology as related to the health professions included in the course are identification of significant health care research problems, development of relevant hypotheses, review and critical evaluation of literature and identification of methodology pertinent to the hypotheses developed. This methodology addresses the selection of sample, measurement instrument and research design. H 18 710 0 1201

712. Administration of Hospital-Based Education. (3). 2R; 2L. Historical perspective of hospital health education, resources and requirements for providing institution-wide educational services, identification and analysis of educational needs, hospital's role in community health planning and program evaluation. H 18 712 1 1202

714. Quality Assessment and Assurance for Health Care Institutions. (3). Introduction to the organization and activities relevant to quality assurance from both inside and outside the institution—roles and problems. Introduction to quality assurance problem-solving as a structured process. Prerequisite: instructor's consent. H 18 714 0 1201

750. Instructional Design. (1). Designed to help the student gain increased understanding and knowledge about how adults learn. The student has the opportunity to explore new ideas about teaching and learning in relationship to the development of the adult. There are opportunities to apply knowledge, skills and abilities to real life situations through discussions, readings and presentations of reports to other students. Group discussion of assigned topics familiarize the student with the concepts of the adult learner. Prerequisite: graduate standing. H 18 750 2 1201
Fairmount College of Liberal Arts and Sciences

Phillip D. Thomas, PhD, Dean

Fairmount College of Liberal Arts and Sciences offers a variety of programs designed to serve the general objectives of The Wichita State University and to enhance its urban mission. The college seeks to preserve the cumulative learning of the past, interpret the research of the present and enlarge the educational opportunities for the future by offering courses and curricula representing the newest developments in the world of learning.

For some time, the college has recognized four main areas of study: (1) preparation for professional and technical careers, (2) specialization through departmental majors, (3) cross-cultural education and (4) preparation for teaching. In recent years, however, the college faculty has expanded these traditional views to encompass nontraditional forms of education and the use of field majors. Substantial flexibility exists within all these areas for the college serves both those who come directly from high school and those who return after many years away from school.

Degrees Offered

Baccalaureate

The Bachelor of Arts, Bachelor of Science and Bachelor of General Studies degrees are conferred by Fairmount College of Liberal Arts and Sciences. Each degree requires the completion of a minimum of 124 credit hours, the attainment of an overall grade point average of 2.00 including transfer work, a grade point average of 2.00 in the major field of study and a 2.00 WSU grade point average.

Bachelor of Arts degrees are offered in American studies, anthropology, art history, biological sciences, chemistry, computer science, classical languages, economics, English, French, geology, German, gerontology, history, journalism, linguistics, communicative disorders and sciences, mathematics, minority studies, music, philosophy, physics, political science, psychology, religion, social work, sociology, Spanish, speech communication, studio arts and women's studies.

The Bachelor of Science is available in administration of justice, biological sciences, chemistry, computer science, geology, mathematics and physics.

The Bachelor of General Studies is a nonmajor degree which requires breadth in distribution of course work.
and allows for the development of areas of concentration which may be thematically or occupationally related.

Associate
Associate degrees require completion of a minimum of 60 hours for the Associate of Arts and a minimum of 64 hours for the Associate of Science with 15 of these hours in residence. Both degrees require an overall grade point average of 2.00, a grade point of 2.00 in the major field of study and a WSU grade point average of 2.00.

Associate of Arts degrees are conferred in humanities, social sciences, natural sciences and mathematics and gerontology. The Associate of Science is available in administration of justice.

Graduate
Graduate programs are offered through the Graduate School in many liberal arts and sciences areas. The Master of Arts (MA) may be earned in anthropology, communications (interdisciplinary), English, gerontology, history, political science, psychology, sociology and Spanish. The Master of Science (MS) may be obtained in biological sciences, chemistry, 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 Administration of Justice (MAJ) in administration of justice; the Master of Education (MED) in speech; the Master of Arts in Liberal Studies (MALS) in interdisciplinary studies and the Master of Public Administration (MPA) in public administration.

For more information, consult The Wichita State University Graduate School Bulletin.

Policies
Admission
Students may be admitted to Fairmount College of Liberal Arts and Sciences upon successful completion of 24 semester hours with an overall grade point average of 2.00. Students must complete all basic skills courses (English 101 and 102 grades of "C" or better; Speech 111 or 112; and Math 109, 111, 112 or 211) prior to admittance to Fairmount College.

Probation and Dismissal Standards
Students are placed on probation whenever their overall grade point average falls below 2.00. Probation is removed when the overall grade point average reaches the required 2.00 level. Students continue on probation when they earn a 2.00 or better semester average and their overall grade point average remains below 2.00. If students on probation fail to earn at least a 2.00 semester average, and if their overall grade point average remains below 2.00, they will be dismissed. Students on probation will not be academically dismissed unless they have attempted at least 12 hours after being placed on probation. When dismissed, students may reenroll only with the permission of the college’s Committee on Admissions and Exceptions.

Application for Graduation
Every student seeking a degree from the college must apply for graduation and complete a degree card at the end of the semester in which 90 credit hours have been earned. Although graduation may be several semesters away, both application and degree card must be completed at this time. Applications filed in the semester in which graduation is intended may result in a delay in actual graduation by one or more semesters. Applications and degree cards may be obtained from the college office, Room 200, Liberal Arts and Sciences.

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 prior approval. Students may have credit withheld for a course if they do not complete the required field trips.

External Credit Program
The External Credit Program applies only to courses offered by departments and programs within Fairmount College. It allows persons to earn credit for learning that has taken place outside the traditional classroom such as business or industry training programs, extensive experience in community service and volunteer work, operating a business or holding elective office.

In order to receive credit for such learning, applicants must demonstrate knowledge equivalent to that gained in regularly offered University courses to the satisfaction of faculty in the appropriate fields of study. The associate dean in charge of external credit will decide which departments and programs within the college may give credit for nontraditional learning and representatives in those areas will determine the kind of documentation needed as evidence of this learning.

Students in the External Credit Program must be admitted to The Wichita State University and are required to pay a nonrefundable assessment fee which covers faculty assessment time. University and college equivalency examination fees will apply to all credit awarded. Applicants will be advised of these fees upon entering the program.

Cooperative Education
The Fairmount College of Liberal Arts and Sciences participates in the Cooperative Education program which finds paid internships for undergraduates and graduates who wish to combine their classroom studies with academically related employment.

Further information is available in the Cooperative Education office, 109 Morrison Hall, or the academic information section of the Catalog.

Requirements for Graduation
Bachelor of Arts and Bachelor of Science
The following college requirements must be met in order for students to receive the Bachelor of Arts (BA) or the Bachelor of Science (BS) degrees from the college. Courses taken to fulfill these requirements also satisfy the University’s general education distribution requirements. The requirements for the BA and BS fulfill all University graduation requirements except the following:

1. Communications—six hours of composition and three hours of oral communication (a grade of “C” or better must be earned in both Eng. 101 and 102).
2. General Education—30 hours of “C” and “G” courses including a minimum of nine “G” hours. These courses may be used to satisfy University and college distribution requirements.
3. Upper Division—at least 40 semester hours of credit in courses numbered 300 or above.
4. Required—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.
5. D Grades—no students are allowed credit toward graduation for D grade work in excess of one-quarter of the total hours.

I. Humanities. Candidates for the BA degree must take 12 to 15 hours of courses in at least three of the following subdivisions. Three to six hours from the major may apply in this distribution toward the BA. Candidates for the BS
degree must take nine hours in at least three of the following subdivisions. Nine hours must be "G" or "Q" courses in either degree.†

1. American Studies
2. Literature (see Item II), English Language and Literature
3. Foreign Language Literature
4. History
5. Humanities
7. Philosophy
8. Religion
9. Speech Communication
10. Women's Studies
11. Art History (any course) and Music—Mus.-Comp. 113Q, 114, 160G, 161, 162

II. Literature. Students must complete at least three hours of literature. Foreign language literature courses taken after completion of the foreign language requirement (if any) may be used to meet the literature requirement and to count for humanities hours.

III. History—Political Science. Students must demonstrate proficiency in the field of the American political system and institutions either by passing Hist. 131Q or 132Q or Pol. Sci. 121Q or by passing an examination offered each semester by the history and political science departments.

IV. Social and Behavioral Sciences. Candidates for the BA degree must take 12 to 15 hours of courses in at least three of the following subdivisions. Six hours from the major may be included.† Candidates for the BS degree must take nine hours in at least two of the following subdivisions. Only three hours from the major department may apply.‡ In either degree, six hours must be in "G" or "Q" courses.

1. Administration of Justice
2. Anthropology
3. Economics—Econ. 200Q, 201Q, 202 and all upper-division courses
4. Geography—all courses except Geog. 201 and 235
5. Gerontology
6. Journalism
7. Minority Studies
8. Political Science
9. Psychology
10. Sociology/Social Work

† A total of 27 hours must be taken in the humanities and social sciences by candidates for the BA degree.
‡ A total of 18 hours must be taken in the humanities and social sciences by candidates for the BS degree.

V. Natural Sciences. Each student must take 12 semester hours (three courses), including four hours in a laboratory science. Each student must take at least one course in each of the physical and biological sciences divisions listed below or students who have taken two units of high school laboratory science (exclusive of general science) must take at least nine hours, including four hours in a laboratory science and one course in one of the physical and biological sciences divisions as listed below. Six hours in mathematics or natural sciences must be in "G" or "Q" courses.

1. Physical Sciences. Chem. 101G, 3 hours; 103Q, 5 hours; 111Q, 5 hours; 112Q, 5 hours; 123Q, 5 hours; 124Q, 5 hours; and all other courses except Chem. 201. Geog. 201, 203, and 235, 3 hours. (No other geography courses count toward the physical science division.) Geol. 101Q, 3 hours; 111Q, 4 hours; 300Q, 3 hours; 302Q, 3 hours; 312, 3 hours. Phys. 111Q, 4 hours; 195Q, 3 hours, or with 196, 4 hours; 213Q, 5 hours; 214Q, 4 hours; 313Q, 4 hours, 314Q, 4 hours; 315Q, 1 hour; 316Q, 1 hour.

2. Biological Sciences. 105G, 4 hours; 120Q, 4 hours; 203Q, 5 hours; 204, 5 hours; 370Q, 3 hours; 509Q, 4 hours; 518Q, 3 hours.

VI. Mathematics. Students must demonstrate proficiency by passing Math. 109, 111, 112 or 211, or by passing an examination of equivalent mathematical skills. Six hours in mathematics or natural sciences must be in "G" or "Q" courses.

VII. Foreign Languages. Candidates for the BA degree and for the BS degree in administration of justice must demonstrate proficiency at a level equivalent to five hours beyond the 112 course in one foreign language or equivalent to the completion of the 112 course in two foreign languages. This proficiency may be demonstrated in either of the following ways:

1. Students may successfully complete 111 and 112, plus five additional hours in one foreign language, or 111 and 112 in two foreign languages.
2. Other foreign language experience, or high school foreign language study at the rate of one high school unit for each college semester, may apply toward the required proficiency.

A student who has credit in two years of a high school foreign language may enroll in 111 and 112 for credit without departmental consent.

A student who has credit in three or more years of high school foreign language may take 111 and 112 for credit only if departmental consent has been received in writing. Otherwise, a student who has credit in three or more years of a high school foreign language may enroll in any 200-level course for credit without departmental consent.

Candidates for the BS within the division of natural sciences and mathematics have no foreign language requirement unless it is required by the department. In that case, the foreign language required does not count in the humanities section of the general education distribution requirements.

† A total of 27 hours must be taken in the humanities and social sciences by candidates for the BA degree.
‡ A total of 18 hours must be taken in the humanities and social sciences by candidates for the BS degree.

* The division of natural sciences and mathematics includes the departments of biological sciences, chemistry, geology, mathematics, physics and computer science.

VIII. Major. All specific department major courses and requirements are listed in the Catalog by departments. While the department controls its own requirements for the major, the following expectations apply to all department majors:

1. A 2.00 grade point average is required in the major.
2. No more than six hours from the major can be used to satisfy college distribution requirements.
3. General Studies courses may not be used as hours in the major unless approved by the department.
4. At least 12 upper-division hours are required in the major.
5. No more than 45 hours in the major can be used for graduation with a BA degree and no more than 50 hours in the major can 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.
7. Combined majors, consisting of 24 hours from one field of study and 12 hours from an allied field of study, may be designed under the advisement of the major departments and Fairmount College of Liberal Arts and Sciences.

IX. Field Major. Field majors in biochemistry, chemistry/business, classical studies, gerontology, international studies, Latin American studies, urban affairs and women's studies are available. Other field majors may be designed by students who wish to select three or more correlated areas of study and develop an acceptable plan of course work. Field majors must adhere to the following rules:

1. At least 18 hours must be taken in one department and nine hours in each of two allied departments (36
hours total) with at least 12 of these hours upper division.

2. A plan must be approved by an advisor in the major areas in Fairmount College of Liberal Arts and Sciences.

X. Minors. Minors are offered in geography, Italian and all fields of study in which a major may be earned. Minors acceptable from outside the college are education (those courses necessary for certification), accounting and business administration. The number of hours required for a minor is set by each department.

XI. Nonliberal Arts and Sciences Courses. Students may count only 24 hours of nonliberal arts and sciences courses toward either the Bachelor of Arts or Bachelor of Science degree. (This includes courses taught outside of departments in the liberal arts and sciences.) Any nonliberal arts and sciences courses required by a major within the college will apply to LAS hours required for the degree.

Bachelor of General Studies

The Bachelor of General Studies degree allows students who wish to design their own programs of study greater freedom by reducing some of the requirements of the other bachelor's degrees for the purpose of allowing the student to develop areas of concentration which may cross departmental, or even college, lines. The Bachelor of General Studies degree allows the student to become a generalist and sometimes allows preprofessional or nontraditional career students greater flexibility in planning for their unique future.

The requirements of the degree include the following:

1. Communications—six hours of composition and three hours of oral communication (a grade of "C" or better must be earned in both Eng. 101 and 102).
2. General Education—30 hours of "G" and "Q" courses including a minimum of 9 "G" hours. These courses may be used to satisfy University and college distribution requirements.
3. Upper Division—at least 40 semester hours of credit in courses numbered 300 or above.
4. 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.
5. D Grades—no students are allowed credit toward graduation for D grade work in excess of one-quarter of the total hours.

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. The distribution of coursework must occur in the following three divisions:

A. Humanities (minimum of 12 hours within three departments with nine "G" or "Q" hours):
1. American Studies
2. English Language and Literature (no specific requirement)
3. Foreign Languages (no specific requirement)
4. History (no specific requirement)
5. Humanities
6. Linguistics
7. Philosophy
8. Religion
9. Speech Communication
10. Women's Studies

B. Social and Behavioral Sciences (minimum of 12 hours within two departments with six "G" or "Q" hours):
1. Administration of Justice
2. Anthropology
3. Economics (do not count as out-of-college hours)
4. Geography (all courses except 201 and 235)
5. Georontology
6. Journalism
7. Minority Studies
8. Political Science (no specific requirement)
9. Psychology
10. Sociology/Social Work

C. Natural Sciences and Mathematics (minimum of 12 hours in two departments with six "G" or "Q" courses):
1. Biology
2. Chemistry
3. Computer Science
4. Geology
5. Mathematics (Math. 109, 111, 112 or 211 required)
6. Physics

Associate Degrees

Two-year associate degree programs offered by Wichita State are part of the regular academic programs and credits earned in them are transferable to four-year baccalaureate degree programs. Areas of concentration encompass a logical combination of courses to provide initial occupational expertise in selected areas or to help students fulfill personal, social or cultural objectives. Candidates must complete at least 15 hours in one area of concentration.

Associate of Arts in Humanities

The associate degree in humanities requires 60 semester hours including the following requirements:

I. General Education (30 semester hours)
1. English composition—six hours
2. Oral communication—three hours
3. Social sciences—six hours
4. Natural sciences and mathematics—six hours
5. Humanities—six hours
6. Electives—three hours

II. Area of Concentration (15-20 semester hours)
At least 15 to 20 semester hours of course work must be taken from the following general areas with at least three courses from one discipline.

American studies
Art
English
History
Modern languages
Music
Philosophy
Religion
Speech communication
Women's studies

III. General Electives (10-15 semester hours)

Students must select at least ten to 15 hours of elective courses in consultation with their academic adviser to support the overall objectives of their degree program.

Associate of Arts in Social Sciences

The associate degree in social sciences requires 60 semester hours, including the following requirements:

I. General Education (30 semester hours)
1. English composition—six hours
2. Oral communication—three hours
3. Social sciences—six hours
4. Natural sciences and mathematics—six hours
5. Humanities—six hours
6. Electives—three hours

II. Area of Concentration (15-20 semester hours)

At least 15 to 20 semester hours of course work must be taken from the following general areas with at least three courses from one discipline.

Administration of Justice
Anthropology
Broadcasting
Economics
Geography
Journalism
Minority Studies
Political Science
Psychology
Sociology/Social Work
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 adviser and with the dean’s approval. Although such a major cuts across departmental lines and is determined by the field of specific interest, the combination of courses must be acceptable to the college. Normally 36 hours are required for the major with 18 hours in the major department and at least nine in each of the two allied departments. Examples of possible field majors are indicated below.

Biochemistry. Biochemistry is a relatively young but 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.

Chemistry. Chemistry is a systematic study of the properties and reactions of matter. Students choosing this field major should seek the advice of the chairperson of the Department of Biological Sciences or the Department of Chemistry as early as possible. Required courses are Biol. 2030, 204, 416 and 584; Chem. 1230, 1240, 531, 532, 662, 663, 664 and 665; Phys. 2130 and 2140; and Math. 112 or 111 and 123. Also required are the following courses which are cross-listed in the department of biological sciences and chemistry: 360, 666 and 669 (two enrollments). Students must meet the BS graduation requirements in the college.

Chemistry/Business. See the chemistry section of the Catalog for complete description.

Classical Studies. Classical studies is an interdisciplinary program designed to give students a sense of continuity and to interpret the values, ideas and ideals of antiquity as shown in its history, art, mythology, literature, political institutions and religions. The major also serves as a sound preparation for areas in which sensitivity to language and ideas is an important tool—classics, linguistics, ancient history, art history, archaeology, comparative literature, law, religion and Near Eastern studies.

The major consists of 36 hours, including six hours selected from Greek or Roman history (Hist. 550, 560, 562, 563, 734) and six hours selected from art history (Art Hist. 221Q, 222, 520). Also required are Phil. 349, 531, 585 or 650 (ancient topic), Eng. 270, 545 or 550, and one of the following: Art Hist. 121G or 322, Greek 350, Hist. 101G or Rel. 442. In addition, Latin 210 or Latin or Greek 224 or one Latin or Greek course beyond 224 (except Greek 350) must be completed. The remainder of the 36 hours 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.

Gerontology. See gerontology section for a complete description.

International Studies. The program for the international field major is flexible and is designed to meet the need for specialists in foreign areas, international government or international economics, government, business and international organizations. Students are prepared for careers in international organizations in the U.S. government and in business firms with international activities.

Two options are available: Option A is in area studies; Option B is a combination of area studies and international business. No minor is required for either option. Students interested in Option A should contact Professor John Dreifort (history); those interested in Option B should contact Professor Dharma de Silva (management) or Professor Dreifort.

Public Administration. See public administration section for a complete description.

Women’s Studies. See women’s studies for a complete description.

Art History

The art history program is designed to prepare students for the whole range of activities related to the art of the past: criticism, college-level and secondary-level teaching and conservation. Requirements and curriculum for a major or minor in art history in Fairmount College of Liberal Arts and Sciences are listed in the College of Fine Arts, Division of Art, section of the Catalog.

Studio Arts

Requirements and curriculum for a major or minor in studio arts in Fairmount College of Liberal Arts and Sciences are listed in the College of Fine Arts, Division of Art, section of the Catalog.

Communicative Disorders and Sciences (Logopedics)

Requirements and curriculum for a major or minor in communicative disorders and
of preparation (the last 30 must be taken at Wichita State) within the required fields of study; earned 188 credit points with no more than 20 hours of D grade work; passed the first year of medical or dental school (for 30 hours), and qualified for admission to the second year. Candidates must apply for the degree.

Biological sciences majors are required to complete 94 hours plus either the organismal biology and ecology or microbiology option listed under the Department of Biological Sciences section of the Catalog.

Dental schools require prescribed preparation in the sciences as well as a broad education. Entrance requirements are generally similar, but students should give careful attention to the pattern in each school of their choice. Emphasis on the sciences is recommended. The counselor for preprofessional studies in Fairmount College of Liberal Arts and Sciences can provide a specific program of course work for either the three-year or four-year program.

The preparation for the study of veterinary medicine generally includes a broad education and an emphasis on science, especially biological sciences. The counselor for preveterinary medicine in Fairmount College of Liberal Arts and Sciences can provide a specific program of course work.

Schedules also may be arranged to meet entrance requirements of the various schools of optometry, osteopathy, pharmacy, podiatry, chiropractic, mortuary science and related professional fields. The office of the premedical professions counselor is in Room 200 of the Liberal Arts and Sciences building.

Preregistration

Students interested in pursuing graduate theological work should consult with the religion department chairperson for specific requirements set forth by specific seminaries.

Teaching

Students in Fairmount College of Liberal Arts and Sciences may qualify for secondary teaching certificates in Kansas and additional states. Those who plan to qualify for the standard secondary teaching certificate must complete the program outlined in the College of Education section of the Catalog.

Administration of Justice

In addition to the campus program, the Department of Administration of Justice offers degree programs at Emporia State University and at Bethany College in Lindsborg.

The Department of Administration of Justice offers three degree programs: (1) Associate of Science, (2) Bachelor of Science and (3) Master of Administration of Justice. These degree programs are designed to provide preservice and inservice students with a broad educational background in all aspects of the administration of justice field. Within the Bachelor of Science and Master of Administration of Justice degree programs, the student may select among several established areas of specialization.

The Associate of Science and Bachelor of Science degree programs are described below. Students interested in the requirements for the Master of Administration of Justice degree should consult the WSU Graduate School Bulletin.

Bachelor of Science—Major and Minor

Major. The major in administration of justice consists of at least 33 hours (but not more than 50 hours) including AJ 100Q, 201, 2200, 403, 512 and 521; 12 hours in one of the following areas of specialization; and a minimum of three with a maximum of 20 additional elective hours in administration of justice (except in the General Administration of Justice track, where a minimum of 15 hours of electives are required).

I. Law Enforcement (12 hours). This area involves a study of the law enforcement role in society and the methods used by law enforcement agencies to achieve criminal justice goals. Course work in this area includes a minimum of 12 semester hours selected from the following courses: AJ 143, 320, 340, 343, 344, 636, 610Q and 422 (or 481).

II. Courts (12 hours). This area concerns the "adversary process" of the criminal justice system. Course work includes a minimum of 12 hours to be selected from the following courses: AJ 320, 520, 533, 606, 610Q, 641 and 422 (or 481).

III. Corrections Services (12 hours). This area involves rehabilitative casework and supervision of convicted offenders in both correctional institutions and the community. Course work in this area to be selected from the following courses: AJ 533, 560, 606, 641, 653, 656, 680 and 422 (or 481).

IV. Criminal Justice Administration (12 hours). This area concerns the management of various criminal justice agencies. Course work in this area to be selected from the following courses: AJ 501, 610, 606, 633, 636, 639, 680Q and 422 (or 481).

V. Investigation (12 hours). This area encompasses scientific and traditional criminal investigation services provided by law enforcement agencies. Course
work in this area to be selected from the following courses: AJ 320, 340, 343, 344, 345, 643, 646 and 422 (or 481).

VI. Security Services (12 hours). This area concerns the management procedures, technological systems and operational research functions of contract, industrial and institutional security agencies. Course work in this area to be selected from the following courses: AJ 340, 343, 370, 570, 572, 670 and 422 (or 481).

VII. General Administration of Justice (15 hours). This area offers an overview of administration of justice and an exposure to a variety of specializations. Students must choose 15 elective hours from any combination of courses listed in the channels above and/or from the following nonclassified courses: AJ 202, 303Q, 382Q, 399, 421, 445 and 600.

Students seeking the Bachelor of Science (BS) degree with a major in the Department of Administration of Justice must complete at least 21 semester hours of upper-division course work in administration of justice. Upper-division course work is defined as junior- and senior-level course work offered by an accredited, four-year college or university and considered by Wichita State and the Department of Administration of Justice to be of upper-division academic quality.

To satisfy the requirements for the BS in administration of justice, students must satisfy the college foreign language requirement.

Students majoring in administration of justice are also directed to select a minimum of 24 hours of supportive course work in one or more of the following areas: sociology, social work, psychology, minority studies, American studies, political science, anthropology, chemistry, biological sciences, geology or physics. With their advisor's assistance and approval, students may select courses from these areas that best relate to their particular administration of justice specialty area. (Note: These courses may be chosen to satisfy certain sections of The Wichita State University general education requirements as well as the administration of justice requirements.)

Certificate of Emphasis in Cross-Cultural Communications for Administration of Justice. The emphasis in cross-cultural communications in administration of justice is designed to provide learning experiences that will prepare practitioners to bring about favorable interaction between criminal justice agencies and the minority groups they serve. This emphasis area attempts to prepare students to develop empathetic responsiveness, combined with humanistic insights and to develop and maintain mutually dependent helping and working relationships between criminal justice and a variety of minority groups.

All students majoring in administration of justice (including all fields of specialization) may opt to obtain the Certificate of Emphasis in Cross-Cultural Communications for Administration of Justice in addition to the administration of justice major. Those students seeking this certificate must satisfactorily complete Min. Stud. 210 and one of the following: Min. Stud. 331, 332, 333 or 334. Also, students must take 12 additional hours in minority studies course work, nine of which must be in upper-division courses.

Minor. The minor consists of at least 18 hours of administration of justice courses, including AJ 100 and four upper-division courses.

Associate of Science
The Associate of Science degree in administration of justice is awarded to students who complete the 64-hour, two-year program. The requirements for the degree are summarized in the table:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Eng. 101</td>
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<td>Eng. 102</td>
<td>3</td>
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<tr>
<td>Speech 111</td>
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<td>AJ 220</td>
<td>3</td>
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<tr>
<td>Electives</td>
<td>22</td>
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Lower-Division Courses
AJ 100Q or departmental consent is prerequisite for all administration of justice courses unless otherwise noted.

100Q. Introduction to the Administration of Justice. (3) An introduction to the philosophy and history of law enforcement, identifying multiple facets of the administration of justice system, including the police, the courts, correctional agencies and the offender. The administration of justice role is studied as it relates to the individual and to society. Through visitation and contact with administration of justice agencies, the student is acquainted with the responsibilities and problems of personal development for an administration of justice career. A 29 1000 02105

143. Police in the Community. (3) Rights and duties of citizens, Constitutional provisions affecting law enforcement officers, emphasizing due process, search and seizure and informant identity are explored. Interview and interrogation techniques and procedures used in all phases of contact between the community structure are examined. A 29 143 02105

201. Agency Administration I. (3) A study of management models, administrative techniques and patterns of organizational structure characteristic of administration of justice agencies. A 29 201 02105

202. Fire Services Administration I. (3) A survey of management models, administrative techniques and patterns of organizational structure characteristic of the fire service agency. A 29 202 02102

220Q. Criminal Law. (3) History, scope and nature of law, parties to crime, classification of offenses, act and intent, capacity to commit crime and defenses. Elements of major criminal statutes and an overview of criminal procedures and rules of evidence are examined. A 29 220Q 02105

Upper-Division Courses
303Q. Contemporary Issues in Criminal Justice. (3) An analysis of criminal justice in a changing society. Topics are explored that are most relevant to contemporary issues and trends in law enforcement, courts and corrections. Prerequisite: none. A 29 303Q 02105

320. Criminal Procedure. (3) Criminal procedure in the administration of justice system, including rights of accused, initiation of prosecution, rules of arrest, search and seizure and the exclusionary rule. A 29 320 02105

340. Investigative Technology. (3) Departmental fee. An analysis of technology and systems utilized in both criminal and traffic investigation using crime scene investigating procedures, various methods of physical identification, investigation of fingerprint and photographe traffic accident and safety investigative systems. Emphasis is placed on field research and evidentiary aspects of investigative technology. A 29 340 02105

343. Special Investigation. (3) Care, collection and preservation of evidence. Sources of information and locating subjects. Crime scene recording and investigative techniques applicable to specific offenses are studied. A 29 343 02105

344. Criminalistics and Scientific Crime Detection. (3) Departmental fee. Scientific aids available to law enforcement officers, including forensic chemistry, physics and microanalysis. Investigative procedures from crime scene through laboratory analysis to court presentation are studied. A 29 344 02105

345. Investigative Photography. (3) Departmental fee. Basic photography theory and practice as applied to criminal investigation and criminalistics. Students take, develop and present laboratory work for evidentiary purposes. Prerequisite: AJ 343 or instructor's consent. A 29 345 02105

370. Analysis of Security Administration. (3) A course of study for interested students and practitioners of security management. The history and philosophy of security, per-
sonnel security measures and security goals of business, security firms, military service, and government bureaus are discussed. Content is divided into two perspectives: (1) those women employed by the criminal justice system and (2) those women sought after and incarcerated by the criminal justice system. Emphasis is placed on those facets unique to women in the history of law enforcement and corrections. A 29 382Q 0 2105

403. Senior Seminar. (3). An intensive study of the theory and operation of the total criminal justice system. Required of all administration of justice majors. Prerequisites: senior standing and departmental consent. A 29 403 0 2105

421. Individual Directed Study. (1-3). Study in a specialized area of the administration of justice system with emphasis on the student's research project. Repeatable for credit but不得超过 a total of six hours. Prerequisites: 15 hours in the administration of justice core and departmental consent. A 29 421 3 2105

422. Internship. (3). Supervised field placement with a governmental or private law enforcement, court, correction, juvenile justice, forensic science or security agency. The internship is designed to provide a learning experience in which the student can integrate and apply knowledge and theory derived from the administration of justice curriculum. Interns are required to work 96 hours for three hours credit; there is a maximum of six hours credit. Prerequisites: 15 hours in administration of justice, junior or senior standing, consent of the criminal justice agency and internship coordinator's consent. A 29 422 3 2105

445. Special Topics. (3-6). Group project and inquiry through student investigation under the direction of an individual of administration of justice topics, including law enforcement, corrections and the judicial process. Repeatable for credit, not to exceed a total of six hours. A 29 445 3 2105

481. Cooperative Education. (1-6). This course 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 the departmental Cooperative Education coordinator. Prerequisites: administration of justice major, 15 hours in administration of justice courses junior or senior standing and consent of the criminal justice agency. Offered Cr/NCr only. A 29 481 3 2105

Courses for Graduate/Undergraduate Credit

501. Agency Administration II. (3). An intensive examination of a variety of emerging organizational and management innovative concepts. The processes related to the determination and implementation of management philosophy for the administration of justice agency and its individual practitioners are explored. Prerequisite: AJ 201 or departmental consent. A 29 501 0 2105

510. ADP in Administration of Justice. (3). A survey of use and potential of automated data processing in police, courts and correctional agencies. The ethical and legal problems confronting society and agencies of the justice system occasioned by the use of computers as information-gathering and storage devices are examined, as well as the ethical and legal problems attendant to the use of ADP in billing and applied research in the administration of justice. A 29 510 1 2105

512. Research Methods. (3). An introduction to statistical methods, including experimental design, the analysis of statistical processes and related procedures. A study is made of the rules of evidence as it pertains to the administration of justice. A 29 512 0 2105

520. Criminal Evidence. (3). Concepts of criminal evidence rules as they pertain to kinds and degrees of evidence—procedure for determining their application. The hearsay rule and its exceptions; and judicial notice, burdens of proof and presumptions. Emphasis is placed on the rules of evidence that govern the administration of justice process. A 29 520 0 2105

521. Law and the Administration of Justice Process. (3). Examination of recent judicial interpretations affecting legal process, rules of evidence, substantive law and administrative law. An in-depth study of statutory provisions is made with emphasis on the conflict of laws and legal trends affecting administration of justice personnel. A 29 521 0 2105

533. Juvenile Justice. (3). An analysis of decision-making processes in juvenile justice, the content of juvenile law and Supreme Court decisions affecting juvenile justice, as well as specific select problems in the administration of juvenile justice. A 29 533 0 2105

560. Community Prevention Programs. (3). An analysis of typologies, philosophies and methods used in the design and practice of community-based crime prevention programs. Emphasis is also placed on a variety of governmental and nongovernmental community support and action programs, which, although not traditionally identified as such, appreciably contribute to the administration of justice process. Program categories to be analyzed include citizen involvement (voluntary and civilian advisory groups) and educational, religious and family welfare and youth services. A 29 560 0 2105

570. Security Staff Supervision. (3). Assessment of quality of human beings in different systems under different headings. Analyses using actual cases and appraisals of the concept of loyalty, security and suitability of personnel in governmental or private agencies. Prerequisite: AJ 370 or departmental consent. A 29 570 0 2105

572. Security Technology. (3). Physical security hazards, threats, sabotage, theft and precautions practiced to protect the governmental and private agencies, as well as actions taken by security officers to counter them. Emphasis is on research in the development of security technology and software. Prerequisite: AJ 370 or instructor's consent. A 29 572 0 2105

591. Criminal Justice Theory. (3). Cross-listed as Anthro 591. This course encompasses the area of criminal investigation involving forensic evidence, blood, fingerprint, dentition and skeletal system. It covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, identification, classification with an emphasis in anthropological interpretation. A 29 600 0 2202

596. Conflict Resolution in the Administration of Justice. (3). An analysis of community and individual reaction to agency policy and services. Emphasis is placed on the agency's role as mediator between offenders and victims of crime and between other groups and individuals in conflict. A 29 606 0 2105

600. Forensic Anthropology. (3). Cross-listed as Anthro 600. This course encompasses the area of criminal investigation involving forensic evidence, blood, fingerprint, dentition and skeletal system. It covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, identification, classification with an emphasis in anthropological interpretation. A 29 600 0 2202

606. Conflict Resolution in the Administration of Justice. (3). An analysis of community and individual reaction to agency policy and services. Emphasis is placed on the agency's role as mediator between offenders and victims of crime and between other groups and individuals in conflict. A 29 606 0 2105

6100. The Victim and the Administration of Justice. (3). An examination of the relationship of criminal victims to the criminal justice system. Consideration is given to the role of the victim in crime occurrences, as well as theoretical developments in the field. A 29 6100 0 2105

633. Planning in the Administration of Justice. (3). Analysis of planning techniques related to the procedures, personnel, physical and specialized equipment, budget and extra-agency activities. Prerequisite: AJ 201 or departmental consent. A 29 633 0 2105

636. Public and Community Relations. (3). Analysis of the role played by a criminal justice agency in both public and community relations programs that are designed to optimize the agency's communication capabilities. Special emphasis is placed on the unique characteristics of both public and community relations. A 29 636 0 2105

639. Techniques of Agency Staff Supervision. (3). Analysis of the personnel supervision, training and evaluation techniques utilized by administration of justice agencies with emphasis on techniques that criminalize the agency-practitioner work relationship. Prerequisite: AJ 201. A 29 639 0 2105

641. Forensic Psychiatry. (3). Analysis of the role of psychiatry in the administration of justice process. Emphasis is placed on introducing the role of the psychiatrist in which they affect and procedures of forensic psychiatry. A 29 641 0 2105

643. Forensic Science. (3). Analysis of the medical role of prevention, detection and treatment as related to the administration of justice. Emphasis is placed on medical specialty areas, such as pathology and psychiatry, which have significant effect on segments of the administration of justice process. A 29 643 1 2105

646. Seminar on Investigation Theory and Practice. (3). Analysis and discussion of investigative theory and practice with special emphasis on technological innovation and current judicial perspective. Prerequisites: AJ 343 and 344. A 29 646 0 2105

653. Field Corrections Techniques. (3). Analysis of the techniques of probation, parole and community-based supervision and related services. Special emphasis is placed on field corrections techniques as they relate to other segments of the administration of justice system. A 29 653 0 2105

656. Institutional Corrections Techniques. (3). Analysis of the techniques of institutional correctional practice, including diagnostic centers, halfway houses and other related treatment models. Special emphasis

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 3L, means four hours of lecture and two hours of lab.
600. Techniques of Prevention Program Development. (3). An analysis of the techniques utilized to organize and develop traditional and projected crime prevention and related governmental and nongovernmental sponsored programs. Special emphasis is placed on the techniques of identifying existing community services resources and subsequently increasing their level of involvement in the administration of justice process. Prerequisite: AJ 560 or departmental consent. A 29 660 0 2105

670. Seminar—Security, Theory and Practice. (3). An advanced seminar that emphasizes the interrelationships between theories underlying contemporary security practice. Special emphasis is placed on the application of managerial theories that support innovation. Prerequisite: AJ 370 or departmental consent. A 29 670 0 2105

6800. Administration of Justice: Transnational and Comparative Perspectives. (3). Primarily designed to acquaint students with structural and functional aspects of law enforcement agencies, court systems, correctional facilities, juvenile treatment and crime prevention strategies employed by different societies throughout the world. The role of the International Treaties on Offenders and Crime Prevention is incorporated. A 29 6800 0 2105

750. Workshops in Administration of Justice. (3). Prerequisite: AJ 1000 or instructor's consent. A 29 750 2 2105

781. Cooperative Education. (1-6). This course provides the student with a paid field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Students will work with a faculty member in the implementation and evaluation of an academic project related to the field experience. The cooperative education experience must be an integral part of the student's graduate program. The student's academic program must be formulated in consultation with and approved by the department Cooperative Education coordinator. Open only to AJ graduate students. Offered C/NC only. A 29 781 9 2105

Courses for Graduate Students Only

800. General Seminar on the Administration of Justice. (3). An overview and integration of major theories, concepts, assumptions, history and methods from the various fields of administration of justice, including law enforcement, the courts, corrections and legislative control. The possible contribution of other community agencies is also explored. A 29 800 0 2105

801. Judicial Process and the Administration of Justice. (3). The review and discussion of local, state and federal criminal statutes and court decisions as they apply to the administration of justice process. A 29 801 0 2105

802. Advanced Field Corrections Methods. (3). An in-depth analysis of the methods of field corrections, including parole, probation and after-care supervision. Particular attention is given to the relationship that field corrections has to the larger administration of justice system. A 29 802 0 2105

803. Advanced Institutional Corrections Methods. (3). A course analyzing basic methods utilized in the organization and accomplishment of objectives in correctional institutions. Administration of corrections institutions, the seminar reviews methods utilized in diagnostic centers, halfway houses and other treatment models. A 29 803 0 2105


805. Seminar on Principles of Evidence and Proof. (3). An in-depth examination of different types of legal proof that are presented at trial courts. Included in the examination are the mediums of witnesses, records, documents, concrete objects, etc. A 29 805 9 2105

806. Seminar on Agency Administration. (3). A comparative survey and analysis of administrative philosophy, problems, procedures, organizations and functions of effective agency organization. Administrative skills related to operations and personnel both within and outside the agencies are considered. A 29 806 0 2105

811. Research Methods for the Administration of Justice. (3). The advanced study of research, hypothesis, and method of research projects, including the design and evaluation of research projects, the study of design in the research project, including hypotheses and scale construction and sampling procedures; and a review of methods and the nature of the research process, analysis and interpretation. Prerequisite: AJ 512 or equivalent. A 29 811 0 2105

812. Seminar on the Application of Criminological Theory. (3). An in-depth analysis of the major theories of criminality and their importance to the administration of justice process. Emphasis is placed on the integration of a consistent, valid and individual frame of reference being developed by the student. A 29 812 9 2105

814. Seminar on Critical Issues in Criminal Justice. (3). Emergent phenomena in the criminal justice system are investigated to demonstrate the pertinence of theory to practice. Examples of issues include role conflicts in law enforcement and correctional personnel and function; the offender as a client for services; and corrections as a setting for research. A 29 814 9 2105

821. Seminar in Criminalistics. (3). Departmental fee. Review and discussion concerning techniques and ethics involved in the application of the physical sciences, including chemistry, biological sciences, mathematics and physical anthropology to the investigation of crime. A 29 821 9 2105

822. Automated Data Processing in the Administration of Justice. (3). An advanced seminar concerning the methods, purposes and problems encountered in the establishment and utilization of automated information and computerized data processing systems. Special attention is given to the impact of computerized information systems upon police-public relationships. A 29 822 9 2105

823. Forensic Science Seminar. (3). The extensive examination of the wide field of issues in which medicine comes into relation with the law. It involves certification of the dead, the study of violent and unnatural deaths, scientific criminal investigation, drug detection, the duty of the medical examiner, procedures in courts of law and considerations of medical ethics or proper standards. A 29 823 9 2105

824. Seminar on Administration of Justice Education and Training. (3). Analysis of the specialized methods and techniques and technological innovations utilized in the administration of justice educational and training process. A 29 824 9 2105

827. Seminar on Environmental Protection. (3). An in-depth analysis of emerging federal, state and local legislation, judicial decisions, and administrative policy as related to environmental protection. The roles of the administration of justice agency in a variety of governmental and nongovernmental protective agencies are explored as related to prevention, investigation and enforcement processes of environmental protection. Special emphasis is placed upon the contribution of the administration of justice agency in a variety of governmental and nongovernmental protective agencies are explored as related to prevention, investigation and enforcement processes of environmental protection. A 29 827 9 2105

832. Seminar on Agency-Community Relations. (3). An in-depth analysis of the role of agency administrators in community relations and related public officials in existing community programs. Special emphasis is placed upon a multiplicity of approaches for developing new and redefining existing lines of communication between the agency and its community. A 29 832 9 2105

833. Seminar on Youth and the Administration of Justice. (3). An analysis of the criminal justice process as related to the youthful offender. Emphasis is placed upon corrections personnel, community coordination, delinquency prevention and control, police-school relations and ethical administrative and operational aspects of the administration of justice agency's effort as in the juvenile court. A 29 833 9 2105

851. Individual Directed Study in the Administration of Justice. (3-6). Individually directed advanced reading and/or research in special areas of interest in the field of administration of justice. Prerequisite: departmental consent. A 29 851 3 2105

852. Practicum. (3-6). Prerequisite: consent of departmental graduate committee. A 29 852 3 2105

853. Internship. (3-6). Prerequisite: consent of departmental graduate committee. A 29 853 3 2105

854. Thesis. (3-6). Prerequisite: consent of departmental graduate committee. A 29 854 3 2105

American Studies

American studies is an interdisciplinary approach to American culture which seeks to see the national experience as a whole rather than from a single perspective. The program involves students in an examination of American culture and society—its character and values, its intellect and behavior. It studies its institutions, geographical and physical
regions, myths and stereotypes, everyday life, literature, films, music, art, mass media and material culture. A collaboration of scholars working in different academic disciplines, American studies is not so much a subject as an outlook—a broad, open-minded perspective upon the nation's past, present and future. The American experience can be best understood when students pursue the American character across academic disciplines and gather insights from each of them. The result will be an awareness of the multiplicity of forces that molds American culture. "Americans" deal with the complex and often contradictory patterns of civilization and are thus prepared for a variety of careers in the arts, business, education and government, as well as for graduate school education.

The student should plan an individualized program of study with a departmental adviser after completing nine hours of course work in American studies. A senior paper in AS 699 is required. While suggested for all students, AS 210G does not count toward the major. American studies students are encouraged to fulfill University general studies requirements from courses which include the following: Econ. 101G, Eng. 232G, HAE 231G, Hist. 330G and Mus. 493G.

Major: The American studies major consists of 36 hours distributed as follows:

I. 24 hours of American studies courses from these areas—AS 100 (3 hours); 3 hours from AS 110, 1600, 210, 213 or 275G; 3 hours from AS 315, 350, 400 or 450; 3 hours from AS 499A, 499B, 499C or 499D; 3 hours from AS 512, 511, 522 or 540; and 9 hours from AS 601, 602, 605 or 699.

II. 6 hours in American studies courses from any elective.

III. 6 hours from at least 2 of the following 3 groups—


**Others:** Art. Hist. 524, 526; Econ. 201; Educ. 234; Geog. 520; Music. 162; Phys. Ed. 112, 302.

Minor: A minor in Fairmount College of Liberal Arts and Sciences consists of 15 hours, including Amer. Stud. 100 plus at least six upper-division hours.

**Lower-Division Courses**

100. Introduction to American Studies. (3) The course examines the development of American studies as a discipline, focusing on the major American studies research areas. It introduces students to the humanities, social sciences and linguistics. From their perspective as participants in American culture, students are invited to apply the techniques of interdisciplinary research to their own experience. Research projects, field studies, and seminars are used to explore common problems and to present alternative approaches to the study of American society. Offered CR/NC only. A 11 100 0313

105. U.S. History Before Columbus. (3) A course designed to provide specialized instruction using a variable format in an American studies major relevant subject. A 11 150 02 0313

150. Workshop in American Studies. (1-3) A course designed to provide specialized instruction using a variable format in an American studies major relevant subject. A 11 150 02 0313

160G. Introduction to Entrepreneurship. (3) An introductory course that is designed not only to familiarize the student with the world of small business but also to analyze the personal strengths and weaknesses as they relate to launching an entrepreneurial career. Considerable attention will be given to the elementary concepts of planning, financing, starting and managing a small business. A 11 1600 03 0313

201G. The American Hero. (3) Defines historical, cultural and environmental conditions that fostered the rise of many genres of American folklore. Representative heroes from colonial times to the present are examined to see how they symbolize the American character. A 11 201G 03 0313

210G. Crime in America. (3) A study of crime in America from colonial times to the present. Topics explored are the evolution of crime, crime as depicted in literature, crime as depicted in popular entertainment and popular attitudes toward crime and criminals. A 11 210G 03 0313

213. American Popular Culture. (3) Cross-listed as Hist. 213. A 11 213 01 0313

275G. Studies in Popular Literature. (3) Cross-listed as Eng. 275G. A course devoted to study of various forms of popular literature (e.g. revolutionary literature, science fiction, western fiction, detective novel) with an emphasis both on the literary merits of this work and the way it reflects popular tastes and values. Repeatable for credit with change of content. A 11 275G 03 0313

281. Cooperative Education in American Studies. (1-3) The course will permit American studies students to participate in the Cooperative Education program. Offered CR/NC only. A 11 281 03 0313

**Upper-Division Courses**

315. Special Topics in American Studies. (1-3) An analysis of special topics in American studies. Repeatable for credit. A 11 315 03 0313


350G. American Sports Culture. (3) American sports reflect and influence our values, cultural institutions and society. The relationship between media and sports, the "business" of intercollegiate athletics, the evolution of minority group's and women's participation in sports and other topical concerns will enable students to understand the meaning that sports has in our American culture. A 11 350G 03 0313

400. Success in America. (3) The examination of success in America as it has evolved through three centuries of redefinition and change. How success has changed and the factors that are involved will be examined in variety of literary, biographical, historical and cinematic sources. A 11 400 03 0313

450. The 1950s in America. (3) A basic objective of this course is to stress the understanding of the diverse developments affecting the experience of Americans in the period 1945-1960. This period, referred to as the "Cold War era," was a time of significant developments in various areas, including science, technology, and popular culture. The course examines major cultural currents of the time. A 11 450 03 0313

481. Cooperative Education in American Studies. (1-3) The course will permit American studies students to participate in the Cooperative Education program. Offered CR/NC only. A 11 481 03 0313

499A. American Film Culture. (3) Using films as sources and resources of attitudes, values and beliefs, the course studies a variety of these "visual texts" in chronological order to examine such topics as attitudes toward blacks and women, romantic and商业 forms, American society, women's liberation, American popular culture, and the American culture students are invited to reflect upon the differences between the past and present. A 11 499A 03 0313

499B. Women in American Film. (3) The changing role of women in 20th century America can be understood by the images that have been depicted in American films which both create cultural values and reflect them. Topics include the Victorian prudery, American social mores, the flapper, the inquest, and the rebellion of the 1960s. A 11 499B 03 0313

499C. The Western. (3) The Western novel and Western film serve both as popular forms of entertainment and as distinctive literary and cinematic genres with recognizable elements: plots, formulas, characters, settings and situations. This distinctive American art form reveals a lot about American values, character and beliefs during the last two centuries. A 11 499C 03 0313

499D. Kansas in Film. (3) The visual images of Kansas as portrayed in Hollywood films will be studied in order to understand how a sense of place complete with stereotypes and caricatures can be created by feature-length movies. A 11 499D 03 0313
Courses for Graduate/Undergraduate Credit

512. Twentieth Century Problems in American Studies. (3). An analysis and study of problems in various disciplines that influence American development. A 11 512 0 0313

520. American Studies Through the Media. (1-3). Courses created or coordinated by the Department of American Studies which are offered through various media—radio, television, newspaper, and the like. Areas of American studies emphasis vary from course to course. A 11 520 0 0313

521. The American Great Plains. (3). An examination of the indigenous peoples of the Great Plains, the impact of the mingling of diverse cultures and the evolving of a fourth culture. A 11 522 0 0313

522. The American Southwest. (3). The background of the American Southwest, the impact of the mingling of three different cultures and the evolving of a fourth culture. A 11 522 0 0313

601. Directed Readings in American Studies. (1-3). Prerequisites: six hours of American studies course work or its equivalent and instructor's consent. A 11 601 3 0313

602. Directed Readings in American Studies. (1-3). Prerequisites: six hours of American studies course work or its equivalent and instructor's consent. A 11 602 3 0313

698. Introduction to Research. (3). Bibliography, methodology and the philosophy of research. Repeatable for a total of six hours of credit. Prerequisites: six hours of American studies course work or its equivalent and instructor's consent. A 11 698 9 0313

699. Seminar in American Studies. (3). Seminar in individual conferences organized around a problem or problems presented as a representative figure, theme or period, i.e., the Industrial Revolution, Reconstruction, westward migration or Mark Twain and the Mississippi. Repeatable for a total of six hours of credit. Prerequisites: six hours of American studies course work or its equivalent and instructor's consent. A 11 699 9 0313

750. Workshop in American Studies. (1). A course designed to provide specialized instruction using a variable format in a subject relevant to American studies. Repeatable for credit. A 11 750 2 0313

Anthropology

A major in anthropology consists of at least 30 hours, including Anthro. 101Q, 102Q or 124Q, and 647; an area course, such as Anthro. 307, 312, 506 or 511; and one course in archaeology. Anthro. 306Q, 335, 501, 508Q, 513 or 538. Students who expect to pursue graduate work in anthropology should also take Anthro. 525Q, 650Q, 726Q and 749Q under the consent of the major.

Certain courses in related departments may be counted toward an anthropology major if they meet the particular needs of students and are approved by their advisers. No more than six hours from another department may be counted.

Minor: A minor consists of 15 hours of anthropology (including at least six hours of upper-division work) chosen in consultation with the student's major advisor.

Lower-Division Courses

100G. Anthropology of Modern Life. (3). An introduction to the biological and behavioral development of Homo sapiens. This course provides an introduction to the biological and behavioral development of humans. Students are introduced to the basic concepts of population genetics, evolution, and the social structure of Homo sapiens. A 28 100G 0 2202

101Q. Biological Anthropology and Archaeology. (3). This course provides an introduction to the biological and behavioral development of humans. Students are introduced to the basic concepts of population genetics, evolution, and the social structure of Homo sapiens. A 28 101Q 0 2202

102Q. Cultural Anthropology. (3). An exploration of the significance of human culture and its diverse forms among peoples of the world, past and present. A 28 102Q 0 2202

124Q. General Anthropology. (3). An analysis of the fields of physical anthropology, archaeology, and linguistics and an analysis of the concepts of society and culture with special emphasis on nonindustrial peoples of the world. A 28 124Q 0 2202

126G. Popular Archaeology. (3). Archaeology for everyone—its mysteries, romance, and applications. Repeatable for a total of six hours of credit. Prerequisites: six hours of American studies course work or its equivalent and instructor's consent. A 11 699 9 0313

150. Workshop in Anthropology. (1-3). A course designed to provide specialized instruction using a variable format in an anthropologically relevant subject. Repeatable for credit. A 28 150 2 2202

204. Biological Archaeology and Archaeology Lab. (1). Lab fee. Prerequisite: previous or concurrent enrollment in Anthro. 101. A 28 204 1 2202

281. Cooperative Education in Anthropology. (1-4). This course is designed to provide the student with practical experience that will complement the student's academic program. Consultation with and approval by an appropriate faculty sponsor is necessary. Offered On/Cr/No Cr only. A 28 281 0 2202

Upper-Division Courses


305Q. World Archaeology. (3). The course introduces the basic concepts, methods, techniques and modes of analysis of scientific archaeology. This course is applied to a series of problems of increasing complexity: the emergence of human culture, the development of domestic plants and animals and the evolution of cities and complex societies. A 28 305Q 0 2202

307. Peoples of Africa. (3). A description and analysis of the cultural areas of Africa south of the Sahara Desert from an ethnohistorical and anthropological perspective. A 28 307 0 2202

312. Peoples of Asia. (3). Study of tribal cultures and civilizations of Asia. Terms of major cultural areas, racial varieties and ethnic patterns. A 28 312 0 2202

316. Culture and Personality. (3). The relationship of personal development, cultural and personality. A 28 316 0 2202

323. Primitive Folklore. (3). Survey of the literature of Africa, the Americas and the Pacific. The role of myths, tales, fables and proverbs in reflecting a people's value and world view is explored. A 28 323 0 2202

327. Primitive Religion. (3). Cross-listed as Rel. 327. An examination of various concepts concerning the realm of the supernatural as held by primitive people. This course relates such religious and magical beliefs and the resultant practices to the larger patterns of cultural context. A 28 327 0 2202

328. Medical Anthropology. (3). Medical anthropology studies the health beliefs and behaviors of various human societies, especially those, but not limited to, those outside of the western, scientific tradition. Attitudes toward the role of health, the techniques of healing, the use of curing and other medical practices, and the role of health care and the attitudes of the community toward illness are among the areas covered. A 28 328 0 2202

335. Archaeology of North America. (3). 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. A 28 335 0 2203

361. Law, Politics, and Society. (3). The study of legal and political systems in non-Western societies. Topics covered include the role of the state in historical and contemporary law and politics, the impact of colonialism and problems in state building. A 28 361 0 2202

481. Cooperative Education in Anthropology. (1-4). This course is designed to provide the student with practical experience that will complement the student's academic program. Consultation with and approval by an appropriate faculty sponsor is necessary. Offered On/Cr/No Cr only. A 28 481 0 2202

494. Readings in Anthropology. (2-3). Repeatable up to six hours. Special problems in anthropology. Prerequisite: 12 hours of anthropology. A 28 494 3 2202

Courses for Graduate/Undergraduate Credit

501. Approach to Archaeology. (3). Lab fee. An introduction to the problems of studying past cultures. Special attention is focused on methodology and techniques available to the theoretical rationality in interpreting the structure of extinct cultures. Offered: Anthro. 101Q or 124Q or equivalent. A 28 501 0 2203
deals with the ethnography of communications, lexicostatistics and linguistic determination. Prerequisite: six hours of anthropology. A 28 631. 0 2202

656. Advanced Physical Anthropology. (3). An in-depth coverage of selected topics in physical anthropology, including population dynamics, primatology, growth and development and current research methods. Prerequisite: Anthro 101 or instructor's consent. A 28 656 0 2202

667. English Syntax. (3). Cross-listed as Eng. 567 and Ling. 667. Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisite: Eng. 315 or Ling. 577 or Anthro. 577 or instructor's consent. A 28 667 0 1505

690. Field Methods in Anthropology. (3-6). A maximum of six hours can be counted as anthropology hours toward either degree. A course that 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. A 28 690 2 2202

749. Educational Anthropology. (3). A course dealing with the basic concepts of anthropology and their application to social science units in the elementary and secondary schools. The course explores the nature of subcultures in American society and the problems they face for the classroom teacher. A course for education majors and graduate students. Cannot be used to meet requirements of the General Education Program for anthropology. A 28 749 0 2202

750. Workshop. (1-4). Short-term courses with special focus on anthropological problems. Prerequisite: instructor's consent. A 28 750 2 2202

760. Urban Anthropology. (3). Comparative study of urbanization in non-Western societies (emphasis on sub-Saharan Africa). Prerequisite: six hours of anthropology or urban affairs or instructor's consent. A 28 760 0 2202

Courses for Graduate Students Only

801. Seminar in Archaeology. (3). Comprehensive analysis of archaeological data with emphasis on theoretical problems of interpretation and reconstruction. Repeatable up to six hours. Prerequisite: Anthro. 501 or departmental consent. A 28 801 9 2203

802. Methods in Anthropology. (2-3). Designed to develop abilities in the conception and investigation of anthropological problems and instruction in observation techniques, as well as more specialized methods such as photography, mapping, and tape recording. Repeatable up to six hours. Prerequisite: departmental consent. A 28 802 9 2202

820. Seminar in Physical Anthropology. (3). Analysis of fossil, skeletal and modern biological differences among people. Emphasis is placed on methods and techniques of analysis with a consideration of current interpretive models. Prerequisite: Anthro. 556 or 557 or departmental consent. A 28 820 9 2202

837. Seminar in Cultural Anthropology. (3). Intensive study of advanced theoretical questions in cultural anthropology. Repeatable up to six hours. Prerequisite: five hours of anthropology. A 28 837 9 2202

847. Colloquium in Anthropology. (1-2). S/U grade only. Repeatable for a maximum of three hours. To provide graduate students with seminar-style experience in recent research in all of the subfields of anthropology. Course also 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 two credits. Prerequisite: graduate standing in anthropology. A 28 847 9 3303

848. Recent Developments in Anthropology. (3). A review of the latest discoveries and interpretations in the science of man. Repeatable up to six hours. Prerequisite: five hours of anthropology. A 28 848 9 2202

870. Independent Reading. (2-3). Repeatable up to six hours. Prerequisite: departmental consent. A 28 870 3 2202


Biological Sciences

The Biological Sciences Department offers a broad and flexible curriculum leading to the Bachelor of Arts (BA) or the Bachelor of Sciences (BS) degrees with a major in biological sciences and an emphasis either in microbiology or organismal biology and ecology. The department also participates in a field major which leads to a BS degree in biochemistry.

All students who intend to pursue one of the programs within the Department of Biological Sciences should contact the department as early as feasible in their educational careers as possible for assignment to a faculty academic advisor.

Major. A major in biological sciences leading to the Bachelor of Arts (BA) requires a minimum of 30 semester hours of biological sciences course work.

A major in biological sciences leading to the Bachelor of Sciences (BS) requires a minimum of 40 semester hours of biological sciences course work.

The candidates for the major under either degree must: (1) complete the major core courses, consisting of Biol. 203Q, 204 and 584; (2) select either a microbiology or an organismal biology and ecology emphasis and fulfill the requirements for the chosen emphasis; and (3) maintain an overall grade point average of 2.00 in all biological sciences course work. Students pursuing a BA may take 40 semester hours of biological sciences course work for credit, while those pursuing a BS may take 50 semester hours of biological sciences course work for credit.

Microbiology Emphasis—Students selecting this emphasis must complete the following, in addition to the major core courses: (1) Biol. 330; (2) a minimum of 16 semester hours for the BS or 11 semester hours for the BA selected from among the courses listed under the division of microbiology below; and (3) for the BS (but not for the BA), a minimum of five semester hours selected from among interdivisional courses and/or those listed under the division of organismal biology and ecology. In addition, all students must complete the following chemistry course work or its equivalent: (1) Chem. 111Q and 112Q or 123Q and 124Q, and (2) any two from among Chem. 553 (unless Chem. 1230 and 1240 are taken), 531 and 532.

Organismal Biology and Ecology Emphasis—Students selecting this emphasis must complete the following, in addition to the major core courses: (1) either Biol. 320, or Biol. 505 and 506, or Biol. 534 and 535; (2) either Biol. 502, 520, 524, 527, 528, 532, 540, 544 or 650; (3) Biol. 418 and either Biol. 560, 575, 577 or 578; and (4) for the BS (but not for the BA), a minimum of seven semester hours of elective biological sciences courses selected from those listed under either division and/or from interdivisional courses. In addition, all students must complete the following chemistry course work or its equivalent: (1) either Chem. 111Q and 112Q or Chem. 123Q and 124Q; and (2) Chem. 531.

Students preparing for the secondary teaching profession and majoring in biological sciences should complete the requirements of the organismal biology and ecology emphasis in order to qualify for the state teaching certificate.

Minor. A minor in biological sciences requires a minimum of 20 semester hours. Candidates for the minor must: (1) complete the major's core courses (Biol. 203Q, 204 and 584); (2) complete a minimum of six additional semester hours of elective courses chosen from among the upper-division courses available for major credit; (3) complete at least one lecture/laboratory or lecture/field course among those taken to satisfy the elective course requirement; and (4) maintain an overall grade point average of 2.00 in all biological sciences course work.

Biochemistry Field Major. The department of biological sciences and chemistry participate jointly in this program. Required courses are: Biol. 203Q, 204, 416 and 584; Chem. 111Q, 112Q, 523, 531, 532, 662, 663, 664 and 665; Phys. 213 and 214; and Math. 112 or 111 and 123. Also required are Biol. 666 and 669 (two enrollments) which are cross-listed in the chemistry department and 21
Nonmajor Courses. The Department of Biological Sciences offers courses designed primarily to meet the needs of students in other departments. These are listed below as “Nonmajor Courses.” These courses, or their equivalents at other institutions, cannot be used to satisfy the biological sciences course work requirements for the major.

Nonmajor Courses
(May not be used to satisfy the requirements for the major)

Lower-Division Courses

102G. Biological Science. (5). Man in the living world: an introduction to the basic concepts and biological sciences with an emphasis upon man himself. A 12 102G 0 0401

105G. The Human Organism. (4), 3R; 2L. (Day and evening sections offered fall and spring semesters; day section offered eight-week Summer Session.) A course designed to introduce the non-science major to certain biological principles as they relate to the human organism, to provide biological information and understanding on subjects which are relevant to the student’s own well-being and role as a world citizen and to increase awareness of the human place in the biosphere. The program of instruction is supplemented and reinforced with a laboratory experience which is appropriate for the non-science major and the theme of the course. Credit earned in this course may not be applied toward the requirements for a major or minor in biological sciences and credit is not given for both Biol. 102G and Biol. 105G. Students repeating Biol. 100G (no longer offered) should enroll in this course. A 12 105G 0 0401

120G. Introduction to Microbiology. (4), 3R; 2L. (Day and evening sections offered fall and spring semesters and eight-week Summer Session; evening section offered spring semester) Fundamentals of microbiology with emphasis on basic microorganisms and pathological microorganisms in sanitation and disease. A 12 120G 0 0411

225. Human Anatomy. (3). 2R; 2L. (Day sections offered fall and spring semesters and eight-week Summer Session; evening section offered fall semester.) Elementary human anatomy. A 12 225 0 0412

226. Elementary Human Physiology. (3). 3R. (Day sections offered fall and spring semesters and eight-week Summer Session; evening section offered spring semester) Basic human physiology. Enrollment in Biol. 226 is optional. Prerequisite: Biol. 225. Chem. 101G preferred. A 12 226 0 0410

227. Elementary Human Physiology Laboratory. (1). 3L. (Day sections offered fall and spring semester; evening section offered spring semester.) Laboratory in which some of the principles of human physiology are demonstrated in an experimental setting. Prerequisite or corequisite: Biol. 226. A 12 227 0 0410

Upper-Division Courses

310. The Biology of Human Reproduction and Fetal Development. (4). (Offered on irregular basis as staffing permits.) The major goal of this course is to present biological information from the fields of anatomy, embryology, physiology and endocrinology as it relates to human reproduction. Each topic is presented initially at an introductory level and developed subsequently to include the results of recent findings in each of the fields. Lectures and readings cover such subjects as: (1) the development and maturation of the reproductive tract; (2) reproductive endocrinology; (3) the anatomy and physiology of the male and female reproductive tracts; (4) the biology of fertilization, embryonic development, pregnancy and lactation; and (5) the artificial reproduction and infectious artificial, artificial. Prerequisite: Biol. 102G, 105G, 2030 or 225. A 12 310 0 0410

370G. Ecology and Man. (3). (Day section offered fall semester in even-numbered years and spring semester; evening section offered fall semester in odd-numbered years). The main goal of the course is to provide information which will allow the student to appreciate the complex interaction among the human population, natural resources, use practices and pollution. The course seeks to (1) provide a basis for interpreting and acting upon environmental problems through an understanding of basic ecological concepts; (2) engender a recognition of the difficulties encountered in solving environmental problems; including those that are technically uncomplicated; and (3) educate the student, as a responsible citizen, to the possibilities for meaningful input into the solution to such problems and to the importance of a basic knowledge in science, engineering, political science and economics. Students wishing to repeat Biol. 570 (no longer offered) should enroll in this course. A 12 370G 0 0401

470. Applied Human Physiology. (4). 3R; 3L. (Offered fall semester only). Enrollment restricted to students in the physical therapy program and the registration majors as space permits. Advanced course in human physiology stressing applications of physiological principles. Prerequisite: Biol. 226. A 12 470 0 0410

Courses for Graduate/Undergraduate Credit

509G. Foundations of Human Heredity. (4). (Offered spring semester only). Introduction to the mechanisms and societal significances of developmental, transmittal and population genetics of humans. Attention given to inborn errors of metabolism and development and the roles of genetic counseling and genetic engineering in their management. Course is intended for students majoring in life sciences and does not carry credit toward a biological sciences major or minor. Students earning graduate credit are expected to produce a term paper based on a topic chosen in consultation with the instructor. Prerequisite: junior standing. A 12 509G 0 0417

518Q. Biology of Aging. (3). Cross-listed as Geron. 518. (Offered as staffing permits.) An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence with emphasis on man. Students receiving graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Basic knowledge in biological sciences that satisfies general education requirements. A 12 518Q 0 0410

Interdivisional Courses

Lower-Division Courses

150Q. Biological Workshop. (1-3). A 12 150 0 0401

203Q. Introduction to Organismal Biology. (5). 4R; 3L. (Day sections offered fall and spring semesters; evening section offered fall semester only.) An introduction to the fundamental concepts of biology as they apply to multicellular organisms. Topics include the advantages and problems of a multicellular habit, homeostatic systems involving nervous and hormonal systems, the development of specialized cells by considering cell differentiation phenomena in plant and animal development. The laboratory is designed to demonstrate the principles of cell biology and to develop the student’s skill in the experimental method and the communication of scientific information. Students wishing to repeat Biol. 113 (no longer offered) should enroll in this course. Prerequisites: Biol. 203Q and Chemistry 1030, 111Q or 123Q is recommended. A 12 203G 0 0401

212Q. Introduction to Cellular Biology. (5). 4R; 3L. (Day sections offered fall and spring semester; evening section offered fall semester only.) A continuation of Biol. 203 in which the principles of cellular biology are presented and the cellular and molecular bases of phenomena discussed in Biol. 203 are fully developed. Topics include cellular structure as it relates to function; the concept of cells as organisms; the chemical basis of inheritance; nutrient procurement, use and cycling in the cell; the regulation of cellular activity by protein synthesis, protein activity and membrane systems; the development of specialized cells by considering cellular differentiation phenomena in plant and animal development. The laboratory is designed to demonstrate the principles of cell biology and to develop the student’s skill in the experimental method and the communication of scientific information. Students wishing to repeat Biol. 113 (no longer offered) should enroll in this course. Prerequisites: Biol. 203Q and Chemistry 1030, 111Q or 123Q. A 12 204 0 0401

Upper-Division Course

481. Cooperative Education. (2-4). This course is designed to complement and enhance the student’s academic program by providing an opportunity to apply knowledge gained through coursework to job-related situations. For information contact the coordinator of the Cooperative Education program office. No more than four credit hours earned in Biol. 481 may be applied toward satisfying the credit hour requirements in biological sciences. Prerequisite: applicant and Cooperative Education position approved by the departmental staff committee. Offered Cr/NC only. A 12 481 0 0450
Courses for Graduate/Undergraduate Credit

573. Statistical Applications in Biology. (3). (Offered spring semester only.) A course designed to supplement Stat. 370 by providing experience with practical applications of statistical theory to biological data. The course is based on the analysis of data derived from both the primary literature and independently designed research projects. The design of experiments to answer specific hypotheses is emphasized. Technical literature on statistical techniques is used to illustrate the use of statistical packages. Students earning graduate credit are expected to complete an additional statistical analysis assignment involving the use of the computer facilities. Prerequisites: Stat. 370. A 12 573 2 0419

584. Genetics. (4). The mechanisms of heredity and variation in plants and animals with a critical review of the concept of the gene. Students seeking graduate credit are expected to prepare a term paper based on the technical literature resulting in several written reports or a comprehensive term paper chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 664 0 0422

666. Special Topics in Biochemistry. (3). (Offered spring of even-numbered years.) A course designed primarily for students who choose the biochemistry field major. Emphasis is on a number of current problems in biochemistry and biology are discussed in depth. Reading published research papers in the field is required. Students earning graduate credit are expected to 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. A 12 660 0 0414

669. Research in Biochemistry. (2). A course designed primarily for students who choose the biochemistry field major. Participation in a biochemistry research project under the direction of a faculty member and a written report summarizing the results is required. May be repeated once for credit. Prerequisites: Biol. 416 and Chem. 662 or 663 and Chem. 664 or 665. A 12 669 0 0414

750. Biology Workshop. (1-3). A 12 750 2 0401

780. Molecular Genetics. (3). (Offered on irregular basis as demand warrants. Contact department for information.) Studies of the biochemical nature of genetic material and the mechanisms of genetic regulation and metabolism. Students earning graduate credit are expected to produce a term paper and deliver a class seminar based on the technical literature on a topic chosen in consultation with the instructor. A 12 780 0 0422

798. Biology Seminar. (2). Reviews of current research in biological sciences. Repeatable once for credit. A 12 798 9 0401

Courses for Graduate Students Only

890. Research. (2-5). S/U grade only. Students performing research on their thesis projects should enroll for an appropriate number of hours. An oral presentation of the research results must be presented to the student's thesis committee before a grade is assigned. A 12 890 4 0499

891. Thesis. (2). S/U grade only. Students must be enrolled in this course during the semester in which the thesis is defended. A 12 891 4 0499

Microbiology

Upper-Division Course

330. General Microbiology. (5). 3R; 6L. (Offered fall and spring semesters.) Introduction to the structure, function, systematics, ecology and population dynamics of microorganisms with emphasis on prokaryotes. Students wishing to repeat Biol. 550 (no longer offered) should enroll in this course. Prerequisites: Biol. 204 and Chem. 112Q. A 12 330 0 0411

Courses for Graduate/Undergraduate Credit

531. Food Microbiology. (4). 2R; 4L. (Offered on irregular basis as demand warrants. Contact department for information.) This course examines the role and significance of microorganisms in foods. Included are factors that affect microbial growth; detection of microbes and their products; food spoilage; food preservation by use of chemicals, radiation, high and low temperature, drying and fermentation; food-borne microbial infections and intoxications; and the microbial basis of food sanitation, control and inspection. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 330. A 12 531 1 0411

552. Mycology. (4). 2R; 4L. (Offered spring semester in odd-numbered years.) The structure, development and reproduction of fungi with emphasis on the cytology and physiology of forms of scientific and economic importance. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 552 1 0411

590. Immunobiology. (3). (Offered fall semester only.) The nature of antigens and antibodies and their interactions. Cellular and humoral aspects of immunologic phenomena are included. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 204 and Chem. 531. A 12 590 0 0416

591. Immunobiology Laboratory. (3). (Offered spring semester in odd-numbered years.) Methods of immunization and techniques for quantitative and qualitative determinations of antibody production and antigen-antibody reaction. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 550 and Chem. 531 or instructor's consent. A 12 591 1 0416

654. Pathogenic Microbiology. (4). 2R; 4L. (Offered spring semester only.) An introduction to the important pathogenic microorganisms and their relationships to health and disease in man. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 330. A 12 654 1 0411

658. Microbial Physiology. (3). (Offered fall semester in odd-numbered years.) Physiological and metabolism of microorganisms. All students are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 330 and Chem. 531. A 12 658 0 0411

659. Microbial Physiology Laboratory. (3). (Offered spring semester in odd-numbered years.) An introduction to the basic techniques involved in the study of microbial physiology. Students earning graduate credit are expected to design and perform an additional experiment in consultation with the instructor and present the results in written form using the format of a scientific journal chosen in consultation with the instructor. Prerequisites: Biol. 330 and Chem. 531. A 12 659 1 0411

660. Topics in Microbiology. (2-4). Lab fee. No more than a total of six credit hours earned from among Biol. 610, 640 and 660 may be applied toward major and graduation requirements. Students must complete a direct exam independent of the instructor and obtain departmental approval prior to enrollment. Prerequisite: Biol. 330. A 12 660 4 0401

756. Microbial Genetics. (4). (Offered on irregular basis as demand warrants. Contact department for information.) Contents vary. Problems include theoretical and practical aspects of the relationship between development, metabolism and genetics in microorganisms. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 330 and 584 or departmental consent. A 12 756 0 0422

790. Advanced Immunology. (3). (Offered on irregular basis as demand warrants. Contact department for information.) Contents vary. Problems include the theoretical and practical aspects of the relationship between development, metabolism and genetics in microorganisms. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 590 and instructor's consent. A 12 790 0 0416

Organismal Biology and Ecology

Upper-Division Courses

320. Animal Physiology. (5). 3R; 4L. Lab fee. (Offered fall semester only.) An introduction to the physiological mechanisms that control animal functions. Topics covered include: respiration; circulation; nutrition; digestion, energy metabolism; thermoregulation; osmoregulation and excretion; muscle movement and their control; sensory perception; reproduction; and the integration of function. Examples are taken from throughout the animal kingdom. Prerequisites: Biol. 204 and Chem. 112. A 12 320 1 0410

418. The Biology of Ecosystems. (3). (Offered fall and spring semesters.) Principles underlying the interrelationships of living organisms and their environment from the biosphere to the population level of organization. Prerequisite: Biol. 204. A 12 418 0 0420
Courses for Graduate/Undergraduate Credit

502. Vascular Plants. (4). 2R; 6L. (Offered fall semester in even-numbered years.) An introduction to the structure, reproduction and evolution of the major groups of living and extinct vascular plants. An introduction to flowering plant systematics. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 204. A 12 520 1 0407

505. Plant Physiology. (4). (Offered fall semester in even-numbered years.) An introduction to the principles which govern plant growth and development, including water relations, photosynthesis and respiration as it relates to growth and development and the chemical and environmental regulation of developmental processes. Concurrent enrollment in Bioi. 506 is optional. Students earning graduate credit are expected to 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. A 12 502 1 0402

506. Plant Physiology Laboratory. (2). 4L. (Offered fall semester in even-numbered years.) An introduction to the techniques of experimental plant physiology. An emphasis is placed on experimental design, the use of elementary statistics in the analysis of results, drawing conclusions from experimental results and the written communication of experimental findings. Phenomena considered include photosynthesis, respiration, translocation, mineral nutrition and the control of plant growth and development by environmental and chemical factors. Students earning graduate credit are expected to design and perform an additional experiment in consultation with the instructor and present the results in written form using the format of the journal Plant Physiology. Prerequisite or corequisite: Biol. 505. A 12 506 0 0406

520. Invertebrate Zoology. (4). 3R; 4L. (Offered fall semester in even-numbered years.) A comparative study of the morphology and physiology of invertebrates with emphasis on the basic body types and their major variations. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 520 1 0407

524. Vertebrate Zoology. (4). 2R; 4L. (Offered spring semester in even-numbered years.) Evolution, distribution, systematics, natural history and special characters of vertebrate animals. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. Biol. 527 is also recommended. A 12 524 1 0407

527. Comparative Anatomy. (5). 3R; 4L. (Offered fall semester only.) An intensive study of representative chordates with emphasis on vertebrate anatomy. Students earning graduate credit are expected to 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. A 12 527 1 0412

528. Parasitology. (3). 2R; 4L. (Offered fall semester only.) The parasites of man and other vertebrate hosts. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 528 1 0407

532. Entomology. (5). 3R; 4L. (Offered fall semester in even-numbered years.) An introduction to the morphology, physiology, life cycles, behavior, ecology, and economic significance of insects. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor or develop proficiency in a specific taxon by performing an individual systematic project. Prerequisite: Biol. 204. A 12 532 1 0421

534. Mammalian Physiology. (3). (Offered spring semester of odd numbered years.) An organ systems approach to mammalian-primarily human-physiology. Emphasis is placed upon nervous and endocrine control systems and the coordination of body function. Students earning graduate credit are expected to submit a term paper based upon library research on a topic in mammalian physiology chosen in consultation with the instructor. Prerequisite: Biol. 204 and Chem. 1120. A 12 534 0 0410

535. Mammalian Physiology Laboratory. (3). 4L. (Offered spring semester of odd numbered years.) An empirical approach to mammalian physiology. Students seeking graduate credit are expected to submit an individual laboratory report regarding the results of a laboratory experiment to those found in the current technical literature. Prerequisite: concurrent or prior enrollment in Biol. 534. A 12 535 1 0410

540. Comparative Embryology. (4). 2R; 4L. (Offered spring semester in even-numbered years.) Gametogenesis, fertilization and development processes in animals with emphasis on vertebrates. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. Biol. 527 is also recommended. A 12 540 1 0407

544. Histology. (4). 2R; 4L. (Offered spring semester in odd-numbered years.) The microscopic anatomy of eucaryotic tissue systems with emphasis on mammals. Students earning graduate credit are expected to complete additional assignments chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 544 1 0413

560. Plant Ecology. (4). 2R; 6L. (Offered spring semester in even-numbered years.) Principles and patterns of plant distribution and of adaptation of plants to particular habitats. Emphasis is put on the experimental approach to plant ecology. Field trips are an integral part of the laboratory. Prerequisite: Biol. 204. A 12 560 1 0402

575. Field Ecology. (3). 9L. (Offered fall semester only.) Techniques for analysis of systems consisting of living organisms and their environment. Students earning graduate credit are expected to perform an individual project on comparative community structure and report the results as a technical paper. Prerequisite: instructor's consent. A 12 575 1 0420

578. Limnology. (5). 2R; 6L. (Offered spring semester in even-numbered years.) Introduction to the biological and physical processes that operate in lakes, streams and estuaries. Assigned readings, individual projects and field trips are required. Students earning graduate credit are expected to perform individual projects on the limnological properties of two ponds, comparing their characteristics, or investigate a specific taxon or trophic level in a lake. The results of this investigation are reported as a technical paper. Prerequisite: Biol. 204 and instructor's consent. A 12 578 1 0420

610. Topics in Botany. (2-4). No more than a total of six credit hours earned from among Biol. 610, 640 and 660 may be applied toward major and graduation requirements. Students must complete a Directed Independent Study Abstract form and obtain departmental approval prior to enrollment. Prerequisite: Biol. 204. A 12 610 4 0402

620. Animal Behavior. (3). (Offered spring semester only.) A survey of animal behavior, including human, with major emphasis on the analysis of behavior as a concert of physiological processes. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204 or departmental consent. A 12 620 0 0407

630. Entomology. (3). (Offered fall semester in odd-numbered years.) A systematic study of the biological basis of social behavior. The course focuses on animal societies, their population, structure, casts and communication and the underlying physiology. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204 or departmental consent. A 12 630 0 0407

640. Topics in Entomology. (2-4). No more than a total of six credit hours earned from among Biol. 610, 640 and 660 may be applied toward major and graduation requirements. Students must complete a Directed Independent Study Abstract form and obtain departmental approval prior to enrollment. Prerequisite: Biol. 204. A 12 640 4 0407

671. Evolutionary Ecology. (4). 3R; 2L. (Offered fall semester in even-numbered years.) A synthesis of basic principles in population genetics and quantitative genetics as a framework for the study of topics in evolutionary ecology. Emphasis includes (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) historical strategies in heterogeneity and environmental (7) demographic and genetic covariance. Basic techniques in population ecology are taught on several short field trips throughout the semester. Students earning graduate credit are expected to participate in a weekly seminar in addition to class hours. Prerequisite: Biol. 584. Biol. 418 also is recommended. A 12 671 1 0420

726. Physiological Basis of Behavior. (3). (Offered fall semester only.) An introduction to coordinative mechanisms that stress the essential unity of nervous and endocrine function. Prerequisite: Biol. 730 or instructor's consent. A 12 726 0 0410

The following abbreviations are used in the course descriptions: A stands for lecture and L for laboratory. For example, 4L 2L means four hours of lecture and two hours of lab.
Chemistry

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 in chemistry—preprofessional option, Bachelor of Science in chemistry—chemical physics option, 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. 524, 532, 545, 546, 547 and the necessary prerequisites, including Math. 344 and Phys. 312 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 and 665, for Chem. 524 (then Chem. 523 is required) or by substituting Chem. 662 or 663 for Chem. 546.

Students who meet the requirements of the BA program may be certified by the American Chemical Society if they also take Chem. 524, 546, 614 and 615 and six hours of professional development courses. Students planning to become teachers of chemistry should complete the bachelor of arts program.

Biochemistry Field Major. The departments of biological sciences and chemistry participate jointly in this program. Students selecting this major should seek the advice of one of the departmental chairpersons as early as possible. The required courses are: Biol. 2030, 204, 416 and 584; Chem. 1110, 1120, 523, 531, 532, 662, 663, 664 and 665, Phys. 2130 and 2140 and Math. 112 or 111 and 123. Also required are Chem. 666 and 669 (two enrollments), which are cross-listed in the Department of Biological Sciences, and 21 hours of biochemistry electives.

Chemistry/Business Field Major. The Charles M. Bues program in chemistry/business is designed for students who wish to pursue careers in chemical sales, management, advertising and other related areas. This program requires 30 hours of business courses as follows: Accctg. 210 and 220; Econ. 201Q and 2020; Bus. Law 435, Fin. 340; Mgmt. 360, 405 and 605. In addition, approximately 30 hours of chemistry and mathematics are required: Chem. 1110, 1120, 523, 361 or 662, 531 (or 533 and 534) and Math. 114 or 242Q. Students must also take five to eight hours of chemistry courses numbered 500 or higher (Chem. 603 is highly recommended).

Students selecting this option should contact the chairperson of the Department of Chemistry as early as possible for advice.

Minor. The chemistry minor consists of at least 14 hours of chemistry courses and must include at least four hours from Chem. 523, 531 and 545. A 2.00 GPA is required.

Advising. All students pursuing one of the above degrees should consult closely with the Department of Chemistry in planning their program. It should be noted that Chem. 123 and 124 can be substituted for Chem. 111, 112 and 523 if the appropriate prerequisites can be met. Students should plan to take required physical chemistry courses (Chem. 540, 545 or 546) during their junior year, thereby requiring that physics and calculus prerequisites be taken earlier.

Minimum Requirements in Chemistry Programs

Bachelor of Science

Course
Chem. 1110, 1120
Chem. 531, 532
Chem. 523, 524
Chem. 545, 546
Chem. 547
Chem. 614, 615
Chem. 900-909
Phys. 313, 314, 315, 316
Math. 112, 242Q, 243, 344

Hrs.
10
10
8
6
2
6
4
10
18
8

Professional development

Recommended Course Sequence

Fall Courses

Chem. 1110, General Chemistry
Math. 112, Precalculus Mathematics

Hrs.
5
5

Spring courses

Chem. 1120, General and Inorganic Chemistry
Math. 242Q, Calculus

Hrs.
5
5

Sophomore

Fall courses

Chem. 531, Organic Chemistry
Math. 243, Calculus II
Phys. 313Q, University Physics

Hrs.
5
5
4

Spring courses

Chem. 532, Organic Chemistry II
Math. 344, Calculus III
Phys. 314Q, University Physics II
Phys. 315Q, University Physics Lab I

Hrs.
3
3
4
1

Junior

Fall courses

Chem. 545, Physical Chemistry
Chem. 523, Analytical Chemistry
Phys. 316Q, University Physics Lab II

Hrs.
3
4
1

Spring courses

Chem. 546, Physical Chemistry II
Chem. 524, Instrumental Methods of Chemical Analysis
Biological science

Hrs.
3
4

Senior

Fall courses

Chem. 614, Chemical Bonding
Chemistry course above 600

Hrs.
3
4

Professional development

4
### Spring Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 615, Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 547, Physical Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Professional development</td>
<td>4</td>
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### Bachelor of Arts

**Course**

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<tr>
<td>Chem. 1110, 112Q</td>
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</tr>
<tr>
<td>Chem. 531, 532</td>
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<tr>
<td>Chem. 523, 524, 546</td>
<td>8</td>
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<tr>
<td>Chem. 545, 547</td>
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<tr>
<td>Chem. 110</td>
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<td>Math. 112, 242Q, 243, 344</td>
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### Biochemistry Field Major

**Course**

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<th>Course</th>
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<tr>
<td>Chem. 1110, 112Q</td>
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<tr>
<td>Chem. 523</td>
<td>10</td>
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<tr>
<td>Chem. 531, 532</td>
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<tr>
<td>Chem. 662, 663</td>
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<tr>
<td>Chem. 664, 665</td>
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<tr>
<td>Chem. (Biol.) 360</td>
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<tr>
<td>Chem. (Biol.) 666</td>
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<td>Chem. (Biol.) 669</td>
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<td>Biol. 203Q, 204</td>
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<tr>
<td>Biol. 416</td>
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<td>Biol. 584</td>
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<td>Math. 112 or 111, 123</td>
<td>5-6</td>
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<td>Phys. 213Q, 241Q</td>
<td>10</td>
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<tr>
<td>Biochemistry electives</td>
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### Chemistry/Business Field Major

**Course**

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<th>Course</th>
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<tbody>
<tr>
<td>Chem. 1110, 112Q</td>
<td>10</td>
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<tr>
<td>Chem. 523</td>
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<tr>
<td>Chem. 533-534 or 531</td>
<td>5</td>
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<tr>
<td>Chem. 361 or 662</td>
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<tr>
<td>Chem. 500-800</td>
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<tr>
<td>Math. 144 or 242Q</td>
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<td>Actg. 210 and 220</td>
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<td>Econ. 201Q and 202Q</td>
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<td>Mkt. 300, 405, 608</td>
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<td>Fin. 340</td>
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<td>Mgmt. 360</td>
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<tr>
<td>B. Law 435</td>
<td>3</td>
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<tr>
<td>Math. 114 or 242Q</td>
<td>3</td>
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### Lower-Division Courses

101G. The Science of Chemistry. (3). Teaches students the basic concepts of chemistry that will aid their understanding of the physical world in which they live. There is no attempt to teach basic computational or laboratory skills; instead the emphasis is on such concepts as atomic and molecular theory, energy, structures and theories regarding why reactions occur. A 13 101G 0 1905

1030. General Chemistry. (5). 3R; 4L. Lab fee. A survey of inorganic, organic, nuclear, and biological chemistry. The course is 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. 1110-1120 sequence. Credit is not granted for both Chem. 1030 and 110. Prerequisite: one year of high school algebra or Math. 011. A 13 1030 0 1905

110. Preparatory Chemistry. (3). A general chemistry course for students who have not had adequate preparation in chemistry or physics. The course enables students to develop their problem-solving skills briefly review mathematics relevant to general chemistry and 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 courses: Chem. 101G, 103Q, 110, or 111G. Prerequisites: one and a half units of high school algebra or Math. 011. A 13 110 0 1905

110G. General Chemistry. (5). 3R; 4L. Lab fee. An introduction to the general concepts of chemistry. Chemical stoichiometry, atomic and molecular structure, bonding, gas laws, and periodicity and mass spectrometry are included. The Chem. 1110-112Q course sequence is designed to meet the needs of students who may wish to take more than one course in chemistry. Lower-division courses are included. One of the following courses: Chem. 110G, 1101G, 103G, or 111Q. Prerequisites: one and a half units of high school algebra or Math. 011 and either high school chemistry or physics or a college-level chemistry course. A 13 111Q 0 1905

112G. General and Inorganic Chemistry. (5). 3R; 4L. Lab fee. Continuation of Chem. 111G. Thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative analysis and an introduction to theories of bonding are included. Prerequisite: Chem. 111Q with a grade of C or better. A 13 112G 0 1905

123G. General and Analytical Chemistry. (5). 3R; 4L. Lab fee. An introduction to atomic and molecular structure, chemical arithmetic, gas laws, phase and ionic equilibria and electrochemistry. A laboratory introduction to quantitative analysis and the drawing of conclusions from data is the material ordinarily presented in Chem. 523 and the use of a small digital computer in chemical computations. Students who successfully complete the Chem. 123G-124Q sequence are not required to take Chem. 523. Prerequisites: one and a half units of high school algebra and one unit of high school chemistry. A 13 123G 0 1905

124Q. General and Analytical Chemistry. (5). 3R; 6L. Lab fee. Atomic and molecular structure, thermodynamics, kinetics and nuclear chemistry. Prerequisite: Chem. 123G with a grade of C or better. A 13 124Q 0 1905

201. Glass Blowing. (1). 2L. Lab fee. A laboratory course utilizing the principles and techniques of glass blowing for the production of scientifically useful equipment. Prerequisite: recommendation of the chemistry department. A 13 201 0 1905

281. Cooperative Education in Chemistry. (1-4). The course permits chemistry students to participate in the Cooperative Education Program. Offered Cr/NCr only. A 13 281 2 1909

302. Microcomputing for Chemists. (1). An introduction to microcomputers and their application to the calculation aspects of chemistry. Topics include the BASIC language, function evaluation, disk operations, graphics, function plotting, numerical methods for calculation, spreadsheet and database manipulation and use of small computers and languages. Prerequisites: Chemistry 123Q and a course in computer programming. A 13 302 0 1905

### Courses for Graduate/Undergraduate Credit

501. Acids, Bases and pH. (1). The study of properties characteristic of acids and bases, typical acid-base reactions, indicators, pH, solubility and buffer solutions. The course begins with a study of Lewis acid-base concepts of atoms. molecules and ions. Prerequisite: introductory elementary teacher or departmental consent. A 13 501 0 1905

523. Analytical Chemistry. (4). 2R; 6L. Lab fee. Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization and oxidation-reduction volumetric analysis. Prerequisite: Chem. 1120 with a grade of C or better. A 13 523 0 1909

524. Instrumental Methods of Chemical Analysis. (4). 2R; 6L. Lab fee. Introduction to instrumental methods of chemical analysis and analysis and separation of complex mixtures, both organic and inorganic. In addition, basic computer programming is discussed as it applies to analytical chemistry. Prerequisite: Chem. 523 or 124Q. A 13 524 0 1909

531. Organic Chemistry. (3). 5R; 6L. Lab fee. An introduction to the study of carbon compounds with emphasis upon reaction mechanisms, stereochemistry and spectrographic analysis. Prerequisite: Chem. 112Q or 124Q with a grade of "C" or better. A 13 531 0 1907

532. Organic Chemistry. (3). 5R; 6L. Lab fee. A continuation of Chem. 531 with emphasis upon the structures and reactions of principal functional groups and compounds of biological interest. Prerequisite: Chem. 531. A 13 532 0 1907

533. Elementary Organic Chemistry. (3). Basic organic chemistry with special emphasis on topics of importance to health professions and education majors. Special emphasis is given to carbohydrates, proteins, drugs, pesticides and energy production. Students should also 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. 112Q or equivalent. A 13 533 0 1907

534. Elementary Organic Chemistry Laboratory. (2). Lab fee. A basic laboratory course to provide pertinent experiences in the laboratory for students in the lecture course. Prerequisite: Chem. 533. Prerequisite or corequisite: Chem. 533. A 13 534 0 1907

540. Elementary Physical Chemistry. (5). An introductory treatment of thermodynamics, kinetics, quantum chemistry, spectroscopy and statistical thermodynamics for students not intending to become professional chemists. In contrast to the more formal theoretically oriented, traditional physical chemistry course (545-546), this more practical-oriented course attempts to survey most of the important areas of physical chemistry in a heuristic and applied manner. The concentrated one semester treatment serves students majoring in preprofessional programs; students majoring in geology, engineering, biological sciences and physics;
and field majors in biochemistry and chemistry-business. Prerequisites: Chem. 112Q or equivalent, Math. 242Q or equivalent and one semester of physics. A 13 540 0 1908

545. Physical Chemistry. (3). Thermodynamics and molecular structure. Principles of chemical thermodynamics, heat, and work, first and second and third phases, phase equilibrium, solutions, chemical equilibrium, electrochemistry and surface chemistry are studied. Prerequisites: Chem. 112Q, Math. 344G or its equivalent and one semester of college physics. A 13 545 0 1908

546. Physical Chemistry. (3). Kinetic theory, kinetic, transport phenomena, quantum mechanics, spectroscopy and statistical thermodynamics. Prerequisites: General chemistry and physics and Math. 344. A 13 546 0 1908

547. Physical Chemistry Laboratory. (2). Laboratory fee. Experimental methods of measurement in relation to bio logical activity, drug metabolism, and the study of the principles learned in Chem. 545 thermodynamics. Prerequisites: one year of college physics and Math. 344. A 13 547 0 1908

560. Numerical Methods. (2). 1R; 3L. Applications of numerical methods to problems in chemistry and physics. Roots of equations; curve fitting; integration and smoothing of experimental data; numerical differentiation and integration and computer programming. Prerequisite: departmental consent. A 13 602 1 1905

613. Industrial Chemistry. (3). For students with an interest in industrial and applied processes in current use. The course is designed to bridge the industrial-academic gap. Topics covered include chemicals from petroleum, natural gas and coal, the polymer industry, the pharmaceutical industry, technical report writing, and communication with engineers and nontechnical persons. Cost calculation and inventories are included. Various aspects of industrial and applied energy conservation are discussed. Prerequisite: 18 hours of chemistry including Chem. 531 or equivalent. A 13 605 0 1905

650. Medicinal Chemistry. (3). For students interested in chemistry related to the design, development and mode of action of drugs. The primary purpose of the course is to describe those organic substances that are used as medicinal agents and to explain the mode of action and chemical reactions of drugs in the body. To illustrate the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenesis, etc.; and to bring about a better understanding of drugs. Topics include transport, basic receptor theory, metabolic transformation of drugs, discussion of physical and chemical properties of drugs in solution, drug design, structure-activity relationships and discussion of a select number of organic medicinal agents. Prerequisites: Chem. 532 or 533 or 685 or 686 and Biochemistry (Chem. 561 or 562) and a year of biology are strongly recommended. A 13 606 0 1905

685. Biochemistry Laboratory I. (2). 6L. Lab fee. Experimental methods of inorganic chemistry. Prerequisite: Chem. 614 or concurrent enrollment. A 13 613 1 1906

614. Chemical Bonding. (3). Molecular symmetry, structure, bonding and spectral properties of inorganic compounds. Prerequisite: Chem. 546. A 13 614 0 1905

615. Inorganic Chemistry. (3). Inorganic chemical literature, periodicity and trends of the elements, coordination chemistry, properties of inorganic compounds, organometallic chemistry, inorganic chemistry and mechanisms. Prerequisite: Chem. 546. A 13 615 0 1906

624. Advanced Analytical Chemistry. (3). 2R; 3L. Lab fee. Fundamentals of absorption and emission spectroscopy, light scattering techniques, mass spectrometry, nuclear magnetic resonance, polarography, voltammetry and coulometry. Prerequisite: Chem. 524. A 13 624 1 1909

625. Electronics. (2). 1R; 4L. Lab fee. Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: instructor's consent. A 13 625 1 1909

636. Advanced Organic Chemistry. (3). Topics include stereochemistry, conformational analysis, organic reaction mechanisms including free radical energy transfer, stereochemistry, isotope effects, catalysis, solvent effects, kinetic and thermodynamic control, rearrangements. Prerequisite: Chem. 532. A 13 636 0 1907

641. Advanced Physical Chemistry. (3). Introduction to quantum chemistry, atomic and molecular spectra, statistical thermodynamics and reaction rate theory. Prerequisite: Chem. 546. A 13 641 0 1908

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. Standard experimental and theoretical techniques used in research in chemical physics are discussed. Prerequisite: Chem. 641 or instructor's consent. A 13 642 0 1905

662. Biochemistry of Cell Constituents, Catalysis, Oxidation, Photosynthesis. (3). Study of major constituents of the cell: proteins, carbohydrates, lipids, nucleic acids, enzymes, etc. Enzyme catalysis, biological oxidations, photosynthesis and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Biochemistry field majors should enroll concurrently in Chem. 664. Prerequisites: Chem. 523 and 532 or equivalents. A 13 662 0 0414


664. Biochemistry Laboratory I. (2). 6L. Lab fee. Practical education in biochemical processes and procedures. Experimentation includes techniques related to chromatography, characterization and assay of important metabolites; application of radioisotopes in vivo biochemical pathways, assay techniques of common isotopes; structure, function, purifications and reactions of proteins, DNA's and RNA's, and the use of high pressure liquid chromatography and other separation techniques in chemistry and biology. Recommended for students seeking admission to medical and pharmaceutical professions or interested in graduate work in chemistry and biology. This course should be taken concurrently with Chem. 662. Prerequisites: Chem. 523 and 532 or instructor's consent. A 13 664 1 0414

665. Biochemistry Laboratory II. (2). 6L. Lab fee. Practical education in biochemical techniques and instrumentation. Recommended for students planning to take advanced techniques of biochemical problems in industry and university. The student may pursue his own work, assisted by his instructor, or may work with other students on cooperative research projects. Prerequisite: Chem. 523 and 532 or instructor's consent. A 13 665 9 0414

699. Research in Biochemistry. (2). Students in the field major participate in a biochemical research project under the direction of a faculty member. A written report summarizing the results is required. May be repeated once for credit. Prerequisites: Biol. 416 and Chem. 662 or 663 and 665. A 13 699 4 9414

700. Chemistry Seminar. (1). S/U grade only. Seminars are given by students on either current topics or on their own research. Repeatable for credit. A 13 700 9 1905

701. Chemistry Colloquium. (1). S/U grade only. Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit. A 13 701 9 1905

705. Molecular Symmetry. (1). A study of the chemically relevant groups in group theory. Topics include symmetry elements, character tables, symmetry classification of molecules and representations of groups. A 13 705 0 1905

708. Special Topics in Chemistry. (2-3). A discussion of special topics of interest to faculty and students. Offerings are announced in advance. Repeatable for credit. A 13 708 0 1905

712. Coordination Chemistry. (3). The study of classical, organic-metallic and bio­ organic coordination complexes. Topics include nomenclature, fundamental bonding concepts, principles of synthesis, mecha-
713. Physical Methods in Inorganic Chemistry. (3). An introduction to electronic and vibrational spectroscopy, magnetic susceptibility, EPR, NMR, Mossbauer spectroscopy and X-ray crystallography as applied to inorganic systems. Emphasis is placed upon interpretation of spectroscopic data, including the electronic and molecular structure of compounds. Prerequisite: Chem. 705 or equivalent. A 13 713 0 1906

723. 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 atomic spin resonance spectroscopy, X-ray methods. Lectures and discussions on theory and practice are given. Particular emphasis is placed upon instrumentation and the acquisition of artifact-free data. A 13 723 0 1909

724. Electroanalytical Chemistry. (3). Potentiometry, polarography, voltammetry, chronopotentiometry and coulometry; reversible and irreversible diffusion controlled processes; CE (chemical reaction before electrical function) and CER (chemical function before chemical reaction) and catalytic reaction; and organic polarography and voltammetry. A 13 724 0 1909

725. Digital Computers in Chemical Instrumentation. (3). An introduction to the use of the small digital computer in the laboratory. Lectures deal with digital logic, data acquisition techniques and the on-line digital computer in instrumentation. Laboratory experiments in the design of digital logic circuits, interfacing chemical instruments to the digital computer and programming the small digital computer. A 13 725 1 1905

735. Physical Organic Chemistry. (3). An examination of molecular orbital theory; conservation of orbital symmetry, aromaticity and antiaromaticity;-electrocyclic reactions; cycloadditions and sigmatropic rearrangements; organic reactive intermediates, including carbonium ions, carbocations, free radicals, carbones and nitrenes; and photochemistry. Prerequisite: Chem. 705 or its equivalent. A 13 735 0 1907


741. Quantum Chemistry. (3). Theoretical basis of atomic and molecular structure. Topics include the postulates of quantum mechanics, exact solutions for the particle-in-a-box and the hydrogen atom, variational and perturbation techniques, bond and electron spin, Hartree-Fock and configuration-interaction methods, molecular-orbital and valence-bond wavefunctions and infrared and Raman-Feynman theorems. Prerequisite: Math. 344 or equivalent. Corequisite: Chem. 705 or equivalent. A 13 741 0 1906

742. Chemical Kinetics. (3). A description of reacting systems, including the mathematical and experimental characteristics of simple and complex kinetic systems. The theories of chemical kinetics are discussed, 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. A 13 742 0 1906

745. Chemical Thermodynamics. (3). A presentation of the basic three laws of thermodynamics in a classical framework designed to increase the student's understanding of real physical systems. The molecular viewpoint is given through Boltzmann statistics. The interrelation between classical thermodynamics and statistical mechanics is discussed. A 13 745 0 1908

746. Molecular Spectroscopy. (3). The theoretical basis for spectroscopy and spectroscopic determinations of molecular structure. Topics include polyelectronic atoms and molecules, vibrational and rotational motion 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. A 13 746 0 1908

761. Enzyme Mechanisms. (3). An introduction to the study of enzyme mechanisms. Modern approaches include steady-state, relaxed-state and transition-state kinetic methods. Prerequisite: one semester of undergraduate biochemistry. A 13 761 0 0414

762. Structure and Function of Nucleic Acids. (3). The study of monomers and polynucleotides, including chemical and physical structure, macromolecular organization of RNAs and DNAs, biosynthesis of purines and pyrimidines, replication, gene action, transcription, translation, role, mode of operation and three-dimensional structure of transfer RNAs; protein biosynthesis; modification of biochemical functions of the cell by drugs, cancer and radiation, enzymatic and non-enzymatic; and probes for the study of structure-function relationship of nucleic acids and architecture of viruses. Prerequisite: one semester of undergraduate biochemistry. A 13 762 0 0414

763. Structure-Function Analysis of Biomolecules. (3). An examination of the physical, chemical and biological tools used for studying biomolecules. Topics include application of radiotracer, autoradiography, primary, secondary and tertiary structural analyses; equilibrium dialysis and reaction kinetics; high performance liquid chromatography, gel electrophoresis, and spectroscopy; immunological binding and binding methods. Prerequisites: one semester of undergraduate biochemistry and Chem. 546. A 13 763 0 0414

Courses for Graduate Students Only

890. Research in Chemistry. (2-12). S/U grade only. Research for the student planning to receive a MS. Research is directed by a faculty member. Repeatable for credit. A 13 890 4 1906

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. A 13 990 4 1906

Communications

Students interested in communications should see the speech, minority studies, linguistics and journalism listings in this Catalog. The Master of Arts in communications (MA) is offered as an interdisciplinary program. Information on the MA can be found in The Wichita State University Graduate School Bulletin.

Courses for Graduate Students Only

801. Introduction to Communications Research. (2). An introductory approach to an understanding of the nature and scope of communications research as it applies to communication theory, mass communication, cross-cultural communication and the arts. An overview of the current status of research in these areas is provided. Students are introduced in the basic steps of research: availability of library and other resources; bibliographic search; computer accessing of source materials; organization, style and format of a research report and citation of sources in footnotes and bibliographies in accordance with standard style guides. This course should be taken at the beginning of the graduate program. A 13 801 0 0601

802. Historical and Qualitative Methodologies in Communication Research. (2). An introduction to historical, critical and observational methodologies in research. The course emphasizes historical, critical and observational research with particular emphasis on those forms of research common to communication studies. Prerequisites: Comm. 801. A 32 802 0 0601

803. Empirical Research Methodology in Communication Research. (2). An introduction to empirical research methods in communication. The course emphasizes both experimental and nonexperimental research with particular emphasis on those forms of research common to communication studies. Students study research design, methods and reporting methods. Prerequisites: Comm. 801. A 32 803 0 0601

870. Directed Research. (2-3). Directed research culminating in a written research paper on a specific investigation, project or production. Supervised by a committee of three graduate faculty members with the committee chair acting as "instructor of record" and awarding the grade. Required of all Master of Arts in Communications (MAC) degree students who select the thesis option. Study should be in the student's area of emphasis. Course should be taken after completion of 24 hours of graduate work approved in the plan of study. Not renewable for credit. On approval of the student and chair. Comm. 875-876. Prerequisites: Comm. 801 and Comm. 802 or 803. A 32 870 3 1999

875-876. Thesis. (2-2). A 32 875 4 0601; A 32 876 4 0601

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R,2L means four hours of lecture and two hours of lab.
Computer Science

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 industry or government. The BS degree is especially useful for scientific applications or preparation for graduate study in computer science.

Math Requirements: Students earning the BS degree must complete a minimum of 16 hours of college-level mathematics; those earning the BA degree must complete a minimum of nine hours of college-level mathematics. (See details below).

Sequence Electives: Both the BS and BA degrees in computer science require students complete 15 hours of sequence electives. These 15 hours of associated course work give students some knowledge of a field where computers might be used. Areas most frequently chosen are such computer science fields as artificial intelligence, software engineering and systems analysis or related fields such as business, electrical engineering and mathematics. All sequence electives must be approved by the departmental advisor.

Major: Bachelor of Science (BS). This degree requires a minimum of 40 hours of computer science and 16 hours of mathematics, including the following courses:

- Computer Science: 140, 200Q, 212, 216, 300, 405, 420, 485, 501, 510, 540, 560 and an additional computer science language.
- Mathematics: 112 (or equivalent), 242Q, 243, 211, 331O.

Sequence Electives: 15 hours of course work chosen in consultation with the departmental academic advisor. (See above for details.)

Major: Bachelor of Arts (BA). This degree requires a minimum of 34 hours of computer science and nine hours of mathematics, including the following courses:

- Computer Science: 140, 200Q, 212, 216, 300, 405, 420, 485, 501, 510, 540 and an additional computer science language.
- Mathematics: 111 (or equivalent), 211, 331O.

Sequence Electives: 15 hours of course work chosen in consultation with the departmental academic advisor. (See above for details.)

Minor: The minor requires a minimum of 15 hours of computer science course work, including the following courses:

- Computer Science: 140, 200Q, 212, six hours of upper-division computer science course work and an additional course of the student’s choice. Mathematics: Math 111 (or equivalent) and 211. These courses are prerequisites to the required computer science courses.

Model Program for BS in Computer Science

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS140, Introduction to Computer Hardware</td>
<td>3</td>
</tr>
<tr>
<td>Math 112, Calculus I and II</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Hist. 131Q or 132Q, History of the United States, or Pol. Sci. 121Q, American Politics</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>CS 200Q, Introduction to Programming</td>
<td>2</td>
</tr>
<tr>
<td>CS 212, PASCAL Programming</td>
<td>3</td>
</tr>
<tr>
<td>Math 211, Elementary Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Natural science elective</td>
<td>5</td>
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</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
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</thead>
<tbody>
<tr>
<td>CS 300, Fundamental Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CS 216, Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>Math 242Q and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral science elective</td>
<td>3</td>
</tr>
<tr>
<td>CS 405, File Processing Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CS language</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts elective (literature)</td>
<td>3</td>
</tr>
<tr>
<td>Natural science elective</td>
<td>3-5</td>
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</table>

**Junior Year**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CS 340, Computer Organization and Programming</td>
<td>3</td>
</tr>
<tr>
<td>CS 510, Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>Sequence electives for computer science</td>
<td>6</td>
</tr>
<tr>
<td>Math. 331Q, Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Natural science elective</td>
<td>3-5</td>
</tr>
<tr>
<td>CS 501, Numerical Programming Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CS 640, Operating Systems and Architecture I</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts elective</td>
<td>3</td>
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**Senior Year**

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CS 560, Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS 485, Debugging Techniques</td>
<td>2</td>
</tr>
<tr>
<td>Sequence electives for computer science</td>
<td>9</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavior science elective</td>
<td>3</td>
</tr>
<tr>
<td>CS 420, Concepts of Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral science elective</td>
<td>3</td>
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<td>Other elective</td>
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Model Program for BA in Computer Science

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</tbody>
</table>
Lower-Division Courses

105. An Introduction to Computers. (3). 2R; 2L. This is a computer literacy course for students who wish to familiarize themselves with the computer. It covers basic computer concepts in hardware and software and illustrates a wide range of applications in education, government, business, industry and the home. Students gain experience in actually operating a microcomputer through lab exercises and standard software packages. These include word processing, spreadsheet, data base and graphics packages. No credit toward the major or minor in computer science. Credit granted in only one of the following: CS 1100 or CS 105. Prerequisites: Familiarity with typewriter keyboard and minimal typing skills. 

110G. Introduction to Computers and Their Applications. (2). 2R; 2L. An introductory course offered on television for students who wish to familiarize themselves with the computer. It covers basic computer concepts in hardware and software and illustrates a wide range of applications in education, government, business, industry and the home. No credit toward the major in computer science. Credit granted in only one of the following: CS 1100 or CS 105. Prerequisites: Familiarity with typewriter keyboard and minimal typing skills.

140. Introduction to Computer Hardware. (3). 2R; 2L. An introduction to digital computer hardware. Topics include number systems, computer circuits, microprocessors, and programming. The laboratory is used for extension of the concepts introduced in lecture and for drill. Students use elementary laboratory equipment and put together simple electrical circuits typical of the kind found in current computers. Prerequisite: one unit of high school algebra.

150. Workshop. (1-5). Short-term courses with special focus on introducing new computer techniques. Repeatable for credit. Prerequisite: departmental consent.

190. Introduction to Programming for Business. (3). 2R; 2L. The course is a survey of the means and methods of business data processing. It includes the description of computer hardware used in the business environment and an introduction to software and systems development. The course includes a programming assignment using a computer language. No computer science language class can be taken concurrently. Credit granted in only one of these three courses: CS 190, CS 210, or CS 199. Prerequisites: One and a half units of high school algebra (or equivalent); one unit of high school geometry (or equivalent); or departmental consent. A 34 190 1 0703

200G. Introduction to Programming. (2). An introduction to the process of analyzing problems and describing their solutions in procedure-oriented languages. Topics include concepts and uses of computers, functions, algorithms, program documentation, and a survey of a computer programming language. No direct experience with computers is provided in this class. Credit granted in only one of these three courses: CS 190, CS 200G or EE 199. Prerequisites: One and a half units of high school algebra (or equivalent), one unit of high school geometry (or equivalent); or departmental consent. A 34 200G 0 0704

201G. Fortran Language. (3). 2R; 2L. Fundamentals of computer programming in FORTRAN and its application to problems. Prerequisites: CS 190 or 200G and Math 109, 111 or 112; or departmental consent. Credit not granted to students who have already completed EE 199 A 34 201G 0 0704

202. PL/I Language. (3). 2R; 2L. Fundamentals of computer programming in PL/I and its application to problems. Prerequisites: Math 111 or 112 or departmental consent. Prerequisite: CS 190 or 200G and Math 109, 111 or 112; or departmental consent. A 34 202G 0 0704

203. APL Programming. (3). 2R; 2L. Fundamentals of computer programming in APL and its application to problems. Prerequisite: CS 190 or 200G and Math 109, 111 or 112; or departmental consent. A 34 203G 0 0704

205. COBOL Language. (3). 2R; 2L. Fundamentals of computer programming and its application to problems. Prerequisites: CS 190 or 200G or EE 199. A 34 205G 0 0704

206. BASIC Language Programming. (3). 2R; 2L. Fundamentals of computer programming in BASIC and its application to problems. Prerequisites: CS 190 or 200G or EE 199. A 34 206G 0 0704

207. C Language. (3). 2R; 2L. Fundamentals of computer programming in C and its application to problems. Prerequisites: CS 140 and 200G or CS 190 or 200G or EE 199. A 34 207G 0 0704

212. PASCAL Programming. (3). 2R; 2L. Fundamentals of computer programming in PASCAL and its application to problems. Prerequisites: CS 190 or 200G or EE 199. A 34 212G 0 0704

214. LISP Programming. (3). 2R; 2L. Fundamentals of computer programming in LISP and its application to problems. Prerequisites: CS 190 or 200G or EE 199. A 34 214G 0 0704

215A. Ada Language. (3) 2R; 2L. Fundamentals of computer programming in Ada and its application to problems. Prerequisite: CS 212 and 215A, 200G or EE 199. A 34 215A 0 0704

216. Assembly Language Programming. (3). 2R; 2L. Fundamentals of computer programming in 370 BAL and its application to problems. Prerequisites: CS 140 and 200G or CS 190 or 200G or EE 199. A 34 216G 0 0704

220. Operating System Programming. (3). 2R; 2L. A survey of computer operating systems and their application to problems. Prerequisites: CS 190 or 200G and Math 109, 111 or 112, and Math 104 or departmental consent. A 34 220G 0 0704

231. Data Languages. (3). 2R; 2L. Fundamentals of data language programming and its application to problems. Prerequisites: CS 190 or 200G or EE 199. A 34 231G 0 0704

233. Programming Techniques. (3). 2R; 2L. Application of programming concepts and techniques to problems in computer science. Prerequisites: CS 201G and Math 109, 111 or 112, and Math 104 or departmental consent. A 34 233G 0 0704

235. Microcomputer Programming. (3). 2R; 2L. An introduction to microcomputers and their applications in science and engineering. Topics include programming languages, assembly language, numerical methods, graphics, file operations, software and hardware interfacing, device control and data acquisition. Actual use of microcomputers for programming and evaluation is emphasized. Credit not granted toward the major in computer science. Prerequisites: CS 190 or 200G or EE 199. A 34 235G 0 0704

236. Introduction to Computer Graphics. (3). 2R; 2L. An introduction to computer graphics with an emphasis on interactive computer graphics which presents the basic concepts of the field. Topics include geometry of computer graphics, graphics primitives, two-and three-dimensional representation, transformation, data structures, clipping, hidden lines and surfaces, shading, and the use of microcomputers for practical experience. Prerequisite: CS 300. A 34 236G 0 0704

401. Data Structures and Algorithms. (3). 2R; 2L. Introduction to data structures and algorithms. Topics include hashing, sorting, searching, trees, and graph algorithms. Prerequisites: CS 140, CS 200G, or EE 199. A 34 401G 0 0704

402. Concepts of Computer Science. (3). Selected theoretical areas in computer science are introduced. Several independent topics are presented to interest the student in further independent study or graduate work in one of these areas. Probable topics include Turing machines, Kolmogorov complexity, recursive calculi, and computer coding. Prerequisites: CS 140 and 300. A 34 402G 0 0704

481. Cooperative Education in Computer Science. (1-3). The goal of this course is to provide the student with an academic experience 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.
485. Debugging Techniques. (2). A study of the methods of locating errors in computer programs. Topics include code verification, test data selection, compiler options and debugging software. The student applies the material by assisting other students for three hours each week in a debugging practice. Prerequisites: CS 340 and 405 and three courses numbered CS 201 through 216. A 34 485 1 0705

497. Special Topics. (1-3). Special topics of current interest in computer science. Prerequisite: department consent. A 34 497 0 0700

498. Individual Projects. (2-3). Repeatable for a total of six hours of credit. Graded S/U only. Prerequisite: department consent. A 34 498 4 0701

Courses for Graduate/Undergraduate Credit

501. Numerical Programming Techniques. (3). 2R; 2L. A study of the programming techniques necessary to write accurate, efficient, portable, and maintainable software. The emphasis is on the implementation and use of procedures to solve mathematical problems on a computer. Prerequisites: MAT 243 and CS 300. A 34 501 1 0704

510. Programming Languages. (3). Formal definition of programming languages emphasizing syntax and semantics. Also examined are underlying properties of algorithmic languages, including scope of declarations, storage allocation, grouping of statements, binding time of constituents, subroutines and procedures. Prerequisite: CS 300. A 34 510 0 0704

512. Systems Programming. (3). 2R; 2L. A study of system software including assemblers, disassemblers, macroprocessors, link editors, loaders, language translators and debuggers. Practical experience in building system software through programming laboratory exercises. Prerequisite: CS 405 or equivalent, with a "C" or better grade. A 34 512 1 0704

515. Compiler/Interpreter Techniques. (3). 2R; 2L. Review of programming language structures, translation and implementation. Compilations of simple expressions and statements. Overall design and organization of compilers and interpreters, including lexical and syntactic scan, construction of symbol tables, object code generation, diagnostic error messages and optimization techniques. Prerequisite: CS 510. A 34 515 1 0704

527. The History of Computers. (3). Cross-listed as Hist 527. This course is a study of the development of automatic computing machines of their mechanisms of control and programming. Topics discussed include mechanical computers, electronic digital computers and both mechanical and electronic computers and their operational characteristics as they are variously constrained by the conceptual origins of computing. A 34 527 0 0700

540-541. Operating Systems and Architecture I and II. (3-3). Design of computer systems emphasizing software and computer architecture. Batch processing systems and their operating characteristics are reviewed, including addressing techniques, memory management, file design and systems accounting. Concurrent processes are discussed for both hardware and software, including topics such as I/O devices, controllers, interrupts, queuing, resource allocation, addressing, recovery, protection and synchronization in multiprocessing and multiprogramming systems. Advanced architectures and operating system implementations are considered. Prerequisites for 540: CS 300 and 340 and 350 and Math. 540. A 34 540 0 0702; A 34 541 0 0702

556. Data Structures. (3). The formal specification of data structures. Linear lists and arrays, orthogonal lists and multilinked structures, binary trees and graphs and searching and sorting techniques are included. Prerequisite: CS 405. A 34 556 0 0702

565. Data Base Design. (3). Principles of data base design and management for computer information systems. Several logical organization and file design techniques are examined. Problems of security and integrity of data are also discussed. Prerequisite: CS 405. A 34 565 0 0702

574. Artificial Intelligence and Philosophy. (3). The basic ideas between artificial intelligence and philosophy: concepts and techniques of artificial intelligence and their application in philosophy. The relevance of Gödel's theorem and of other results in the domain of computability are discussed. Prerequisites: at least one 500-level course in computer science or philosophy. A 34 574 0 0701

580. Introduction to Software Engineering. (3). 2R; 2L. An introduction to the body of knowledge, presently available tools and current theories and conjectures regarding the process of program development. These techniques are applied to different viewpoints, ranging from the individual program statement to a large programming project. Prerequisites: CS 340 and 405 and three CS courses numbered 201 through 216. A 34 580 1 0704

611. ADA and Software Engineering. (3). 2R; 2L. An in-depth study of the programming language ADA with an emphasis on understanding the software engineering principles on which it is based. Focus is on new novel features the language has offer such as packages, generics, separate compilation and multitasking structures. Laboratory sessions provide hands-on programming experience to reinforce textbook knowledge of the language. Prerequisite: CS 510. A 34 611 1 0704

641. Small Systems Architecture. (3). A course on minicomputers and microcomputers and on how small computers are used to support and enhance general concepts of computer architecture, particularly the differences between large computers and small computers and the special features of small computer systems. Vertical microprogramming, use of display terminals, cassette, tapes, disks, networked small computers; and trends in small computer use and design. Prerequisite: CS 340 OR EE 594. A 34 641 0 0702

644. On-Line Computer Systems. (3). Characteristics of dedicated, business-oriented computer systems, as contrasted with general purpose, multiprogrammed systems. Study focuses on hardware requirements, design methodologies for application programs and data bases and characteristics of typical operating systems. Prerequisites: CS 340 and 405 and Math. 3310 or equivalent. A 34 644 0 0702

671. Artificial Intelligence. (3). Heuristic versus algorithmic methods, principles of heuristic approach and cognitive processes. Also covered are objectives and methods of artificial intelligence research and simulation of cognitive behavior. A survey of appropriate examples from various areas of artificial intelligence research is included. Prerequisite: CS 300. A 34 671 0 0704

673. Pattern Recognition. (3). An introduction to pattern recognition and image processing, including clustering algorithms, cluster validity, feature extraction, classifier design, expert systems design, image estimation, discriminant functions, syntactic pattern recognition, image enhancement, image registration, FFT, texture and application in various fields. Prerequisites: CS 252 and 300 and Math. 311 or 511, 243 and 3310 with grades of "C" or better. Math. 370 recommended but not required. A 34 673 0 0701

675. Numerical Methods. (3). A continuation of CS 501 emphasizing the theoretical aspects of the algebraic equations. The course includes the solution of the eigenvalue problem, approximation and numerical solution of partial differential equations. Prerequisites: CS 501 and Math. 511. A 34 675 0 0704

676. Expert Systems. (3). Planning, construction and application of expert systems. Major aspects of expert systems are discussed and illustrated with various examples, including data representation, knowledge base validation and maintenance, expert systems and expert system software, and on-line reference facilities, meta-rules and dealing with uncertainty. Basics of a production system language are introduced. Prerequisite: CS 301 or instructor's consent. A 34 676 0 0799

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 keynote in the education of the well-trained computer applications analyst. Topics include systems design, cost-benefit, data base, distributed processing, project management and documentation. Prerequisite: CS 405 or substantial programming experience with departmental consent. A 34 684 0 0705

697. Selected Topics. (1-3). Selected topics of current interest. Repeatable for credit with departmental consent. A 34 697 0 0701

720. Theoretical Foundations of Computer and Information Sciences. (3). The course provides an advanced level introduction to the theoretical bases of computer science and related concepts in information science. Computer science theory includes the various models of computation, formal languages, finite state machines, nondeterministic and nondeterministic, plus the concepts of decidability, computability and for
an emphasis on network design and telecommunications. Include live treatment of the design of computer networks. (3). A study of the principles of network design. (3). Advanced study of the design of computer networks. (3). Introduction to computer network design, including routing, addressing, and network protocols. Prerequisite: CS 560. A 34 882 0 0707

873. Computer Vision. (3). An introduction to computer vision, a rapidly growing subdivision of artificial intelligence. The basic topic is the understanding of a scene by a computer. Two-dimensional Fourier analysis, scene matching and understanding, texture, motion, shape, and appearance are covered. Prerequisites: CS 563 or instructor's consent. A 34 873 0 0799

874. Simulation and Modeling. (3). An up-to-date treatment of the important aspects of simulation studies, including data generation and testing. Construction of simulation models and the use of software. Methods of measurement, software reliability, and simulation software are covered. Prerequisites: CS 560 or AE 327. Math 344 and Stat. 571 or IE 564. A 34 874 0 0799

882. Software Testing and Reliability. (3). A study of the ingredients of software quality assurance and their interactions. Characteristics of software quality and the development of policies and procedures to improve software reliability models and program testing methods for software development and testing. Methods for proving program correctness and comparison. Prerequisite: CS 560. A 34 882 0 0705

890. Graduate Seminar. (2). A series of seminars on topics of current research interest in computer science. Participation is required to present one or two seminars on topics selected by the approval of their graduate advisors. Repeated up to two times. Graded S/U only. Prerequisite: departmental consent. A 34 890 9 0701

891. Practicum. (3). An advanced project in computer science. Prerequisites: CS 560 and either 562 or graduate standing. A 34 821 0 0700

891. Practicum. (3). A study of advanced topics in computer science, such as divide-and-conquer, complexity of algorithms and dynamic programming, are studied. Applications to set operations, hashing, graph searching, transitive closure, and partitioning are analyzed. Prerequisites: CS 560 and either 562 or graduate standing. A 34 821 0 0700

841. Advanced Computer Architecture. (3). A study of advanced topics in computer architecture, such as parallel processing, stack architectures, computer performance evaluation and reliability of computer systems. Architectures of typical systems belonging to the IBM, CDC, and Burroughs families of computers are studied. Prerequisite: CS 540. A 34 841 0 0702

841. Advanced Computer Architecture. (3). A study of advanced topics in computer architecture, such as parallel processing, stack architectures, computer performance evaluation and reliability of computer systems. Architectures of typical systems belonging to the IBM, CDC, and Burroughs families of computers are studied. Prerequisite: CS 540. A 34 841 0 0702

842. Operating Systems Concepts. (3). A comprehensive treatment of the design of executive software for systems ranging from simple multiprogramming to multiprocessor and network environments. Concepts of concurrent and parallel processes, resource problems of intra- and inter-system communication, synchronization and integrity are addressed. General principles of resource management and related single-process and multiprocess environments are presented. Prerequisite: CS 540. A 34 842 0 0702

843. Distributed Computing Systems. (3). A study of hardware and software features of on-line multiple computer systems with an emphasis on network design and telecommunications. Topics include distributed data bases, interprocess communication and centralization versus distribution. Study of the use of microcomputers in representative configurations is also included. Prerequisites: CS 540 or 641 or EE 694. A 34 843 0 0702

856. Principles of Data Base Design. (3). An advanced treatment of the principles of data base design. The following topics are addressed: logical design, including relational model, physical design, including new technological advances in implementing very large data bases; security and integrity of data; and distributed data base networks. Prerequisites: CS 560. A 34 862 0 0702

Courses for Graduate Students Only


810. Programming Languages: Advanced Concepts. (3). An advanced study of programming languages, structures and design. Data and control structures and their abstraction. Compilers and software design. Formal specifications of syntax and semantics, including models for establishing program correctness configurations. Prerequisites: CS 510 and 720. A 34 810 0 0704

821. Analysis of Algorithms. (3). Introduction to the techniques used in analyzing both special algorithms and classes of algorithms. Popular models, including Knuth's Mix and random access machine. Specific techniques, such as divide-and-conquer algorithms and dynamic programming, are studied. Applications to set operations, hashing, graph searching, transitive closure, and partitioning are analyzed. Prerequisites: CS 560 and either 562 or upper-division. A 34 842 0 0702

854. Computer Science Inductives. (3). An introduction to the study of computer science concepts. Prerequisites: CS 510 and 551. A 34 854 0 0702

898. Special Topics. (2-3). Topics of current interest to advanced students of computer science. Repeatability with departmental consent. Prerequisite: departmental consent. A 34 898 3 0701

Economics

Major. The economics major in Fairmount College of Liberal Arts and Sciences consists of a minimum of 31 hours and a maximum of 41 hours. Econ. 201Q, 202Q, 211, 301, 302 and 340 are required along with Math. 111 and 144. Math. 112 may be accepted in lieu of Math. 111. Students who plan to continue their study of economics in a PhD program should consult an adviser in the Department of Economics and, in most cases, include additional mathematics courses.

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. 100, 101G, 200G and 231. Econ. 210Q and 202Q, or the equivalents, must be included.

Courses. Economics courses are listed in the College of Business Administration section of the Catalog.

English Language and Literature

English Language and Literature

Major. A major consists of 33 hours, three of which may, with departmental consent, be taken in a cognate subject (such as foreign literature, theater, etc.) offered in a course by another department. The course work must be distributed as follows:

I. Basic Requirements (12 hours)
   Eng. 2720*, 310*, 3200*, or 3300; 274 or 315

II. Major Requirements (21 hours with at least 15 upper-division) from Eng.

* Prerequisites for all other English courses unless special permission is granted.

Minor. A minor consists of 15 hours and requires Eng. 310, 3200 or 3300 and at least six hours of upper-division work. Eng. 101 and 102 are not counted toward a minor. A number of minors have been specifically 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 Eng. 101 and 102 and thereafter complete 33 hours of course work in English, including the following courses:

I. Basic Requirements (12 hours)
   Eng. 2720*, 310*, 3200*, or 3300*; 274 or 315
Composition

Noncredit Course

011. Syntax, Logic and Organization. (3). Offered CRNC only. Designed for students who wish to review the basic elements of written English. This course combines lecture, small-group discussion and individual tutoring. For students whose ACT scores are 16 or below on ACT English or when placement test scores do not qualify them for Eng. 101. Credit cannot be applied for graduation. A 14 011 0 1501

Lower-Division Courses

101. College English I. (3). A course emphasizing reading, listening, writing and thinking abilities, as well as library skills. Prerequisite: qualifying score on ACT or placement exam. A 14 101 0 1501

102. College English II. (3). A course emphasizing critical reading, research and argumentation. Eng. 102 should be taken sequentially with Eng. 101 in the freshman year. Prerequisite: Eng. 101, with a grade of "C" or better. A 14 102 0 1501

103. Reading, Thinking and Writing. (3). A third semester of English composition. Writing assignments are based on literature read during the semester. Reading material varies from instructor to instructor, but generally follows a specific theme. Prerequisites: Eng. 101 and 102. A 14 103 0 1501

150. Workshop. (1-4). Repeatable for credit. Material varies according to the needs of students. A 14 150 2 1502

210. Composition: Business, Professional and Technical Writing. (3). Prerequisites: Eng. 101 and 102 or instructor's consent. A 14 210 0 0601

Upper-Division Course

481. Cooperative Education. (1-3). This course is designed to provide 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 CRNC only. A 14 481 0 1507

Courses for Graduate/Undergraduate Credit

510. Peer Tutoring. (2). Explores strategies for using peer and collaborative learning to teach composition. Special emphasis is given to diagnosis and evaluation of writing abilities, conducting individual and group conferences, the writing process, the basic elements of Standard Written English and theories of second language and dialect acquisition. Concurrent enrollment in Eng. 511 recommended. This course or equivalent preparation required of all students intending to serve as tutors in the writing lab. Prerequisite: instructor's consent. A 14 510 0 1507

511. Tutorial Practicum. (1). Required of all students intending to serve as tutors in the writing lab, this course provides supervised tutoring experience. Prerequisite: previous or concurrent enrollment in Eng. 510. A 14 511 0 1507

680. Theory and Practice in Composition. (3). Introduction to theories of rhetoric, research in composition and writing programs and practices in schools and colleges. Students investigate the process of writing, analyze and sample of school writing and develop their own writing skills by writing, revising and evaluating their own and their peers' work. The course is especially designed for prospective and practicing teachers and may not be taken for credit by students with credit in Eng. 780. A 14 680 0 1501

685Q. Advanced Composition. (3). Designed 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. A 14 780 0 1501

Creative Writing

Lower-Division Course

285Q. Introduction to Creative Writing. (3). An introductory course for students interested in the techniques and practice of imaginative writing in its varied forms. This course may be used to fulfill the general education requirement only as an elective (studio and performance). Prerequisites: Eng. 101 and 102. A 14 285 0 1507

Upper-Division Courses

301. Creative Writing: Prose Fiction. (3). May be repeated for up to six hours of credit. Prerequisite: Eng. 285Q with a grade of "B" or better. A 14 301 0 1507

303. Creative Writing: Poetry. (3). May be repeated for up to six hours of credit. Prerequisite: Eng. 285Q with a grade of "B" or better. A 14 303 0 1507

401. Advanced Creative Writing: Prose Fiction. (3). An advanced course for students developing the skilled practice of writing, rewriting, revising and publishing prose fiction. Prerequisites: Eng. 285Q and at least three hours of Eng. 301. A 14 401 0 1507

403. Advanced Creative Writing: Poetry. (3). An advanced course for students developing the skilled practice of writing, rewriting, revising and publishing poetry. Prerequisites: Eng. 285Q and at least three hours of Eng. 303. A 14 403 0 1507

Courses for Graduate/Undergraduate Credit

517-518. Playwriting I and II. (3; 3). Cross-listed as Speech 516 and 517. Not
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 coordinator. A 14 517 0 1507; A 14 518 0 1507

586. Writer's Tutorial: Poetry. (3). Tutorial work in creative writing in poetry with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing coordinator. A 14 585 0 1507

604. Writing Seminar: Fiction. (3). An advanced course designed primarily for the nontraditional student, both graduate and undergraduate, who desires intensive experience in the conceptualization and writing of prose fiction. Not credited toward the MFA degree. Prerequisites: six hours of undergraduate creative writing or instructor consent based on submitted manuscript. Departmental consent required for undergraduate enrollment. A 14 604 9 1507

605. Writing Seminar: Poetry. (3). An advanced course designed primarily for the nontraditional student, both graduate and undergraduate, who desires intensive experience in the conceptualization and writing of poetry. Not credited toward the MFA degree. Prerequisites: six hours of undergraduate creative writing or instructor consent based on submitted manuscript. Departmental consent required for undergraduate enrollment. A 14 605 9 1507

Courses for Graduate Students Only

801. Creative Writing: Fiction. (3). Advanced work in creative writing. Repeatable for credit. Prerequisite: consent of creative writing coordinator. A 14 801 9 1507

805. Creative Writing: Poetry. (3). Advanced work in the writing of poetry. Repeatable for credit. Prerequisite: consent of creative writing coordinator. A 14 805 9 1507

875. Master of Fine Arts Essay. (1-6). A 14 875 4 1507


Linguistics

Upper-Division Course

315. Introduction to English Linguistics. (3). Cross-listed as Ling. 315. Introduction to linguistic principles, including phonological and grammatical concepts. A 14 315 0 1505

Courses for Graduate/Undergraduate Credit

665. History of the English Language. (3). Cross-listed as Ling. 665. Linguistic and cultural investigation of the development of English. Prerequisite: Eng. 315 or Ling. 577 or departmental consent. A 14 665 0 1505

667. English Syntax. (3). Cross-listed as Ling. 667 and Anthro. 667. A study of the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite: Eng. 315 or equivalent or departmental consent. A 14 667 0 1505

672. Studies in Language Variety. (3). Cross-listed as Ling. 672. An introduction to the study of language variety with special attention to regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite: Eng. 1450 or Ling. 577 or departmental consent. A 14 672 0 1505

727. Teaching as a Second Language. (2-3). Cross-listed as Ling. 727 and CDLS 727. Current methods of teaching English to nonnative speakers are discussed. Students learn to analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use. D 12 727 0 1220

740. Graduate Studies in Linguistics. (3). Selected topics in theories of language and methods of linguistic study. With departmental consent the course is repeatable for credit. A 14 740 9 1505

807G. Narrative in Literature and Film. (3). A course devoted to study of various forms of narrative in literature (e.g., fiction, poetry, drama, and essay) and film. Prerequisite: consent of creative writing coordinator. A 14 807 9 1507

829. The Bible as Literature. (3). The Bible is studied as a literary artifact through extensive readings in both Old and New Testaments. Literary techniques are pointed out and their meaning for the manner of composition of the Bible is discussed. A 14 829 0 1501

Upper-Division Courses

307G. Narrative in Literature and Film. (3). A 14 307G 0 1501

310. The Nature of Poetry. (3). Designed to acquaint the student with the variety of poetic forms and techniques. Contributions of culture, history, and poetry theory are noted as background to the works under study, but the course primarily emphasizes the characteristics of poetry as a literary communication. A 14 310 9 1502

320. The Nature of Drama. (3). A course designed to acquaint the student with drama as an art form and as a literary genre. While introducing the student to a variety of plays drawn from different cultures and historical periods, the course focuses primarily on the characteristics of drama, giving attention to dramatic theory and history. A 14 320 0 1502

330. The Nature of Fiction. (3). A course designed to acquaint the student with narrative fiction in a variety of forms: the short story, short novel, and novel. In covering works of fiction from different cultures and historical periods, the course focuses primarily on the characteristics of fiction, giving some attention to historical development and to themes of fiction. A 14 330 0 1502

340. Major Plays of Shakespeare. (3). Designed for students who wish to study the best works of Shakespeare's career in one semester. Students who take this course may take Eng. 515 once for credit. A 14 340 9 1502

342. American Folklore. (3). Cross-listed as Amer. Stud. 342. Survey of the types and functions of unwritten traditional materials in the United States, including belief, tales, songs, folk music, customs, and crafts, including some ethnic varieties of the unwritten materials that form the uniqueness of American culture. A 14 342 0 1502

345. Studies in Comparative Literature. (3). Study of representative works in the western and ancient Near Eastern literary traditions with emphasis on the contrastive relations between themes, types, and structures. Readings may be drawn from one or several periods and may include works of fiction, drama, poetry, epic, romance, satire, and other types. A 14 345 0 1502

Readings from mythology, the classics and selected books of the Bible. A 14 272G 0 1502

274. The Language of Literature. (3). An examination of the principles and problems of literary interpretation that are especially related to language structure. A 14 274 0 1502

275Q. Studies in Popular Literature. (3). Cross-listed as Amer. Stud. 310. A course devoted to study of various forms of popular literature (e.g., revolutionary literature, science fiction, western fiction, detective novel) with an emphasis both on the literary merit and on the way these works reflect popular tastes and values. Repeatable for credit with change of content. A 14 275Q 0 1503

290Q. The Bible as Literature. (3). The Bible is studied as a literary artifact through extensive readings in both Old and New Testaments. Literary techniques are pointed out and their meaning for the manner of composition of the Bible is discussed. A 14 290Q 0 1501

224A, 20th Century British and American Literature. (3). A course devoted to study of major works in American and British literature. A 14 224G 0 1502

223G. Themes in American Literature. (3). A course devoted to study of major works in American literature. A 14 223G 0 1502

220. Origins of the Western Literary Tradition. (3). A course devoted to study of major works in Western literature. A 14 220G 0 1502

224A. The Literary Heritage: English Major Works. (3). A study of the major works in the English literature. A 14 224G 0 1502

220A, 20th Century British and American Literature. (3). A course devoted to study of major works in American and British literature. A 14 220G 0 1502

220A. The Bible as Literature. (3). The Bible is studied as a literary artifact through extensive readings in both Old and New Testaments. Literary techniques are pointed out and their meaning for the manner of composition of the Bible is discussed. A 14 220G 0 1502

220A. The Bible as Literature. (3). The Bible is studied as a literary artifact through extensive readings in both Old and New Testaments. Literary techniques are pointed out and their meaning for the manner of composition of the Bible is discussed. A 14 220G 0 1502
356. Afro-American Literature. (3). A survey course designed to acquaint the student with the major authors of African-American literature from the 17th century to the present. Lectures cover the development of the novel and early single poetry to the Harlem Renaissance; student reading, discussion and writing begin with the Harlem Renaissance and end with the 1970s. Prerequisites: Eng. 101 and 102. A 14 356 0 1502

400G. The Literary Imagination: Epic, Romance, Tragedy, Comedy. (3). A course designed to acquaint the student with the major authors of Western literary tradition. It focuses on the tendency of the imagination to construct different kinds of fictions that satisfy the human demand for various forms of literary pleasure—the pleasure that derives from the experience of love and war on a heroic scale (epic and romance), of pain and suffering (tragedy), and of human folly (comedy and satire). The course also acquaints students with the major literary moyy by approaching works from a variety of critical perspectives. A 14 400G 01502

450. Independent Reading. (1-3). Designed for majors and nonmajors who wish to pursue special reading or research projects in areas not normally covered in course work. Repeatable for credit. Prerequisites: departmental consent. A 14 450 3 1502

Courses for Graduate/Undergraduate Credit

503. Studies in American Literature I. (3). A course in the major fiction, poetry and nonfiction prose of the classic American period. Discussions may include such topics as the historical development of American letters, the development of the novel and romance, the transcendental period and the rise of western and regional literatures. A 14 503 0 1502

504. Studies in American Literature II. (3). Fiction, poetry and drama of the late 19th century to the end of the World War II. Readings may also include literary criticism and other types of nonfiction prose. Discussions cover themes, topics and literary forms inspired by the authors. A 14 504 0 1502

512. Studies in Fiction. (3). Subjects to be announced each semester. Repeatable for credit. A 14 512 0 1502

513. Studies in Poetry. (3). Subjects to be announced each semester. Repeatable for credit. A 14 513 0 1502

514. Studies in Drama. (3). Subjects to be announced each semester. Repeatable for credit. A 14 514 0 1502

515. Studies in Shakespeare. (3). Subjects to be announced each semester. Repeatable for credit, except by students who take Eng. 340. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 515 0 1502

521. Studies in Medieval Literature. (3). Study in authors, genres, motifs and literature, from the 12th to 15th centuries. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 521 0 1502

522. Studies in Renaissance Literature. (3). Subjects to be announced each semester. Repeatable for credit. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 522 0 1502

524. Studies in Restoration and 18th Century Literature. (3). Subjects to be announced each semester. Repeatable for credit. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 524 0 1502

526. Studies in Romantic Literature. (3). Subjects to be announced each semester. Repeatable for credit. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 526 0 1502

527. Studies in Victorian Literature. (3). Subjects to be announced each semester. Repeatable for credit. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 527 0 1502

532. Studies in Modern British Literature (1800-1950). (3). English and Irish literature of the first half of the 20th century. Subjects to be announced each semester. Repeatable for credit. A 14 532 0 1502

533. Studies in Contemporary Literature. (3). Modern literature, primarily British and American, since 1950. Subjects to be announced each semester. Repeatable for credit. A 14 533 0 1502

535. Images of Women in Literature. (3). Cross-listed as WS 535. Women characters as stereotypes, archetypes and fully developed human beings in the works of various authors. A 14 535 0 1502

536. Writing by Women. (3). Cross-listed as WS 536. The works of major women writers, both British and American, in poetry and prose. A 14 536 0 1502

580. Special Studies. (1-3). Topic selected and announced by the individual instructor. Repeatable for credit. Prerequisites: departmental consent. A 14 580 3 1502

610. Old English. (3). Cross-listed as Ling. 610: A 14 610 0 1502

750. Workshop. (2-4). Repeatable for credit. A 14 750 2 1502

Courses for Graduate Students Only

800. Introduction to Graduate Study in English. (3). Especially designed to prepare students to perform effectively in graduate classes in English. The course is concerned with: (1) basic bibliographical tools; (2) terminology, both technical and historical; (3) various approaches to the study of literature, such as fictional analysis of a literary work, the relationships of biography to literary study and the relevance of other disciplines, such as psychology, to literature; and (4) the writing of interpretative and research essays. Throughout the semester, the student gains experience in these approaches to literary criticism and research is maintained. A 14 800 0 1502

811. Graduate Readings in Pre-Renaissance Literature. (3). Early and Middle English poetry, prose and drama to the 15th century. A 14 811 9 1502

812. Graduate Readings in 16th Century Literature. (3). Wyatt, Surney, Sidney, Spenser and their contemporaries. A 14 812 9 1502


814. Graduate Readings in 18th Century Literature. (3). Dryden, Pope, Swift, Fielding, Sterne, Johnson, Boswell, Burns and their contemporaries. A 14 814 9 1502

815. Graduate Readings in Romantic Literature. (3). Wordsworth, Coleridge, Byron, Shelley, Keats, Scott and their contemporaries. A 14 815 9 1502

816. Graduate Readings in Victorian Literature. (3). Writers from Carlyle to Yeats studied in relation to social events and the social, political and religious thought of the age. A 14 816 9 1502

817. Graduate Readings in 20th Century British Literature. (3). Yeats, Joyce, Lawrence, Auden, Spender and their contemporaries. A 14 817 9 1502

821. Graduate Readings in American Literature I. (3). From the beginning to 1870 with emphasis on Emerson, Thoreau, Hawthorne, Melville, Whitman and Dickinson. A 14 821 9 1502

822. Graduate Readings in American Literature II. (3). From 1870 to 1920 with emphasis on James, Twain, Crane, Dreiser, Robinson and Frost. A 14 822 9 1502

823. Graduate Readings in American Literature III. (3). From 1920 to 1970, including Eliot, Stevens, Hemingway, Faulkner and their contemporaries. A 14 823 9 1502

825. Theories of Rhetoric: Classical. (3). Cross-listed as Speech 830. An intensive study of the rhetorical theories of classical writers from 466 a.c. to the decline of Roman oratory. Prerequisite emphasis is on the works of Isocrates, Plato, Aristotle, Quintilian, Cicero and Longinus. A 14 825 9 1502

826. Theories of Rhetoric: Renaissance to Early Modern. (3). Cross-listed as Speech 831. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analysis is made of such thinkers as Augustine, Seneca, Plutarch, Ciceronian, Cicero and Longinus. A 14 826 9 1502

830. Graduate Studies in Drama. (3). Selected topics in the history and nature of dramatic literature. A 14 830 9 1502

832. Graduate Studies in Fiction. (3). Selected topics in the development of the form and content of prose fiction. A 14 832 9 1502

834. Graduate Studies in Poetry. (3). Selected topics in the history and art of poetry. A 14 834 9 1502

840. Graduate Studies in Criticism. (3). Selected topics in the theory and practice of literary criticism. A 14 840 9 1502

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. A 14 845 9 1502

855. Directed Reading. (2-3). Designed for graduate students who want to pursue special research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisites: departmental consent. A 14 855 3 1502
Film Studies
The film studies minor at The 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.

The Wichita State University does not at this time offer a film studies major. However, the minor will prove useful to students majoring in literature, journalism and speech, and will also appeal to those in fields where some knowledge of mass communication as a cultural phenomenon is desirable, including sociology, history, anthropology, psychology, education, administration and American studies.

Students seeking more information about the film studies minor should contact Dr. James Erickson in the Department of English.

Courses approved for the film studies minor are Hist. 106Q, The Way It Was; Western Civilization in Film; Speech 220Q, Introduction to Film Studies; GD 231, Basic Photography (Motion Picture); English 307Q, Narrative in Literature and Film; Speech 320, Cinematography; GD 430, Graphic Design II—Media; Speech 500, Documentary and Propaganda Films; Speech 504, Television Production and Direction; and Speech 604, Advanced Television Production and Direction.

French (See Modern and Classical Languages and Literatures)

Geology
The Bachelor of Science (BS) degree in geology provides in-depth training for professional work in industry or government as well as for graduate study. The Bachelor of Arts (BA) degree in geology provides training for graduate study or teacher preparation background. A number of assistantships, fellowships and scholarships are available. Contact the Department of Geology for further information.

The geology program emphasizes field and laboratory skills in sedimentology/stratigraphy and related fields. Particular attention is directed to solving problems of mineral exploration, mineral-resource evaluation and depletion and the environment.

Students who expect to achieve either the BS or BA in geology within a minimum period of time should have completed geometry, trigonometry and two years of algebra in high school. Chemistry and physics also are recommended in high school.

Geology Major. A major with the BA requires a minimum of 33 hours in geology, including the following:
1. Geol. 111Q, General Geology
2. Geol. 312, Historical Geology; 320, Mineralogy; and 324, Petrology
3. Geol. 540, Field Mapping; 544, Structural Geology; 552, Physical Stratigraphy; and 570, Biogeology
4. Nine additional hours of upper-division geology electives or other sciences with prior written approval of the department.

Required supporting sciences for the BA are:
1. Any approved course in biological sciences
2. Any one of the following groups:
   a. Chem. 111Q or 123Q, and Phys. 213Q and 214Q (or 311 and 312)
   b. Chem. 111Q and 112Q (or 123Q and 124Q) and Phys. 213Q or 311
3. Math. 242Q, 243 or 370
4. CS 200 or 201 (or an approved substitute)

A major with the BS requires a minimum of 45 hours in geology, including the following:
1. Geol. 111Q, General Geology
2. Geol. 312, Historical Geology; 320, Mineralogy; and 324, Petrology
3. Geol. 523, Igneous and Metamorphic Geology; or 526, Sedimentary Geology; 540, Field Mapping; 544, Structural Geology; 552, Physical Stratigraphy; 560, Geomorphology; 570, Biogeology; and 581, Numerical Geology
4. Geol. 640, Field Geology
5. An applied geology course that includes either Geol. 620, Geochemistry; 650, Geohydrology; 660, Geophysics; 680, Economic Geology; or 682, Petroleum Geology
6. One additional course from 500-level courses and above.

Required supporting sciences for the BS degree are:
1. All those courses listed for the BA degree
2. Chem. 112Q or 124Q or Physics 214Q (or 312), to complete a one-year sequence in each in chemistry and physics

BA candidates must meet the language requirements of Fairmount College of Liberal Arts and Sciences. BS candidates must elect one of the following options: (a) ten hours of modern language, (b) an additional nine hours of computer science/mathematics or (c) an additional nine hours of statistics/ computer science. Students electing options (b) or (c) must get prior written approval from the department chairperson for an approved program of courses. Election of one of the two options for language requirements will not alter existing departmental mathematics requirements.

Geology Minor. A minor in geology consists of at least 15 hours of geology including Geol. 111Q, General Geology.

Geography Minor. A minor in geography consists of at least 15 hours including Geog. 125Q or 201 or the equivalent.

It is suggested that students minoring in geology or geography consult with the department in selecting courses most appropriate to their major field of study.

Nonmajor and Nonminor Students. A nonmajor or nonminor student who wishes to achieve the broadest terminal background knowledge of geology is advised to take Geol. 111Q, General Geology, and 312. Historical Geology. Similar advice is offered to the potential major whose decision to elect geology is pending.

Geology

Lower-Division Courses

101Q. Science and Environment. (3). Study of the physical environment and environmental education—the educational process concerned with man's relationship with his natural and manmade surroundings. Includes the relation of population, pollution, energy, resource depletion and allocation, conservation, transportation, technology, economic impact, and urban and rural planning to the total human environment. A 16 101Q 0 190

111Q. General Geology. (4). 3R; 2L. Lab fee. An overview of the earth: the concepts of its origin, composition, materials, structure, landforms and history; and natural processes
operating to create man's physical environment. Field trips in certain laboratories may be required. A 16 1110 1 1914

150. Workshop, (1-4). Short-term courses with special focus on geological problems. Prerequisite: Instructor's consent. A 16 150 2 1914

Upper-Division Courses

300G. Energy, Resources and Environment, (3). An examination of man's effects on his environment and man's dependence on earth resources in meeting his needs. The significance of availability and location of energy and mineral resources will be examined relative to the protection and improvement of man's environment and man's desires for a high standard of living. Some emphasis on urban geology. A 16 300G 0 1914

302Q. Earth and Space Sciences. (3). Elements of meteorology, oceanography and astronomy. Field trips may be required. Not open to students who have taken Geol. 1110 or Geog. 201. A 16 302Q 1 1917

310. Oceanography. (3). Geologic origin of ocean basins and sea; water; dynamics of waves, tides and currents; physical and chemical properties of sea water; diversity of life in the oceans; economic potential, law of the sea and man's effect on this marine environment. A 16 310 0 1914

312. Historical Geology. (3). Prereq. To this course in the study of man, a systematic review of earth history and its preservation in the rock record using field evidence for sequences of biological and tectonic events in selected areas. Also included are the origin and evolution of life. Field trips may be required. Prerequisite: Geol. 1110 or 302Q or equivalent. A 16 312 1 1914

320. Mineralogy. (3). Prereq. A systematic study of the origin, composition and structure of the rock-forming minerals with laboratory emphasis on recognition of their typical forms, occurrence, associations, classification and identification. Field trips may be required. Prerequisite: Geol. 1110. A 16 320 1 1914

324. Petrology. (3). Prereq. A study of the origin, distribution, occurrence, description and classification of igneous, metamorphic and sedimentary rocks with laboratory emphasis on the identification of rocks. Field trips may be required. Prerequisite: Geol. 320. A 16 324 1 1914

410. Honors in Geology. (3). Senior thesis for departmental honors. The independent study deposition of sedimentary rocks and the student's choice must be original research or creative work. Repeatable to a maximum of six credit hours. Prerequisite: acceptance by the Emory Londontown Honors Program and departmental approval. A 16 410 4 1914

430. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geographic significance. The course is given upon demand and may be repeated for credit when the topic of content differs. Where appropriate, travel, lodging and board costs are charged. A 16 430 2 1914

Courses for Graduate/Undergraduate Credit

501. Raw Materials of Antiquity. (3). Prereq. 2L. Lab fee. Nature of rocks, minerals and metallic ores used in prehistoric and ancient cultures. Evaluation of economic factors affecting the location, selection, sedimentation and soil-forming processes; elements of stratigraphy, geologic history of the Pleistocene and Recent Epochs, and absolute and relative dating of rocks and minerals; and mining and metallurgical processes of antiquity. Prerequisite: Anthro. 501 or equivalent or instructor's consent. A 16 501 1 1914

520. Optical Mineralogy. (3). Prereq. A 16 520 1 1914

523. Igneous and Metamorphic Geology. (3). Prereq. A 16 523 1 1914

526. Sedimentary Geology. (3). Prereq. A 16 526 1 1914


552. Physical Stratigraphy. (3). Prereq. A 16 552 1 1914


562. Regional Geology of the United States. (3). A detailed regional survey of the general geology, geomorphology, stratigraphy and structural geology and their interrelationship in the United States. Field trips are required at the option of the instructor. Prerequisite: Geol. 560 or instructor's consent. A 16 562 0 1914

564. Map and Airphoto Interpretation. (3). Prereq. A 16 564 1 1914

570. Biogeology. (3). Prereq. A 16 570 1 1914

574. Special Studies in Biogeology. (3). Prereq. A 16 574 1 1914


620. Geochemistry. (3). A 16 620 0 1915

630. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geographic significance. The course is given upon demand and may be repeated for credit when course locality and content differ. Appropriate lab texts and field costs are charged. A 16 630 2 1914

640. Field Geology. (6). Field investigation of sedimentary rock units and their structures. The application of mapping methods in solving geologic problems is included. This course is held at an off-campus field camp for five weeks (excluding weekends). Preparation of geologic columns, sections, maps and an accompanying professionally written report are due on
campus during the sixth week. Prerequisite: 12 credits of advanced geology, preferably including a field-mapping methods course or instructor's consent. Offered jointly with Kansas State University. A 16 603 1 1914. 650. Geology. (3), 2R; 3L Lab fee. 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 waste disposal. Prerequisites: GeoL 522 and Math. 243 or instructor's consent. A 16 650 1 1914. 657. Earth Science Instructional Methods. (3), Practice in teaching an introductory course in the earth sciences. Developing and presenting the latest in laboratory techniques and evaluating their effectiveness. May be taken more than once if content and objectives differ. Prerequisite: senior standing and permission of the department chairperson. A 16 657 0 1914. 660. Geophysics. (3), 2R; 3L Lab fee. Theory of seismology. The study of seismic phenomena and their relation to the interior and composition of the earth. Prerequisites: Geol 544 and Phys. 214 or equivalent. A 16 660 1 1916. 668. Economic Geology. (3), 2R; 3L Lab fee. Occurrence of metallic and nonmetallic economic minerals and the factors determined by physical and chemical processes determining their location. Field trips may be required. Prerequisite: GeoL 344. A 16 680 1 1914. 682. Petroleum Geology. (3), 2R; 3L Lab fee. The origin, migration, and accumulation of oil and gas in the earth's crust, as well as the distribution and significance of the major fields, and related geological problems. Field trips may be required. Prerequisite: GeoL 544. A 16 682 1 1914. 684. Subsurface Geology. (3), 2R; 3L Lab fee. All subsurface methods, including laboratory, logging, testing, and treatment, valuation and marketing methods, field trips and a written final report required. Prerequisites: Geol 544 and Phys. 214 or equivalent. A 16 684 1 1914. 690. Special Studies in Geology. (1-3). Systematic study in selected areas of geology. Course content and requirements differ and is repeatable for credit. Laboratory work or field trips may be required at the option of instructor. Offered on demand. Prerequisite: instructor's consent. A 16 690 0 1914. 698. Independent Study in Geology. (1-3). Independent study on special problems in the field of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentary geology, (h) stratigraphy, and (i) petroleum. Independent study in selected areas of geology with written final report required. Prerequisite: consent of sponsoring faculty. A 16 698 1 1914. 701. Seminar. (1). Current topics in geology and related subjects presented by student and faculty research. Required of all new degree-seeking graduate students. A 16 701 9 1914. 750. Workshop in Geology. (1-3). Short-term courses with special focus on geological problems. Prerequisites: graduate standing and/or instructor's consent. A 16 750 2 1914.

Courses for Graduate Students Only
800. Research in Geology. (3), 9L. Lab fee. Research in special areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (h) stratigraphy, (i) geophysics, and (k) petroleum. A written final report is required. Prerequisite: consent of sponsoring faculty. A 16 800 9 1914.

808. History of Geology. (1-3). Selected events and personalities in geology that may have had a significant influence on the development of geology as a science. Prerequisite: permission of instructor. A 16 808 9 1914. 810. Advanced Graduate Studies in Geology. (1-6). Systematic study in selected areas of advanced geology. The course is given upon demand and may be repeated for credit when course content differs. Field trips may be required. Prerequisite: graduate standing, consent of instructor and two years of professional postgraduate practice in geology. A 16 810 9 1914. 820. Geochronology. (3), 2R; 3L Lab fee. Theory of age-dating techniques for geological and archaeological materials. Stratigraphy, radiometric, geologic and chemical and biological Processes; evolutionary processes, and phenoclock-dating techniques. Prerequisite: graduate standing in geology and engr. (archaeology). A 16 820 1 1914. 823. Igneous and Metamorphic Petrology. (3), 1R; 6L Lab fee. Mineral paragenesis, bulk chemical compositions, physical-chemical relationships, structures, origins and classification of igneous and metamorphic rocks. Thin-section studies to facilitate rock identifications and the determination of petrofacies relationships. Field trips may be required. Prerequisite: GeoL 523. A 16 823 1 1914. 826. Sedimentary Petrology. (3), 2R; 3L Lab fee. Detailed study of sedimentary rocks and their origins. Determination of mineral compositions, textures, structures, fabrics, and paleo-environmental relationships are facilitated by the use of thin sections, petrographic, and geochronometric analyses. Field trips may be required. Prerequisite: GeoL 526. A 16 826 1 1914. 830. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geologic significance. The course is given upon demand and may be repeated for credit when course content differs. Where appropriate: travel, lodging and board costs are charged. Prerequisites: summer field geology (or equivalent) and instructor's consent. A 16 830 2 1914. 840. Geotectonics. (3). Physical and geologic principles of crustal deformation and tectonic interpretation. The relationship of interior earth processes to crustal deformation is studied with special reference to global tectonics. Field trips may be required. Prerequisite: instructor's consent. A 16 840 0 1914. 852. Field Stratigraphy. (3), 2R; 3L Lab fee. Advanced concepts and principles of stratigraphic analysis and interpretation with emphasis on original source and current research investigations. Field problem and field trips are required. Prerequisites: Geol 524 and 552 or instructor's consent. A 16 852 1 1914. 870. Advanced Biogeochemistry. (3), 2R; 3L Lab fee.Paleoclimatic reconstruction of ancient plant/animal communities and environments with emphasis on community structure, biogeochemistry, synthesis of total raw data and problem solving. Field trips may be required. Prerequisite: a course in biogeochemistry or equivalent. A 16 870 1 1914.


Geography

Only courses 201 and 235 are intended as physical science courses. All other geography courses are intended as social science offerings.

Lower-Division Courses

201. Physical Geography. (3), 2R; 3L Lab fee. Emphasis upon the physical basis of geography, including climate, terrain, soils, landforms and the sea; economic resources; cartographic elements; introduction to regional studies. Field trips are required at the option of the instructor. A 16 201 1 1917.

2190. World Geography. (3). A general survey of world geography, including an analysis of the physical, political, economic, historical and human geography of the major world regions. A 16 2190 0 2206.

235. Meteorology. (3), 2R; 3L Lab fee. An introductory course of the atmosphere and its properties and relationships. A brief survey of the physical, dynamic, synoptic and applied meteorology is included. Course does not count as a major or minor in geography. Field trips are required at the option of the instructor. A 16 235 1 1913.

2620. Cultural Geography. (3). An introduction to cultural geography emphasizing man's geographical distribution, the spatial aspects of his cultural activities, the sources and techniques of his livelihood, and the relationships to his environment. A 16 2620 0 2206.

Upper-Division Courses
320. Field Studies in Geography. (1-6). Off-campus, systematic field study in a selected area of geologic significance. The course is given upon demand and may be repeated for credit when course locale and content differ. Where appropriate: travel, lodging and board costs are charged. A 16 320 2 2206.


The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 2R, 3L means two hours of lecture and two hours of lab.
Courses for Graduate/Undergraduate Credit

510. World Geography. (3). A general survey of world geography, including an analysis of the physical, political, economic, historical and human geography of the major world regions. A 16 510 0 2206

520. Geography of the United States and Canada. (3). Physical, political, economic, historical, and human geography of the United States and Canada. A 16 520 0 2206

530. Geography of Latin America. (3). Physical, political, economic, historical and human geography of Latin America. A 16 530 0 2206

542. Geography of Europe. (3). Physical, political, economic, historical and human geography of Europe. A 16 542 0 2206

550. Geography of Africa. (3). Physical, political, economic, historical and human geography of Africa. A 16 550 0 2206

572. Geography of Asia. (3). Physical, political, economic, historical and human geography of Asia. A 16 572 0 2206

580. Economic Geography. (3). A geographical analysis of the distribution and utilization of basic world resources. A 16 580 0 2206

585. Mineral Resources. (3). Economic geography of the Earth's resources and distribution and utilization of minerals, industrial and chemical minerals, fertilizers, building materials, fossil fuels and water. A 16 585 0 2206

620. Field Studies in Geography. (2-6). Off-campus, systematic field study in a selected area of geographic significance. The course is given upon demand and may be repeated for credit when the course locale and content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisite: instructor's consent. A 16 620 2 2206

630. Geography of Mexico. (3). Physical, human, cultural, and historical geography of Mexico, including important archaeological and historical settings. Relations of sources to arts, crafts, industry and architecture. A 16 630 0 2206

670. Urban Geography. (3). 2R; 3L. Lab fee. Geography of cities: their origin, growth, functions, characteristics and environmental problems of urban areas; structure and dynamic elements of intraurban space; land-use analysis and approaches to urban planning, and problems of urban ecology. A 16 670 1 2214

681. Mineral Crises of Antiquity. (3). An earth-resource viewpoint of the key events of civilization from prehistory through the 19th century. The role of mineral wealth in the affairs of man from prehistirical Grand Pressures; the Copper, Bronze and Iron Ages; the Greek, Roman and Danubian Empires and related mineral resources of Europe and Africa, the gold-silver wealth of early Latin America; the mineral resources of revolutionary America, and the development of the American West through copper, silver and gold. Prerequisite: upper-division or graduate standing. A 16 681 0 2206

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. The course is given on demand and is repeatable for credit when course content differs. Field trips may be required. Prerequisite: junior standing. A 16 695 3 2206

750. Workshop in Geography. (1-4). Short-term courses with special focus on geographical problems. Prerequisite: instructor's consent. A 16 750 2 2206

Course for Graduate Students Only

820. Field Studies In Geography. (2-6). Off-campus, systematic field study in a selected area of geographic significance. The course is given upon demand and may be repeated for credit when the course locale and content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisite: instructor's consent. A 16 820 2 2206

Gerontology

Field Major and Minor

Students majoring or minoring in gerontology undertake a multidisciplinary program of study which draws upon the knowledge and skills of faculty members in 12 different departments in four colleges at Wichita State. Special emphasis is placed on the economic, biological, psychological and sociological aspects of aging. In addition, students can gain an understanding of aging from the perspectives of anthropology, the health-related professions, political science and social work, among others.

For the bachelor's degree major, students must take at least 30 hours in gerontology, including: Geron. 1000, 303, 304, 501, 513 and 518; and 12 hours of electives approved by the gerontology program adviser from listed courses.

The bachelor's degree minor in gerontology requires at least 15 hours, including: Geron. 1000, 303, 304, 501, 513 and 518; and three hours of electives from the listed courses.

The gerontology major combines multidisciplinary academic preparation with application of classroom knowledge through a field placement in the community. This internship experience is designed to permit the student to apply and test ideas developed in the classroom and to tailor the student's career interest.

Lower-Division Courses

100Q. Introduction to Gerontology. (3). Introduction to the field of gerontology, including basic concepts, issues and approaches. P 15 1000 0 2201

150. Workshop in Gerontology. (1-3). A course designed to provide specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit. P 15 150 2 2201

Upper-Division Courses

303. Economic Problems of Aging. (3). Cross-listed as Econ. 303. P 15 303 0 2204

334Q. Developmental Psychology. (3). Cross-listed as Psych. 334Q. P 15 334Q 0 2209

404. Psychology of Aging. (3). Cross-listed as Psych. 404. P 15 404 0 2209

430. Concepts of Loss. (3). Cross-listed as Psych. 430. P 15 430 0 2209

481. Cooperative Education. (3-6). Same as Geron. 501 but offered as part of the Cooperative Education program. See Geron. 501 for description and prerequisites. P 15 481 2 2299

Courses for Graduate/Undergraduate Credit

501. Internship in Gerontology. (3-6). To provide a specially designed field experience for students who need or desire training that will enhance their professional abilities and skills in gerontology and for whom academic credit is appropriate. As part of the internship, students collectively meet one hour a week with the field placement supervisor. Repeatable for credit to a total of six hours. Prerequisite: 12 hours of gerontology and instructor's consent. P 15 501 2 2201

502. Other People and Organizations. (3). Cross-listed as Soc. 502. This course examines the agencies and organizations that deal with or are comprised of the elderly. The relationship between various social networks and the participation of the elderly as they develop roles are examined. Prerequisite: Soc. 2110 or instructor's consent. P 15 502 0 2208


512. Issues in Minority Aging. (3). Cross-listed as Min. Stud. 512. Prerequisites: Min. Stud. 1000 and Soc. 211 or instructor's consent. P 15 512 0 4999

513. Sociology of Aging. (3). Cross-listed as Soc. 513. P 15 513 0 2208

514. Anthropological Perspectives in Gerontology. (3). Cross-listed as Anthro. 514. P 15 514 0 2202

518. Sociology of Aging. (3). Cross-listed as Biol. 518. P 15 518 0 2410

537. The Social Consequences of Disability. (3). Cross-listed as Soc. 537. P 15 537 0 2206

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. Emphasis is on knowledge and skills in applying the theoretical knowledge of gerontology to an emerging area of research and application. Repeatable up to six hours. Prerequisite: instructor's consent. P 15 550 0 2201

590. Legal Aspects of Health Care Administration. (3). Cross-listed as HAE 590. P 15 590 0 1202

610. Aging: Personal, Social and Professional Perspectives. (3). Cross-listed as SW 610. P 15 610 0 2104

663. Economic Insecurity. (3). Cross-listed as Econ. 663. P 15 663 0 2201

698. Independent Readings in Gerontology. (1-3). Directed study in a specialized topic in gerontology. Repeatable up to six
hours. Prerequisite: 12 hours of gerontology credit and adviser's consent. A 15 698 3 2201

731. Growth and Development IV: Adults and Aging. (3). Cross-listed as IS 731. P 15 731 0 3926

750. Workshop in Gerontology. (1-3). A course designed to provide specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit. P 15 750 2 2201

781. Cooperative Education. (3-6). Same as Geron. 810 but offered as part of the Cooperative Education program. See Geron. 810 for description and prerequisites. P 15 781 2 2299

Courses for Graduate Students Only

798. Multidisciplinary Perspectives on Aging. (3). Introduction to the advanced study of the process of aging from a multidisciplinary point of view. Does not count for degree in gerontology. Prerequisite: admission to graduate school. Not open to students with an undergraduate major or minor in gerontology. P 15 798 0 2200

800. Seminar in Gerontology I. (3). Advanced study of the theories of aging from a multidisciplinary perspective with emphasis upon social gerontology. Prerequisite: Geron. 798 or 12 hours of gerontology or instructor's consent. P 15 800 0 2201

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 or 12 hours of gerontology or instructor's consent. P 15 801 0 2200

802. Policymaking for Gerontologists. (3). The making of policy by gerontologists through analysis, planning and implementation of courses assumes knowledge of aging programs. Prerequisite: Geron. 798, 12 hours of gerontology or instructor's consent. P 15 802 0 2201

810. Advanced Gerontology Internship. (3-6). The internship is designed to integrate academic gerontology and practical experience with an emphasis upon application of research findings. Students are assigned to an agency or organization engaged in planning, administering or providing direct services to older people. As part of the internship, the intern is required to submit and be examined upon a comprehensive internship paper. Prerequisites: 12 hours of gerontology and instructor's consent prior to registration. P 15 810 2 2201

820. Thesis. (1-3). Repeatable, but total credit hours counted toward degree shall not exceed four hours. P 15 820 4 2201

History

Major: A major in history requires a minimum of 29 hours. History majors must specialize in one of the following areas:

1. Ancient and medieval history—requires Hist. 101G plus one additional lower-division course.
2. Modern European history—requires Hist. 102G plus one additional lower-division course.
3. English history—requires Hist. 113 or 114 plus one additional lower-division course.
4. U.S. history—requires Hist. 131Q or 132Q plus one additional lower-division course.
5. General history—requires two lower-division courses.

Nine upper-division hours are to be selected from courses in each appropriate area and must be chosen in consultation with an adviser. All history majors must take Hist. 300 and 698. In addition, sufficient hours need to be elected to bring the total to 29. At least six of these hours must be upper-division hours that are not in the area of specialization. Hist. 108G and Hist. 330Q may not be used on a history major.

Minor: A minor in history consists of 15 hours, including a maximum of two lower-division courses and at least three upper-division courses.

Lower-Division Courses

101G & 102G. History of Western Civilization. (4 & 4). 101G: prehistory to 1648. 102G: 1648 to the present. A 18 101G 0 2205 & A 18 102G 0 2205

105 & 106G. The Way It Was: Western Civilization in Film. (4 & 4). Departmental fee.

107G. A History of Lost Civilizations. (3). A comparative examination of lost civilizations of both the Old and New World, including the Sumerians, Hittites, Minoans, Mayans, Mycenaeans, Etruscans, Mohenjo-Daro, Khmers, Incas, Mayas and Aztecs. A 18 107G 0 2205

108G. A History of Lost Civilizations. (3). A comparative examination of lost civilizations of both the Old and New World, including the Sumerians, Hittites, Minoans, Mayans, Mycenaeans, Etruscans, Mohenjo-Daro, Khmers, Incas, Mayas and Aztecs. A 18 108G 0 2205

116G & 117G. History of Latin America. (3 & 3). A 116G: survey from the colonial period to the present. A 18 116G 0 2205 & A 18 117G 0 2205

111 & 112. History of Latin America. (3 & 3). 111: from the earliest times to the beginning of the Second World War. 112: from the end of World War II to the present. A 18 111 & 112 0 2205

113 & 114. English History. (3 & 3). 113: from the earliest times to the beginning of the Second World War. 114: from the beginning of the Second World War to the present. A 18 113 & 114 0 2205

130Q & 132Q. History of the United States. (4 & 4). 130Q: survey from the colonial period to the present. A 18 130Q 0 2205 & A 18 132Q 0 2205

150. Workshop in History. (3-3). A 18 150 2 2205

200. Women Through Western Civilization. (3). Cross-listed as WS 200. A survey of the position of women throughout the ages and in the development of civilization. A 18 200 2 2205

213. American Popular Culture. (3). Cross-listed as Amer. Stud. 213. An examination of popular culture from colonial times to the present with special emphasis on the mass-media explosion since the Civil War. A 18 213 0 2205

222Q. East Asia. (3). Cross-listed as Pol. Sci. 222Q and Rel. 222Q. A 18 222Q 0 2205

300. Introduction to Historical Research and Writing. (3). Basic instruction in research methodology, composition and criticism. This course is required of history majors. A 18 300 0 2205

310. Special Topics in History. (2-3). Repeatable twice for credit. Prerequisite: departmental consent. A 18 310 3 2205

312. History of Engineering and Technology. (3). An examination of the growth and development of science and technology from the 4th millennium B.C. to the 20th century. The role of technological achievements in society and the impact of innovation on society and culture. A 18 312 0 2205

322 & 323. The Far East. (3 & 3). A survey of the social, economic and political development of the Far East with emphasis on China, India and Japan. A 18 322 0 2205 & A 18 323 0 2205

330G. The Americans: Conflict and Consensus in the Development of American Society and Culture. (4). Departmental fee. A topical examination of selected historical phenomena and events in the evolution of modern American culture as interpreted by historians and social scientists. A 18 330G 0 2205

481. Cooperative Education. The cooperative program, a cooperative program, would cover work done at museums or archival divisions of libraries. Cannot be included for a history major or minor. Offered for CR/NCR only. Prerequisite: departmental consent. A 18 481 0 2205
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<td>The American Revolution and the Early Republic (3)</td>
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<td>The Age of Jefferson and Jackson (3)</td>
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<td>Civil War and Reconstruction (3)</td>
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<td>America's Gilded Age, 1877 to 1900 (3)</td>
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<td>The French Revolution and the Industrial Revolution (3)</td>
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597. History of Russian Thought. (3). Russian cultural and intellectual history from 1881 to the present: the Silver Age, Marxism, revolution, and post-1970s culture, socialism, realist, Stalinism, the thaw, the contemporary situation. A 18 597. 0 2205

610 & 611. Social and Intellectual History of Europe. (3 & 3). 610: the social and intellectual history of Europe in the 17th and 18th centuries; 611: the social and intellectual history of Europe in the 19th and 20th centuries. A 18 610. 0 2205 & A 18 611. 0 2205

612 & 613. European Diplomatic History. (3 & 3). 612: European international politics and diplomatic practices, with emphasis on the actions of the great powers and their statesmen, and the Concert of Europe to World War I. 613: Versailles settlement, totalitarian aggression, appeasement, World War II, the cold war and decolonization of Southeast Asia and the Middle East as prelude to major power involvement. A 18 612. 0 2205 & A 18 613. 0 2205

614. Economic History of Europe. (3). Cross-listed as Econ. 625. A 18 614. 0 2205

615. Hitler and the Third Reich. (3). The establishment and collapse of the Weimar Republic, the rise and fall of Hitler’s Third Reich, divided Germany in the present and the role of each in world affairs, 1914 to the present. A 18 615. 0 2205

616. Germans and Jews. (3). The history of antisemitism in central Europe, 19th and 20th centuries. A 18 616. 0 2205

617G. The Holocaust. (3). The origins and development of the concentration camp system in Nazi Germany and its transition into a death camp system. A 18 617G. 0 2205

620. Media Courses in History. (2-3). Courses created or coordinated by the Department of History which are offered through various media: radio, television and newspaper. Areas of historical emphasis vary from course to course. A 18 620. 0 2205

629. A History of Tudor and Stuart England. (3). Examination of the fundamental political, social, economic, intellectual and religious development in English history from 1485 to 1714. A 18 629. 0 2205

632. 18th Century Great Britain. (3). From the accession of William and Mary to the French Revolution. A 18 632. 0 2205

634. 19th Century Great Britain. (3). From the French Revolution to the death of Queen Victoria. A 18 634. 0 2205

660 & 661. History of Science. (3 & 3). 660: ancient and medieval science from its beginnings in the Near East to the end of the Middle Ages. 661: rise of modern science from its first formative steps in the medieval world to the 20th century. A 18 660. 0 2205 & A 18 661. 0 2205

682. Social and Environmental History of Science and Technology. (3). An examination of the social and environmental implications of the development of science and technology from its earliest beginnings to the present day. A 18 682. 0 2205

683. Military History. (3). Major military developments and the conduct of war from antiquity to the mid-20th century. A 18 683. 0 2205

684. The Impact of Total War, 1939 to 1945. (3). Military developments of the major powers since World War I, emphasizing formulation of doctrine, strategy, technology and tactics. The conduct of World War II is also studied with conclusions drawn as to the impact of the war. A 18 684. 0 2205

685. History of Military Thought. (3). Historical review and appraisal of the military thought of such theorists as Machiavelli, Clausewitz, Mahan, Douhet, Liddell Hart and Mao Tse Tung. A 18 685. 0 2205

698. Historiography. (3). Review of the major schools of historical thought, philosophies of history and eminent historians from the ancient world to the present. This course is required of history majors. A 18 698. 0 2205

725. Advanced Historical Method. (3). Review of 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. A 18 725. 0 2205

728. Seminar in American History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 728. 0 2205

730. Seminar in American History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 730. 0 2205

733. Seminar in European History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 733. 0 2205

734. Seminar in European History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 734. 0 2205

750. Workshop in History. (1-3). Repeatable for credit but does not satisfy requirements for history majors. A 18 750. 0 2205

Courses for Graduate Students Only

801. Thesis Research. (2). A 18 801. 4 2205

802. Thesis. (2). A 18 802. 4 2205

810. Special Topics in History. (1-3). Open only to graduate students. Repeatable for credit to a maximum of four hours. A 18 810. 0 2205

Interdisciplinary Liberal Arts and Sciences Program

Lower-Division Courses

222Q. East Asia. (3). A survey of basic topics on China, Korea and Japan, covering the period from 5000 B.C. to the present, including geography, prehistory, history, culture, anthropology, sociology, philosophy, religion, politics and the economics of each country. The course is taught by a team of instructors from several departments. A 18 222Q. 0 400

281. Cooperative Education. (1-4). The course provides employment opportunities or approves current employment, when appropriate, to integrate academic theory with planned professional experience. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated. Offered Cr/NCR only. A 33 281. 2 4903

Italian (See Modern and Classical Languages and Literatures)

Journalism

Major. The major in journalism consists of 30 hours, including Journ. 200, and a concentration of not fewer than 15 hours in one additional field of study in a college of Wichita State. In addition, one of the following sequences must be completed:


2. Radio-Television—Journ. 322, 522 and 500; Speech 114, 221 or 222, 214 and 606; plus six hours in upper-division journalism and speech electives

3. Advertising-Public Relations—Journ. 115Q, S25, 350, 510, 525, 550, 560, 625 and one journalism elective or Speech 637 or 770. Public relations students may substitute Journ. 502 for Journ. 525. The outside concentration for this sequence consists of Psych. 304 and Mkt. 300, 405, 607 and one other marketing course.

Minor. A minor in journalism requires at least 15 hours, including Journ. 200.

Lower-Division Courses

115Q. Introduction to Mass Communications. (3). An introduction to the media of mass communication programs, the role each plays in society. Special consideration is given to the freedom and responsibilities of the mass media. A 19 115Q. 0 0601
150. Journalism Workshop. (1-3). A course designed to provide specialized instruction, using a variable format, in a journalism relevant subject. A 19 150 2 0699

200. Beginning News Writing. (3). 1R; 4L. Required for the major in journalism, the course includes evaluation of news, reporting and writing of various types of news stories with emphasis on accuracy and good writing. Reasonable typing competency is required. Prerequisite: Eng. 102. A 19 200 1 0602

240. Introductory Photojournalism. (3). 2R; 3L. Lab fee. Basic photographic theory and techniques with emphasis on aspects of importance to journalists, writers and editors. Students take, develop and prepare pictures for publication. The journalism department provides a limited number of cameras. Prerequisite: Journ. 200. A 19 240 1 0602

Upper-Division Courses

300. Beat Reporting. (3). Reporting and writing about events in the community. Stories assigned and handed under the instructor's direction may be used in various publications. Prerequisite: Journ. 200. A 19 300 5 0602

322. Broadcast News. (3). 3R; 3L. Cross-listed as Speech 322. Theory and techniques of preparing news for the broadcast media. Students prepare newscasts and news reports for public radio station KMUW. Lab periods arranged with instructor. Prerequisites: Journ. 200 and Speech 224. A 19 322 1 0603

325. Introduction to Advertising. (3). Survey of advertising fundamentals and practices, including copywriting, layout, visualization, market research and packaging. Prerequisite: Journ. 200 or departmental consent. A 19 325 0 0604

340. Applied Photojournalism. (3). 3R; 3L. Lab fee. Covering photographic assignments for the campus newspaper and other publications, under the overall supervision of a journalism instructor. Prerequisite: Journ. 240. A 19 340 1 0610

350. Introductory Public Relations. (3). An introduction to the theory and practice of professional public relations. Topics covered include the role of persuasion and public opinion in public relations, the tools used in planned campaigns and specials for specialized publics. Prerequisite: Journ. 200. A 19 350 0 0604

380Q. History of Communication. (3). The development of the mass media is studied in context with other historical events. American journalism from colonial days to the present is emphasized. Course includes bibliography and criticism in mass communication. A 19 380Q 0 0601

440. Advanced Photojournalism. (3). 3R; 3L. Lab fee. Advanced photographic theory and techniques with emphasis on the feature page photo essay, advertising photography for daily newspaper publications and the photojournalist's personal viewpoints and philosophies. Using camera equipment and the journalism department's laboratory facilities, students shoot, process and print photographs for publications. Prerequisite: Journ. 240. A 19 440 1 0602

481. Cooperative Education. (1-4). Offered for Cr/UnCr only. A 19 481 2 0602

Courses for Graduate/Undergraduate Credit

500. Advanced Reporting I. (3). 1R; 4L. A course for seniors and postgraduate students emphasizing the writing of complex and important types of news stories. Covers police beat stories, sports and economic reporting and includes the study and practice of journalist interviewing. Prerequisites: junior standing, Journ. 200 and either 300 or 322. A 19 500 1 0602

501. Investigative Reporting. (3). 1R; 4L. Theory and application of the techniques of investigating stories. Emphasis on the preparation of the feature story. Prerequisites: Journ. 200 and either 300 or 322. A 19 501 1 0602

502. Public Information Writing. (3). Basic journalistic skills of clear, precise writing are used to communicate effectively with various audiences. Students write feature articles, speeches and popularization of complex documents. Techniques learned in this course are valuable in writing social proposals, committee reports, newspapers and journal articles. Prerequisite: junior standing or departmental consent. A 19 502 0 0602

510. Editing. (3). 1R; 4L. Selection, evaluation and preparation of copy and pictures for publication. Emphasis is on headline and caption writing and page layout. Prerequisites: junior standing and Journ. 200. A 19 510 1 0602

520. Seminar in Journalism. (3). Exploration of problems and controversies involving the press, the nature of news, sources of news and consumers of news. Prerequisite: departmental consent. A 19 520 9 0601

522. Advanced Broadcast News. (3). 3R; 3L. Cross-listed as Speech 522. A course in advanced techniques of preparing news for radio and television presentation with emphasis on actual work in radio and television newsrooms. Lab periods arranged with instructor. Prerequisite: Journ. 322. A 19 522 1 0603

525. Advertising Copywriting. (3). Detailed practice at writing various kinds of advertising copy, including print and broadcast forms. Emphasis is on terse, precise writing that evokes response sought by advertiser. Prerequisite: Journ. 200 or departmental consent. A 19 525 0 0604

550. Editorial Writing. (3). A study of editorial judgment, including practice in the writing of editorials and feature page features and a study of research material available to editorial writers, including community, local and national standing and Journ. 200. A 19 550 0 0602

560. Law of the Press. (3). Emphasis on the case method in examining laws and court cases applicable to the mass media. Introduction to the constitution and covers such topics as libel, privacy and copyright. Prerequisites: Journ. 200 and Journ. 500. A 19 560 0 0601

570. Magazine Journalism. (3). A course on magazine production, including the choosing of subjects, approaches and illustrations; the shooting and editing of photographic stories; layout; the handling of production and management concerns. Prerequisite: Journ. 200 or departmental consent. A 19 570 1 0602

571. Magazine Writing. (3). A course on writing for magazines with emphasis on analyzing the market and preparing articles that fit the needs of specific magazines. Prerequisite: Journ. 200 or departmental consent. A 19 571 1 0602

581. Media Management. (3). A study of the business and management operations of the mass media designed to give journalism students an understanding of the relationships in mass media enterprises. Prerequisite: junior standing or departmental consent. A 19 581 1 0602

625. Advertising and PR Campaigns. (3). Instruction and practice in constructing total advertising and public relations campaigns from market analysis and media selection to creation of the completed package. Prerequisite: Journ. 502, 525 or departmental consent. A 19 625 0 0604

645. Special Topics in Journalism. (1-3). Directed individual research in various aspects of journalism and mass communication or related topics: communications theory, news, editors, advertising and broadcasting. Repeatable for credit when topics differ substantially. Prerequisites: senior standing and departmental consent. A 19 645 3 0601

690. Journalism Internship. (3-6). On-the-job experience and training in news, advertising, public relations or radio or television news broadcasting. Prerequisite: departmental consent. A 19 690 2 0601

715. World Press. (3). A comparative study of press and broadcast systems around the world with emphasis on press freedoms and cross-cultural communication. Prerequisite: senior standing. A 19 715 0 0601

720Q. Dimensions of Mass Communication. (3). A detailed study of mass media, their role as social institutions, their control, support, content and audience of their effects. A 19 720Q 0 0601

750. Journalism Workshop. (1-3). A course designed to provide specialized instruction, using a variable format, in a journalism relevant subject. A 19 750 2 0699

Latin and Greek (See Modern and Classical Languages and Literatures)

Linguistics

Major. A major in linguistics consists of a minimum of 24 hours from the courses listed below, including at least nine hours from Group A and at least one phonetics course—Ling. 218 or 223, Fr. 505 or Span. 505. A major must be combined with either a minor in a foreign language or the 111-112 sequence in two different foreign languages and three hours beyond 112 in one of them, or the equivalent.

Minor. A minor in linguistics consists of 15 hours from the following courses. At least six hours must be taken from Group A.
Note. Courses applied toward another major or minor will not apply toward a major or minor in linguistics.

Group A—Basic Linguistic Theory

Lower-Division Courses

110G. Learning Another Language. (3). An overview of the methods and techniques of language learning. Not counted toward a major. A 10 110G 0 1505

151G. The Nature of Language. (3). 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. A 10 151G 0 1505


223. Linguistics. Phonetics and Phonology. (3). The production and transmission of speech sounds and their role in linguistic structure. Principles of articulatory and acoustic phonetics with transcription exercises, phonetic and distinctive feature phonologies are also studied. A 10 223 0 1505

Upper-Division Course

315. Linguistics. Introduction to English Linguistics. (3). Cross-listed as Eng. 315. A 10 315 0 1505

Courses for Graduate/Undergraduate Credit


680. Linguistics. Comparative Linguistics. (3). Methods of establishing genetic relationship between languages and reconstructing protolanguages. The course includes a survey of the major language families of the world and typological comparisons of languages and the problem of language universals. Prerequisite: Ling. 315 or 577. A 10 680 0 1505

682. Linguistics. Structure of a Selected Non-Indo-European Language. (3). The language offered depends on student demand and availability of staff. The course may sometimes be conducted as a field methods course and is repeatable for credit when different languages are offered. Prerequisite: Ling. 315 or 577. A 10 682 0 1505

Group B—Linguistic Study of Specific Languages or Language Groups

Courses for Graduate/Undergraduate Credit


505. French. Advanced Phonetics and Diction. (2). Cross-listed as Fr. 505. A 10 505 0 1102

505. Spanish. Spanish Phonetics. (2). Cross-listed as Spah. 505. A 10 505 0 1102

579. German. Linguistics in the Teaching of German. (3). Cross-listed as Ger. 579. A 10 579 0 1505

635. French and Spanish. Introduction to Romance Linguistics. (3). Cross-listed as Fr. 635 and Span. 635. A 10 635 0 1105

Group C—Areas of Contact Between Linguistics and Other Disciplines

Lower-Division Courses

220. CDS. Developmental Psycholinguistics. (3). Cross-listed as Psych. 220. A 10 220 0 1505

301. Philosophy. Language and Philosophy. (3). Cross-listed as Phil. 301. A 10 301 0 1505

325. Philosophy. Formal Logic. (3). Cross-listed as Phil. 325. A 10 325 0 1505

Courses for Graduate/Undergraduate Credit


651. Anthropology. Language and Culture. (3). Cross-listed as Anthro. 651. A 10 651 0 2202

727. CDS. Teaching English as a Second Language. (2-3). Cross-listed as CDS 727 and Eng. 727. A 10 727 0 1220


Others

Lower-Division Course

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. A 10 292 0 1505

Courses for Graduate/Undergraduate Credit

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. A 10 590 0 1505

595. Linguistics. Directed Readings. (2-3). Credit assigned to Group A, B or C depending on content. Repeatable for credit. A 10 595 3 1505

Logopedics (See Communicative Disorders and Sciences, College of Education)

Mathematics and Statistics

Mathematics

Major. For the Bachelor of Arts (BA) degree with a major in mathematics, students must complete 21 hours of courses in mathematics or statistics offered by the department numbered 500 or above. In addition, an algorithmic language for computers, such as PL/I, APL, COBOL, FORTRAN or PASCAL, is required.

For the Bachelor of Science (BS) degree in mathematics, majors must complete Math. 511 and 24 additional hours in mathematics or statistics offered by the department numbered 500 or above. In addition, an algorithmic language for computers, such as PL/I, APL, COBOL, FORTRAN or PASCAL, is required.

For the BS in mathematics with emphasis in statistics, the major must complete 27 hours of courses in mathematics or statistics offered by the department numbered 500 or above, including Math. 511; either Math. 545 or 547; and 15 hours of statistics, which must include either Stat. 571-572 or Stat. 771-772. In addition, an algorithmic language for computers, such as PL/I, APL, COBOL, FORTRAN or PASCAL, is required.

For students who are contemplating graduate work it is highly recommended that they include Math. 511, 513, 547 and 640 in their program, along with courses in one or more of French, German or Russian.

Students majoring in mathematics should consult closely with their advisor on any of these programs.

Minor. For a minor in mathematics, students must take a minimum of 15 semester hours of credit courses in mathematics or statistics, including three hours of work in courses numbered 350 or above.

Noncredit Courses

007. Arithmetic. (3). Offered Cr/NCr only. A review and study of the basic arithmetic operations for the mature student whose previous training in arithmetic is inadequate for completion of college mathematics courses. A 20 007 0 1701

011. Algebra. (5). Offered Cr/NCr only. The topics from high school algebra essential to the study of university-level mathematics. This course may be used to meet departmental prerequisites in place of one and one-half
units of high school algebra. Not applicable to degree. A 20 011 0 1701

021. Plane Geometry. (3). Offered Cr/No Cr only. For students without high school credit in plane geometry. This 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. A 20 021 0 1701

Lower-Division Courses

1010. Mathematics Appreciation. (3). Elements and topics in mathematics of interest to persons in other fields. Designed especially for persons majoring in nontechnical fields. No credit toward a major or minor in mathematics. A 20 1010 Q 0 1701

109. College Algebra with Review. (5). Topics covered include real numbers, algebraic expressions, exponents and radicals, functions, and solutions of equations. These topics are followed by the content of Math. 111. Credit is allowed in only one of the three courses: Math. 109, 111 or 122. (Only three hours apply toward a Wichita State degree.) High school geometry or Math. 021 is a highly recommended preparatory course. Prerequisite: one unit of high school algebra or Math. 011. A 20 109 0 1701

111. College Algebra. (3). A survey of functions, theory of equations and inequalities, complex numbers and exponential and logarithmic functions. High school geometry or Math. 021 is a highly recommended preparatory course. Prerequisite: one and one-half units of high school algebra or Math. 011. Credit is allowed in only one of the three courses: Math. 109, 111 or 122. A 20 111 0 1701

112. Precalculus Mathematics. (5). Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions, and other standard topics prerequisite to a beginning study of calculus. This course is not available for credit to students who have received grades of C or better in Math 2205 or its equivalent. Prerequisites: one and one-half units of high school algebra or Math. 011 and one unit of high school geometry or Math. 021. Credit is allowed in only one of the three courses: Math. 109, 111 or 122. A 20 112 0 1701

123. College Trigonometry. (3). A study of the trigonometric functions with applications. Prerequisite: Math. 109 or 111, or equivalent high school preparation, and one unit of high school geometry or Math. 021. Credit in both Math. 123 and 112 is not allowed. A 20 123 0 1701

144. Business Calculus. (3). A brief, but careful introduction to calculus for students of business and economics. Credit in both Math. 144 and 242Q is not allowed. Prerequisite: Math. 109, 111 or 122 with a grade of "C" or better or equivalent high school preparation. A 20 144 0 1701

150. Workshops in Mathematics. (1-3). Topics of interest to participants and not elsewhere available in the curriculum. May be repeated for a total of six hours credit with departmental consent. Prerequisite: departmental consent. A 20 150 2 1701

211. Elementary Linear Algebra. (3). Linear algebra and related topics. Prerequisite: one unit of high school algebra or Math. 011. A 20 211 0 1701

242Q. Calculus I. (5). Analytic geometry and the calculus in an interrelated form. Credit in both Math. 242 and 144 is not allowed. Prerequisites: Math. 112 with a grade of "C" or better or two units of high school algebra, and one unit of high school geometry and one-half unit of high school trigonometry, or Math. 123 and either 109 or 111 with a grade of "C" or better in each. A 20 242Q 0 1701

243. Calculus II. (5). A continuation of Math. 242. A study of integration and applications and an introduction to infinite series are included. Prerequisite: Math. 2420 with a grade of "C" or better. A 20 243 0 1701

Upper-Division Courses

300G. The Evolution of Mathematics. (3). A study of mathematics and mathematicians from antiquity to the present. The purpose is to see how mathematics has developed from man's efforts to understand the world and the extent to which mathematics has molded our civilization and culture. Since mathematics is what mathematicians do, the lives of mathematicians from various ages and countries are studied. This is not a mathematical course. Prerequisite: Math. 211 or equivalent. A 20 300G 0 1701

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. 244 or concurrent enrollment. A 20 311 0 1701

331Q. 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. A 20 331Q 0 1701

344. Calculus III. (3). A continuation of Math. 243. The course includes a study of multiple integration and partial derivatives. Prerequisite: Math. 243 with a grade of "C" or better. A 20 344 0 1701

380. Seminar in Mathematics. (1). Topics of special interest to students. May be repeated for up to four credit hours with departmental consent. Prerequisite: departmental consent. A 20 380 0 1701

480. Individual Projects. (1-5). Repeatable up to ten hours. Prerequisite: departmental consent. A 20 480 3 1701

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

501. Elementary Mathematics. (5). A study of topics necessary to an understanding of the elementary school curriculum, such as set theory, real numbers and geometry. Not for major or minor credit. Prerequisite: elementary education skills. A course for elementary education majors only. A 20 501 Q 0 1701

503-504. Topics in Modern Mathematics I and II. (3-3). An introduction to the new topics in the secondary school curriculum. Repeatable for credit. Prerequisite: departmental consent. A 20 503 0 1701, A 20 504 0 1701

511. Linear Algebra. (3). An elementary study of linear algebra, including an examination of linear transformations and matrices over finite dimensional spaces. Prerequisite or corequisite: Math. 344. A 20 511 0 1701

513. Fundamental Concepts of Algebra. (3). Groups, rings and fields. Prerequisite: Math. 511 or departmental consent. A 20 513 0 1701

531. Introduction to the History of Mathematics. (3). A study of mathematics and mathematicians from antiquity to the present, emphasizing how various areas of mathematics evolved. Problems are solved using the methods of the historical period in which they arose. Requires mathematical skills. Prerequisites: Math. 511 and at least six additional hours of mathematics and/or mathematics courses numbered 500 or above. A 20 531 0 1701

545. Integration Techniques and Applications. (3). A study of the basic integration techniques used in applied mathematics. Includes area under curves, volumes of solids of revolution, improper integrals, series, and the use of integral functions. Prerequisite: Math. 344 with a grade of "C" or better. A 20 545 0 1701

547. Advanced Calculus I. (3). A detailed study of limits, continuity and integration. Prerequisite: Math. 344 with a grade of "C" or better. A 20 547 0 1701

550. Ordinary Differential Equations. (3). A brief study of differential equations. Separation of variables, critical points, linear differential equations with constant coefficients, variation of parameters and existence and uniqueness for first order differential equations. Prerequisite: Math. CS 201 or Math. 344 with a grade of "C" or better. A 20 550 0 1701

551. Numerical Methods. (3). Approximating roots of equations, interpolation and approximation, numerical integration and integration of the numerical solution of first order ordinary differential equations. Some use of the computer. Prerequisites: Math. CS 201 or Math. 201 or Math. 344 with a grade of "C" or better, or departmental consent. A 20 551 1 1703

553. Mathematical Models. (3). This course covers case studies from the fields of engineering, technology and the natural and social sciences. The emphasis is to describe a problem and then develop the mathematics necessary to solve the problem. The case studies are selected to illustrate several of the topics from among linear algebra, differential and integral equations, stochastic processes, statistics and combinatorics. Each student is required to participate in a term project which is to be the solution of a particular problem approved by the instructor. Prerequisite: Math. 344 or departmental consent. A 20 553 0 1703

557. Optimization Theory. (3). An introduction to selected topics in linear and nonlinear optimization. The revised simplex method is developed along with a course in convex analysis. The theory is then extended to solve parametric, integer and mixed integer linear programs. Other topics include additional methods in integer and mixed integer linear programming and classical methods in nonlinear optimization. Prerequisite: Math. 511. A 20 557 0 1703

580. Selected Topics in Mathematics. (3). Topic to be chosen from among topics not otherwise represented in the curriculum. May be repeated up to a maximum of six hours credit with departmental consent. Pre-

753. Ordinary Differential Equations. (3). Existence, uniqueness, stability, and other qualitative theories of ordinary differential equations. Prerequisite: Math. 545 or 547 or departmental consent. A 20 753 0 1703


Courses for Graduate Students Only

801-802. Topics for Mathematics Teachers I and II. (3-3). Topics for secondary school mathematics teachers that relate to the secondary school mathematics curriculum. Topics are chosen according to the needs and interests of individual students. Repeatable for credit with departmental consent. Not applicable toward the MS in Mathematics. A 20 801 0 1701; A 20 802 0 1701

813. Abstract Algebra II. (3). A continuation of Math. 713. Prerequisite: Math. 713 or equivalent. A 20 813 0 1701

818. Selected Topics in Number Theory. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 818 0 1701

819. Selected Topics in Algebra. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 819 0 1701

825. Topology II. (3). A continuation of Math. 725. Prerequisite: Math. 725 or equivalent. A 20 825 0 1701

828. Selected Topics in Topology. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 828 0 1701

829. Selected Topics in Geometry. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 829 0 1701

839. Selected Topics in Foundations of Mathematics. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 839 0 1701

843. Real Analysis II. (3). A continuation of Math. 743. Prerequisite: Math. 743 or equivalent. A 20 843 0 1701

845. Complex Analysis II. (3). A continuation of Math. 745. Prerequisite: Math. 745 or equivalent. A 20 845 0 1701

849. Selected Topics in Analysis. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 849 0 1701

851. Numerical Analysis II. (3). A continuation of Math. 751. Prerequisite: Math. 751 or equivalent. A 20 851 0 1703


857-858. Selected Topics in Engineering Mathematics I and II. (3-3). Advanced topics in mathematics of interest to engineering students, including such topics as tensor analysis, calculus of variations and partial differential equations. Not applicable toward the MS in Mathematics. A 20 857 0 1703; A 20 858 0 1703

859. Selected Topics in Applied Mathematics. (2-3). Repeatable with departmental consent. A 20 859 0 1703

880. Proseminar. (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing. A 20 880 0 1701

881. Individual Reading. (1-5). Prerequisite: departmental consent. Repeatable up to a maximum of four hours toward the MS. A 20 881 3 1701

885. Thesis. (1-4). May be repeated to a maximum of four hours credit. Prerequisite: departmental consent. A 20 885 4 1701

Statistics

No major or minor in statistics is available, but a BS degree with emphasis in statistics is offered as described under the Mathematics section. Statistics courses satisfy general education requirements. As part of the 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 Courses

170Q. Statistics Appreciation. (3). A non-technical course stressing and explaining how statistics and probability help to solve some 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. A 20 1700 0 1702

Upper-Division Courses

360Q. Elementary Probability. (3). Probability functions, random variables and expectation of finite sample spaces. Prerequisite: Math. 111, 112 or 331. A 20 3600 0 1701


Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

570. Special Topics in Statistics. (3). Topics of interest not otherwise available. Prerequisite: departmental consent. A 20 570 1 1703

571-572. Statistical Methods and II. (3-3). Probability models, points and interval estimates, statistical tests of hypothesis, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance, and design of experiments. Prerequisite: Math. 144 or 243 or departmental consent. A 20 571 1 1702; A 20 572 1 1702
574. Elementary Survey Sampling. (3). A brief review of basic statistical concepts and simple random, stratified, cluster and systematic sampling; selection of sample size; ratio and estimation and cost. Applications involve problems from the social and natural sciences, business and other disciplines. Prerequisites: Graduate/Undergraduate credit in statistics, such as Stat. 370, Soc. 501 or Psych. 401. A 20 574 1 1702

576. Applied Nonparametric Statistical Methods. (3). Assumptions and needs for nonparametric tests, rank tests and other nonparametric inferential techniques. Applications involve problems from engineering, medicine, social and natural sciences and other disciplines. Prerequisite: any elementary statistics course such as Stat. 370, Soc. 501 or Psych. 401. A 20 576 1 1702

661. 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. Prerequisites: Math. 344 with a grade of "C" or better. A 20 661 1 1701

671. Probabilistic Models and Statistical Methods. (3). A study of independent and dependent random variables; probability distributions, such as Gamma, Weibull, Normal, Binomial, etc.; reliability and life testing; and topics on statistical inference with emphasis on applications to engineering. Prerequisites: Math. 344 with a grade of "C" or better. A 20 671 1 1702


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 a grade of "C" or better or departmental consent. A 20 771 1 1702; A 20 772 0 1702

Courses for Graduate Students Only

876. Special Topics. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 876 0 1702

879. Individual Reading. (1-5). Prerequisite: departmental consent. A 20 879 0 1702

Minority Studies

The department's objective is to increase the student's cross-cultural communication skills by providing exposure to and an understanding of communication uniqueness among members of America's ethnic/cultural groups, thereby minimizing the barriers that often hamper effective cross-cultural communication.

The department offers courses and programs to stimulate favorable interaction among people, thus reducing ethnic tension. Emphasis in the department is on cross-cultural communication, which stresses the uniqueness of the individual's language and behavior as it relates to communications across ethnic and cultural lines.

Major. The major in minority studies consists of at least 24 hours, including Min. Stud. 2100; any three of Min. Stud. 220, 2400, 331, 332, 333 or 334; Min. Stud. 337 or 339; Min. Stud. 540, Min. Stud. 545; and Min. Stud. 548. A concentration of not fewer than 15 hours in one additional field of study at Wichita State must also be taken. Minority studies majors must follow this sequence unless deviations are approved in advance by the department.

Certain courses in related areas that meet the particular needs of the student and are approved by an advisor may be counted toward a major. These courses may not count for more than six hours.

Minor. A minor in minority studies consists of at least 15 hours. The courses are to be approved by the student's advisor in the department and must include Min. Stud. 2100; any three of 220, 2400, 331, 332, 333 or 334; 337, 338 and 339.

Lower-Division Courses

100Q. Introduction to Minority Studies. (3). An orientation to the social and historical aspects of minority studies. Emphasis is placed on the unique nature of the experiences of minority groups in this country. A cursory examination of some alternative styles of behavior in dealing with problems peculiar to minority people in the United States is also undertaken. A 30 100Q 0 2299

201Q. Fundamentals of Cross-Cultural Communications. (3). An examination of the effects of different cultures on language and methods of communicating. A study of communications and its relationship to behavior in this country is also made. A 30 201Q 0 4999

220. Martin Luther King, Jr. Special emphasis is placed on the motivation, obstacles and social impact of Dr. King's life on the civil rights movement and interreligious movements in the United States. A 30 220 0 4999

240Q. Minority Women in America. (3). Cross-listed as WS 240. An examination of the lives and attitudes and contributions made by minority women to the American culture. An analysis of the misconceptions about minority women that have been generated and perpetuated through the ages by providing accurate information about their lives and attitudes. To help people relate better to minority women in America and understand their attitudes, sensibilities and emotions. A 30 240Q 0 2299

260. Prominent Minorities in the Making of America. (3). Designed to explore, compare and contrast minority thought and processes for social, economical and political reform. Observes these into the social concepts of prominent American minorities through the coverage of popular novels, biographies, autobiographies, fiction, etc. Prerequisite: Min. Stud. 100Q. A 30 260 0 2299

Upper-Division Courses

331. Individual Group Cross-Cultural Communications—Black. (3). Designed to enable students to explore their own unique characters and behavioral traits as related to their particular ethnic group and the relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 2100. A 30 331 0 4999

332. Individual Group Cross-Cultural Communications—Indian. (3). Designed to enable students to explore their own unique characters and behavioral traits as related to their particular ethnic group. The relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 2100. A 30 332 0 4999

333. Individual Group Cross-Cultural Communications—Chicano. (3). Designed to enable students to explore their own unique characters and behavioral traits as related to their particular ethnic group. The relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 2100. A 30 333 0 4999

334. Individual Group Cross-Cultural Communications—White. (3). Designed to enable students to explore their own unique characters and behavioral traits as related to their particular ethnic group. The relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 2100. A 30 334 0 4999

337. Biracial Cross-Cultural Communications—Black/White. (3). An examination of concepts and behaviors useful in analyzing interpersonal behavior in an organizational setting between two selected ethnic groups. Readings and face-to-face encounters with situations involving progress of morale, productivity, motivation, leadership, authority, communication and the introduction of change are used to bring about an understanding of these areas of human interaction. Prerequisite: Min. Stud. 331, 332, 333 or 334. A 30 337 0 4999

338. Biracial Cross-Cultural Communications—Indian/Chicano. (3). An examination of concepts and behaviors useful in analyzing interpersonal behavior in an organizational setting between two selected ethnic groups. Readings and face-to-face encounters with situations involving progress of morale, productivity, motivation, leadership, authority, communication and the introduction of change are used to bring about an understanding of these areas of human interaction. Prerequisite: Min. Stud. 331, 332, 333 or 334. A 30 338 0 4999

380. Multiracial Cross-Cultural Communications. (3). A special laboratory group experience for advanced students. Leadership styles, group development skills and interpersonal competence in a multicultural setting are developed. Prerequisite: Min. Stud. 337 or 338. A 30 380 0 4999

481. Cooperative Education. (1-4). This course allows the student to examine the impact of minority status in the work environment. Interpersonal interactions, communication, and acceptance and adaptation in and to the multicultural work environment are examined. Offered for Cr/NR only. Prerequisite: departmental consent. A 30 481 0 4999

Courses for Graduate/Undergraduate Credit

512. Issues in Minority Aging. (3). Ad-
dresses the needs and interests of students who are interested in (1) providing services to the elderly; (2) exploring the "issues" of concern to minority elderly; (3) becoming familiar with the rights of older and minority Americans; (4) learning the legal procedures for resolving many of the specific problems encountered by minority elderly; and (5) offering tried and tested solutions to the problems encountered by minority elderly. Cross-listed as Ger. 512. Prerequisite: Min. Stud. 100Q, Ger. 100, Soc. 211Q or instructor's consent. P 15 512 O 4999

540. Advanced Multicultural Cross-Cultural Communications. (3). An advanced study on special topics in human relations. Prerequisites: Min. Stud. 380 or concurrent enrollment. A 30 540 0 4999

545. Cross-Cultural Communications Theory. (3). Varying in content, this course offers specific consideration of important areas of cross-cultural communications with emphasis on innovative signs that can gather legitimate data on specific ethnic groups. The setting up and design of a research project is fundamental. Also evaluative research is studied. Prerequisite: Min. Stud. 540 or concurrent enrollment. A 30 545 0 4999

548. Practicum in Cross-Cultural Communications. (3). An investigation and analysis of methods of creative research in cross-cultural communications with emphasis on innovative signs that can gather legitimate data on specific ethnic groups. The setting up and design of a research project is fundamental. Also evaluative research is studied. Prerequisite: Min. Stud. 540 or concurrent enrollment. A 30 548 2 4999

580. Individual Projects. (3). Course is designed to provide the student with an educational and experimental background that relates to the minority experience in America. Lectures, written assignments, encounter groups and related research in the minority communities constitute the teaching methodology for the course. Prerequisite: 50 hours of Wichita State credit or departmental consent. Repeatable for a total of six hours. A 30 580 3 2299

725. Concepts of Cross-Cultural Communications. (3). A critical survey of the concepts of cross-cultural communications. An investigation of the rationale and potential of the project is used to evaluate different ethnic groups, language and behavior. This course provides a conceptual understanding of special implications and problems of communications between, and among diverse ethnic groups in our society. Selections from scholars such as Proser, Smith, Jahn, Giffin, Patton, Power, Ginsman, Rogers and Aranguren are studied. A 30 725 2 4999

750. Workshop. (1-4). Workshops are focused on the nature and scope of minority studies. Emphasis is given to the unique nature of the experiences of minority groups in this country. A curricular examination of some alternative styles of behavior to deal with problems peculiar to minority people in the United States is undertaken. A 30 750 O 4999

Course for Graduate Students Only

860. Seminar in Cross-Cultural Communication. (3). A review of recent developments, research and literature in the field. Emphasis is on language and behavior in cross-cultural communication. Prerequisites: Graduation and instructor's consent. A 30 860 0 4999

Modern and Classical Languages and Literatures

Chinese

Lower-Division Courses

111. Elementary Chinese I. (5). This course is an introduction to the Chinese language with an emphasis on the basis of learning the fundamentals of speaking, understanding, reading and writing modern Chinese. A 17 111 0 1107

112. Elementary Chinese II. (5). The continuation of the introduction to the Chinese language with an emphasis on the fundamentals of pronunciation, speaking, understanding, reading and writing the language. Prerequisite: Chinese 111 or an equivalent learning experience. A 17 112 0 1107

220. Intermediate Chinese. (5). Continues development of speaking, reading and writing skills. Prerequisites: Chinese 112 or departmental consent. A 17 220 0 1107

French

Major. A major in French consists of a minimum of 33 semester hours beyond Fr. 112 or its equivalent, and must include the following courses:

Fr. 220, 223, 227, 300, 526, 551 or 552 or equivalents.

In addition, 15 hours must be selected from courses numbered above 500.

Related Fields. In addition to the above courses, it is strongly recommended that French majors take courses in related fields such as other foreign languages, art, history, English and history philosophy.

Student Teachers. Students who plan to teach French should consult with the department's professor in charge of teacher education early in their careers. In addition to the major requirements, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, art, history, English or philosophy. It is also recommended that future French teachers spend at least a summer in a French-speaking country before student teaching.

Requirements for entering this program are:

1. Grade point average of 3.00 or higher in French.

2. Special departmental approval based on demonstrated proficiency in the use of both oral and written French (not based on course grades)

3. Basic courses in education: IS 232, 234 and 333. Certification requirements are: IS 428, 433, 466E and 442E.

Minor. A minor in French consists of a minimum of 12 semester hours beyond Fr. 112 and must include Fr. 220, 223, 300 and one upper-division French course numbered 500 or above.

Native Speakers. Native and near native speakers of French are not permitted to take courses at the 100 or 200 level but must take a minimum of 12 upper-division semester hours in order to complete a major in French. These students are advised to consult with a French professor before enrolling in French courses.

High School French. Students who have completed more than two units of high school French should consult with an adviser in the French department before enrolling in French courses.

Noncredit Course

060. French for Graduate Reading Examination. (3). Offered CR/NCR only. Open to upper-division and graduate students only. This reading course is designed to prepare students to fulfill departmental requirements of a reading proficiency in French for the Master of Arts or Master of Science. No previous knowledge of French is required. The course does not count toward a degree. A 26 060 O 1102

Lower-Division Courses

111-112. Elementary French. (5-6). Lab fee. Covers speaking, reading and writing, including grammar essentials. Daily, classroom and laboratory work is required. A 26 111 O 1102; A 26 112 O 1102

150. Workshop in French. (2-4). Repeatable for credit. A 26 150 O 1102

210Q. Intermediate French. (5). French review with emphasis on conversation, folklore and modern culture. Prerequisites: two units of high school French. Fr. 112 or departmental consent. A 26 210Q O 1102

215. Study Abroad. (3-6). Transfer of credit from a French-speaking university in (a) grammar, (b) conversation, (c) reading. A 26 215 O 1102

220. Intermediate French Grammar and Composition. (3). Prerequisite: Fr. 112 or departmental consent. A 26 220 O 1102

223. Intermediate French Readings I. (3). Intensive reading of French literary works of the modern period. This course may be used to meet the LAS literature requirement. Prerequisite: Fr. 112 or equivalent. A 26 223 O 1102

227. French Conversation. (1-3). Assignments to increase oral fluency. Emphasis is on learning new vocabulary and idiomatic structures. Exercises in the language laboratory. Prerequisite: Fr. 112 or equivalent. A 26 227 O 1102

Upper-Division Courses

300. Intermediate French Readings II. (3). Intensive reading and analysis of French literary works of all periods. This course may be used to meet the LAS literature requirement. Prerequisite: Fr. 223 or equivalent. A 26 300 O 1102

325. Intermediate French Conversation. (3). Continued practice in the use of the spoken language with an emphasis on developing fluency. Prerequisite: Fr. 227 or 215 or equivalent. A 26 325 O 1102
Courses for Graduate/Undergraduate Credit

Upper-division courses are given on a rotating basis. Fr. 300 is a prerequisite for all upper-division literature and civilization courses, unless otherwise indicated. All literature courses, including Fr. 223 and 300, may fulfill the general education literature requirement.

505. Advanced Phonetics and Grammar. (3). Cross-listed as Ling. 505.

515. Major Topics. (1-4). Special studies in (a) language, (b) literary reports, (c) commercial French, (d) language laboratory, (e) music, (f) composition and (g) problems in teaching French. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1102

525. Advanced Conversation. (3). A course designed to increase fluency in speaking French. Assignments include oral reports, dialogues and work in the language laboratory. Prerequisite: Fr. 300 or equivalent. A 26 525 0 1102

526. Advanced Composition and Grammar. (3). Emphasis on theme writing, original compositions and detailed study of modern French grammar. Prerequisite: Fr. 220 or departmental consent. A 26 526 0 1102

540Q. French Literature in English Translation. (3). May be used to satisfy the general education literature requirement and may count toward a French major or minor if readings and papers are done in French. A 26 540Q 0 0132

541Q. French Literature of Africa and the Caribbean in English Translation. (3). A study of the concept of Negritude through the works of major contemporary African and Caribbean writers. No knowledge of a foreign language is necessary. This course may count toward a French major or minor if readings and papers are done in French. A 26 541Q 0 0312

551. French Civilization: The Middle Ages to the Restoration. (3). Students become familiar with the major events, themes, ideas, trends and movements in French civilization since the Middle Ages as seen in its art, architecture, political structure and history, social evolution and intellectual traditions. The course is interdisciplinary in nature and is designed to complement studies in French language and literature. The course follows a lecture and discussion format and includes slide demonstrations, guest speakers on special topics and films. Most classes and required readings are in French. May be taken concurrently with French 300. Prerequisite/corequisite: Fr. 300. A 26 551 0 1105

552. Contemporary French Civilization. (3). Course familiarizes students with the major events, themes, ideas, trends and movements in French civilization since the Revolution. The course is interdisciplinary in nature and is designed to complement French language and literature courses. Classwork and readings are in French. Prerequisite/corequisite: Fr. 300. A 26 552 0 1105

623. Seminar in French. (3). Seminar in French literature, language or civilization. Prerequisite: two literature courses in French numbered above 500. Repeatable for credit. A 26 623 0 1102

630. Medieval and Renaissance French Literature. (3). Prerequisite: Fr. 300. A 26 630 0 1102

631. 17th Century French Literature. (3). Prerequisite: Fr. 300. A 26 631 0 1102

632. 18th Century French Literature. (3). Prerequisite: Fr. 300. A 26 632 0 1102

633. 19th Century French Literature. (3). Prerequisite: Fr. 300. A 26 633 0 1102

634. Contemporary French Literature. (3). Prerequisite: Fr. 300. A 26 634 0 1102

635. Introduction to Romance Language Linguistics. Cross-listed as Span. 635 and Ling. 635. An introduction to the historical phonology and morphology of the romance languages with particular emphasis on French and Spanish. Prerequisite: departmental consent. A 26 635 0 1102

750. Workshop in French. (2-4). Repeatable for credit. A 26 750 2 1104

815. Special Studies in French. (3). Prerequisite: departmental consent. Repeatable for credit. A 26 815 0 1102

German

Major A. A major in German consists of a minimum of 24 hours beyond the level of Ger. 112. Students may select an emphasis in literature or in language as described below.

The literature emphasis is recommended for students whose concerns are primarily in the humanities or who anticipate graduate study in literature. Students must take Ger. 324, 341 or 441Q, 524 and 577 and at least six hours in Ger. 650.

The language emphasis is suggested for students whose objectives are in teaching (see Major B), linguistics or in the application of language skills in support of other professional pursuits. Students must take Ger. 301, 324, 341 or 441Q, 524 and 577 or 579.

Native speakers of German are not normally permitted to enroll in 100- and 200-level German courses or to receive credit in such courses by advanced standing examination. A minimum of 18 hours in upper-division courses, including Ger. 524 and 577 or 579, is normally required for a native speaker to earn a German major. Native speakers of German should consult with the department before enrolling in German courses.

Major B. The teaching major in German can be either Fairmount College of Liberal Arts and Sciences or in the College of Education. The College of Education consists of at least 50 semester hours chosen from the three options below. For all categories students must have at least 24 hours in the language beyond the 112 level, as discussed earlier under Major A.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy.

Students who wish to enter the student teaching program should consult with the department's professor in charge of teacher education early in their college careers. Requirements for entering the student teaching semester include:

1. Grade point average in German of 3.00 or above

2. Special departmental approval based on demonstrated competency in the use of both oral and written German (not based on course grades)


Minor. A minor in German consists of 11 hours beyond the 112 level. Students are permitted to count no more than one of the following for minor credit: Ger. 341, 441Q, 577 or 641.

Noncredit Course

010. German for Graduate Reading Examination. (3). A reading course designed to prepare students to fulfill departmental requirements in a foreign language. Prerequisite: Ger. 111 or the Bachelor of Arts or Bachelor of Science. No previous knowledge of German is required. This course does not count toward a degree. Offered Cr/Nr only. A 17 010 0 1103

Lower-Division Courses

101. Beginning German. (3). For acquiring practical skill in speaking and understanding everyday German as well as general information concerning German-speaking countries. Does not substitute for German 111. A 17 101 0 1103

102. Beginning German II. (3). A continuation of German 101. For acquiring practical skill in speaking and understanding everyday German as well as general information concerning contemporary German-speaking countries. Does not substitute for German 112. A 17 102 0 1103

111. Elementary German I. (5). Lab fee. A 17 111 0 1103

112. Elementary German II. (5). Lab fee. Prerequisite: Ger. 111, 101-102 or equivalent. A 17 112 0 1103

220Q. Continuing German. (5). Grammar review and cultural readings designed 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. A 17 220Q 0 1103

223. Intermediate German I. (3). Intensive reading and discussion of short works. Prerequisite: Ger. 112 with grade of "C" or better or departmental recommendation to transfer from Ger. 220. A 17 223 0 1103

225. German Conversation. (2). The development of oral fluency. Prerequisite: Ger. 220Q or 223. May be taken concurrently with Ger. 225. A 17 225 0 1103

Upper-Division Courses

301. German Phonetics and Pronunciation. (1). A practical course to improve pronunciation of individual speech sounds as
well as intonation and rhythm of sentences. Prerequisite: Ger. 112 or instructor's consent. A 17 324 0 1103

324. Intermediate Conversation and Composition. (2) Development of written skills is emphasized as conversational practice continues. Prerequisite: Ger. 225 or instructor's consent. A 17 324 0 1103

341. Civilization of the German-Speaking Countries. (3) Selected topics on significant aspects of life and thought in Germany, Austria and Switzerland during the modern period with special attention paid to the interrelation of cultural trends. A knowledge of German is not required. A 17 341 0 0312

344Q. Intermediate German II. (3) Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: Ger. 223 or equivalent. A 17 344Q 0 1103

441Q. Culture of the Two Germanies. (3) Study of the culture and life in the Federal Republic of Germany and the German Democratic Republic since 1945. A knowledge of German is not required. Does not count toward fulfillment of language requirement. A 17 441Q 0 1103

Courses for Graduate/Undergraduate Credit

524. Advanced Conversation and Composition. (3) Prerequisites: Ger. 324 or instructor's consent. A 17 524 0 1103

531. Practicum in German-English Translation. (3) Supervised individual reading and translation from German into English of material in the student's area of interest: humanities, social sciences, natural sciences or current affairs. A 17 531 0 1103

577. Introduction to Linguistics. (3) Cross-listed as Ling. 577 and Anthro 577. Principles of descriptive and historical linguistics: phonetics and phonology, morphology and syntax, the phonological and grammatical structures of Modern German and its development from Proto-Germanic. This course is required for a German major. Prerequisite: Ger. 112 or equivalent of any foreign language. A 17 577 0 1103

579. Linguistics in the Teaching of German. (3) Cross-listed as Ling. 579. The principles of linguistics applied to the problems of teaching German with a contrastive analysis of the phonological and grammatical structures of English and German. Prerequisite: Ger. 577 or instructor's consent. A 17 579 0 1505

641. German Literature in Translation. (3) Consideration of the works of a major author, literary movement, trend or specific genre. Repeatable once for credit. Prerequisite: upper-division standing. A 17 641 0 0312

650. Directed Study. (1-3). Enrollment in any of the areas listed takes place only upon consultation with the department and agreement with the instructor concerned: (a) introduction to the study of German literature; (b) survey I: from the medieval period through the Age of Goethe; (c) survey II: 19th century to 1945. (d) contemporary literature; the literature of both Germanies since 1945; (e) special topics in literature, repeatable once for credit; (f) special topics in language, repeatable once for credit. Prerequisite: Ger. 244 or instructor's consent. A 17 650 0 1103

750. Workshop in German, (2-4). Repeatable once for credit. A 17 750 2 1103

Greek (Ancient Classical)

There is no major in Greek. A minor consists of 11 hours beyond the 111-112 level.

Lower-Division Courses

111-112. Elementary Greek. (5-5). Basic grammar with emphasis on early reading. A 26 111 0 1110. A 26 112 0 1110

223. Intermediate Greek. (3). Plato and Herodotus. Prerequisite: Greek 111-112. A 26 223 0 1110

224. Intermediate Greek. (3). Homer's Iliad. Prerequisite: Greek 223. A 26 224 0 1110

Upper-Division Course

350Q. Classical Culture. (3). Study of representative masterpieces of Greek and Latin literary, historical and philosophical literature in the wider context of classical culture, including art, mythology, religion and political and private life. All works are in translation and no knowledge of Latin or Greek is required. Applies toward a major in classical studies, but not toward a minor in Latin or Greek. A 26 350Q 0 1110

Courses for Graduate/Undergraduate Credit

515. Special Studies. (1-4). Topic announced by instructor. Repeatable for credit. Prerequisite: German 224 or instructor's consent. A 26 515 0 1100

531. Advanced Greek. (3). Sophocles and Euripides. Prerequisite: Greek 224. A 26 531 0 1110

532. Advanced Greek. (3). Thucydides. Prerequisite: Greek 531. A 26 532 0 1110

Italian

There is no major in Italian. A minor in Italian consists of 12 hours beyond the 111-112 level and must include Ital. 531.

Lower-Division Courses

111-112. Elementary Italian. (5-5). Fundamentals of pronunciation and practice in speaking, understanding, reading and writing. A 26 111 0 1104. A 26 112 0 1104

220. Intermediate Italian Grammar and Composition. (3). Prerequisite: Italian 112 or equivalent. A 26 220 0 1104

222-224. Selected Italian Readings. (3). Intensive reading of Italian literary works. Discussions in Italian, as well as oral and written summaries, are featured. Prerequisite: Italian 112 or two units of high school Italian for Ital. 222. Ital. 223 or three high school units for Ital. 224. A 26 222-224 0 1104. A 26 222 0 1104

225. Intermediate Conversation. (2). Prerequisite: Italian 112 or departmental consent. A 26 225 0 1104

Courses for Graduate/Undergraduate Credit

515. Major Topics. (2-4). Special studies in Italian language, literature and civilization. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1104

531. Introduction to Italian Literature. (3). Prerequisite: Ital. 224 or departmental consent. A 26 531 0 1104

540. Medieval and Renaissance Italian Literature in Translation. (3). Representative selections in English translation from Italian medieval and Renaissance literature. The works of Dante and other writers in their medieval context: Boccaccio and the Waning of the Middle Ages; Petrarch and the formation of a new, humanist civilization—reflections and divergences in the 14th, 15th and 16th centuries are all included. A knowledge of Italian is not a prerequisite but the course does not count toward an Italian minor. A 26 540 0 0312

Japanese

Lower-Division Courses

111. Elementary Japanese I. (5). This course is an introduction to the Japanese language with an emphasis on the basic elements of learning the fundamentals of pronunciation, speaking, understanding, reading and writing the language. A 17 111 0 1108

112. Elementary Japanese II. (5). This course is a continuation of introductory Japanese with an emphasis on learning the fundamentals of pronunciation, speaking, understanding, reading and writing. Prerequisite: Japanese 111 or an equivalent learning experience. A 17 112 0 1108

220. Intermediate Japanese. (5). Continues development of speaking, reading and writing skills. Prerequisite: Japanese 112 or departmental consent. A 17 220 0 1108

Latin

Major A. A major in Latin consists of a minimum of 24 hours beyond Latin 112 or its equivalent, and must include at least nine hours of upper-division courses. Courses in Greek and Latin ancient history, Greek philosophy or ancient art are strongly recommended for all majors.

Major B. The teaching major in Latin in either Fairmount College of Liberal Arts and Sciences or in the College of Education consists of at least 50 semester hours, including at least 24 hours beyond Latin 111-112 as listed under Major A.

In addition to the major it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, ancient history, art history, English or philosophy.

Students who wish to enter the student teaching program should consult with the department's professor in charge of teacher education early in their college careers. Requirements for entering the student teaching semester are:

1. Grade point average of 3.00 or higher in Latin

2. Special departmental approval based on demonstrated competencies
in the use of Latin (not based on course grades).

3. Basic courses in education: IS 232, 234 and 333. Certification requirements are: IS 428, 433, 466E and 442F.

Minor. A minor in Latin consists of a minimum of 11 hours beyond the 112 level and must include at least one 500-level course.

Lower-Division Courses

111-112. Elementary Latin. (5-5). Basic grammar with emphasis on early reading. A 26 111 0 1106; A 26 112 0 1106

150. Workshop in Latin. (2-4). Repeatable for credit. A 26 150 2 1 109

210. Intermediate Latin Reading and Review. (5). Latin review and readings of prose and poetry illustrating of Roman life and culture. Prerequisites: Latin 112, two units of high school Latin or departmental consent. A 26 210 0 1109

223. Intermediate Latin. (3). General review of Latin with selected readings of prose and poetry. Prerequisite: Latin 112, two years of high school Latin or departmental consent. A 26 223 0 1109

224. Intermediate Latin. (3). Selected readings of prose and poetry. May be repeated for credit when the readings vary. Prerequisite: Latin 223 or departmental consent. A 26 224 0 1109

Courses for Graduate/Undergraduate Credit

Latin 210 or 224 or departmental consent is the prerequisite for all upper-division courses.

541. Roman Lyric Poetry. (3). The lyric poems of Catullus and Horace with emphasis on imagery, symbolism, structure, diction and meter. A 26 541 0 1109

542. Vergil's Aeneid. (3). Selected books of the Aeneid in the original and in the rest in translation. Study of imagery, symbolism, structure, meter and diction. Consideration is given to the place of the Aeneid in the Augustan Rome and in the epic tradition. A 26 542 0 1109

543. Roman Drama. (3). A study of Roman comedy and tragedy, their Greek background and their influence on European literature. Included are selected plays of Plautus, Terence and Seneca, some in the original and some in translation. A 26 543 0 1109

544. Love in Ancient Rome. (3). The relationship of the sexes and the use of myth in the poetry of Ovid, Propertius and Tibullus. A 26 544 0 1109

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. Consideration is given to the development of the novel from its Greek beginnings up to the time of Apuleius and beyond. A 26 545 0 1109

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. A 26 546 0 1109


Readings from Sallust, Caesar, Livy and Tacitus. A 26 651 0 1109

652. Cicero. (3). The orations, letters and essays of Cicero. The study 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. A 26 652 0 1109

653. Lucretius and Epicureanism. (3). Reading of Lucretius' De Rerum Natura and study of Epicureanism, the atomic theory and Democritean materialism. Consideration is given to the place of Lucretius in Latin literature. A 26 653 0 1109

750. Workshop in Latin. (2-4). Repeatable for credit. A 26 750 2 1 109

Portuguese

No major or minor is offered in Portuguese.

Noncredit Course

060. Reading Portuguese. (2). Offered CR/NCR only. Open to Latin American studies majors and to upper division or graduate students who need to fulfill departmental requirements of a reading knowledge of a foreign language for the Master of Arts or Master of Science. Previous knowledge of Portuguese is required. Does not count toward a degree. A 26 060 0 1120

Lower-Division Courses

111-112. Elementary Portuguese. (5-5). Course emphasis includes understanding, speaking, reading and writing Portuguese. A 26 111 0 1120; A 26 112 0 1120

210. Intermediate Portuguese. (5). Portuguese review with emphasis on conversation, grammar and cultural readings. Prerequisite: Port. 112 or equivalent, or instructor's consent. A 26 210 0 1120

Russian

There is no major or minor in Russian.

Lower-Division Courses

111. Elementary Russian. (5). A presentation of the sounds and structure of Russian with emphasis on the four basic skills of understanding, speaking, reading and writing. A 17 111 0 1106

112. Elementary Russian. (5). A continuation of Russian 111 in order to complete the presentation of elementary Russian grammar and the four basic skills. Prerequisite: Russian 111 or equivalent. A 17 112 0 1106

210. Intermediate Russian. (5). Cultural readings and grammar review presented audiolingually and designed to enhance the four skills of understanding, speaking, reading and writing. Prerequisite: Russian 112 or equivalent. A 17 210 0 1106

225. Russian Conversation and Composition. (2). Development of oral and written skills. Prerequisite: Russian 112 or instructor's consent. A 17 225 0 1106

Upper-Division Courses

300. Russian Literature in Translation. (3). Consideration of the works of one or two major authors, a literary movement, trend or a specific genre. No knowledge of Russian is necessary. Repeatable once for credit. A 17 300 0 1106

315. Special Studies. (1-3). Special studies in Russian language, literature and civilization. Repeatable for credit. Prerequisite: departmental consent. A 17 315 0 1106

Spanish

Major. A major in Spanish consists of a minimum of 30 semester hours beyond Span. 111-112. There are three available options for majors. Basic to all three are the following courses: Span. 220, 223, 225, 300, 325, 525 and 526, or equivalents.

Literature. In addition to the above courses, a major emphasizing Hispanic literature requires 12 hours of upper-division literature and/or linguistics.

Language and Civilization. In addition to the basic courses listed above, a major with an emphasis in language and civilization requires 12 hours selected from the following courses: Span. 505, 513 or 622 (one hour minimum), 552, 557, 626 and 627, or equivalents.

Teaching. The major with teaching emphasis in Spanish in either the Fairmount College of Liberal Arts and Sciences or the College of Education consists of at least 30 hours beyond Span. 112 or its equivalent. These hours must include the basic hours listed above plus a minimum of 12 upper-division hours, six of these chosen from the language major and six from the literature major. Span. 623 may substitute for 526.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy.

Students who wish to enter the student teaching program must have a 3.00 grade point average in Spanish and departmental approval in order to be admitted to the professional semester. It is strongly recommended that teaching majors take Span. 505 and/or 623. IS 442F, 428, 433 and 466E are required of all majors and minors seeking a teaching certificate.

Majors interested in teaching Spanish at the elementary school level should consult the department's professor in charge of teacher education.

Minor. A minor in Spanish consists of a minimum of 11 hours beyond the Span. 111-112 level and must include Span. 220, 223, 225 and one course at the 500 level or above.

Related Fields. Courses in Spanish or Latin American history, political science, economics or art are strongly recommended for all majors. With departmental approval courses in related fields taken in The Wichita State University.
Summer Program in Mexico may count toward the Spanish major.

Native Speakers. Native speakers are those who have completed a substantial amount of their education in a Spanish-speaking country. Native speakers of Spanish are normally not admitted to 100- and 200-level courses. To complete a major, 12 hours of upper-division work is required.

High School Spanish. Students who have completed more than two units of high school Spanish should consult with an advisor in the Spanish department before enrolling in Spanish courses.

Lower-Division Courses

111-112. Elementary Spanish. (5-5). Lab fee. Emphasis on the four fundamental skills in language learning: understanding, speaking, reading, and writing. A 26 111 0 1105 A 26 112 0 1105

150. Workshop in Spanish. (2-4). Repeatable for credit. A 26 150 2 1105

210Q. Intermediate Spanish. (5). Spanish review focusing on conversation and cultural readings. Not open to students with previous credit in Span 221 (not offered any more). Designed primarily for students wishing to fulfill the liberal arts language requirement. It is recommended that prospective majors and minors go directly into Span 222 or 223 or 225. Prerequisite: Span 112, two units of high school Spanish. A 26 210Q 1 1105

215. Intermediate Spanish II. (5) Intensive review of Spanish with special emphasis on conversation. Course offered only in Puebla, Mexico. Prerequisite: Span 112, two units of high school Spanish or departmental consent. A 26 215 0 1105

220. Intermediate Spanish Grammar and Composition. (3). Prerequisite: Span 112 or two units of high school Spanish. A 26 220 0 1105

223. Selected Spanish Readings. (3). Intensive reading of Latin American and Spanish literary works of all periods. This course also includes outside readings and reports. This course may be used to meet the LAS literature requirement. Prerequisite: Span 112 or two high school units of Spanish A 26 223 0 1105

225. Spanish Conversation I. (2). Prerequisite: Span 112 or two units of high school Spanish. Should be taken with Span 220. A 26 225 0 1105

281. Cooperative Education. (1-4). The goal of this course is to provide the student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated. Prerequisite: Span 223 Offered Cr/NC only. A 26 281 2 1105

Upper-Division Courses

300. Intermediate Spanish Readings. (3). Intensive reading and analysis of Spanish literary works of all periods. This course may be used to meet the LAS literature requirement. Prerequisite: Span 223 or departmental consent. A 26 300 0 1105

325. Spanish Conversation II. (2). Continuation of Spanish Conversation I with continued emphasis on literary in Spanish and on vocabulary building. Prerequisite: Span 225 or departmental consent. A 26 325 0 1105

481. Cooperative Education. (1-4). See Span 281. A 26 481 2 1105

Courses for Graduate/Undergraduate Credit

505. Spanish Phonetics. (2). Cross-listed as Ling 505. Prerequisite: any 200-level course or departmental consent. A 26 505 0 1105

515. Major Topics. (1-4). Special studies in (a) language, (b) literary reports, (c) composition, (d) music, (e) composition, (f) problems in teaching Spanish, (g) advanced conversation. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1105

525. Spanish Conversation III. (2). Prerequisite: Span 325 or departmental consent. A 26 525 0 1105

526. Advanced Grammar and Composition. (3). Prerequisite: Span 220 or departmental consent. A 26 526 0 1105

531. Survey of Spanish Literature. (3). Main currents of Spanish literature from 1700 to the present. Prerequisite: Span 300 or departmental consent. A 26 531 0 1105

532. Survey of Spanish Literature. (3). Spanish literature from the beginning to 1700. Prerequisite: Span 300 or departmental consent. A 26 532 0 1105

534. Contemporary Spanish Theater. (3). Prerequisite: Span 300 or departmental consent. A 26 534 0 1105

536. Contemporary Spanish Novel. (3). Prerequisite: Span 300 or departmental consent. A 26 536 0 1105

540Q. Contemporary Spanish Literature in English Translation. (3). Course content may vary from semester to semester, including Spanish and/or Latin American literature. Prerequisite: departmental consent when counted toward a Spanish major or minor. A 26 540Q 0 1105

552. Business Spanish. (3). This course provides students the opportunity to learn and practice commercial correspondence, business vocabulary, translation and interpretation of business texts. Prerequisite: Span 526. A 26 552 0 1105

557. Literary and Technical Translation. (3). Extensive translation of literary works and technical and legal documents from Spanish to English and English to Spanish. Repeatable for credit. Prerequisite: Span 526 or departmental consent. A 26 557 0 1105

560. Spanish Play Production. (1-3). Intensive training of a study as a work of literature, followed by the actual production of the play for the general public. Repeatable for credit. Prerequisite: Span 526 or departmental consent. A 26 560 0 1105

620. Survey of Latin American Literature. (3). Main currents of Latin American literature from 1800 to present. Prerequisite: Span 300 or departmental consent. A 26 620 2 1105

621. Survey of Latin American Literature. (3). Main currents of Latin American literature from 1800 to present. Prerequisite: Span 300 or departmental consent. A 26 621 0 1105

622. Special Studies. (1-4). Topic for study chosen with aid of instructor. Repeatable for credit. Prerequisite: instructor’s consent. A 26 622 0 1105

623. Seminar in Spanish. (1-5). Special studies in (a) language, (b) Spanish and Latin American literature, (c) Spanish and Latin American culture and civilization, and (d) methods of teaching Spanish in the elementary and secondary schools. Repeatable for credit. Prerequisite: departmental consent. A 26 623 0 1105

625. Contemporary Latin American Novel. (3). Prerequisite: Span 300 or departmental consent. A 26 625 0 1105

626. Spanish Civilization. (3). Intensive study of Spanish culture, including historical and geographical factors in its development and its contributions to world civilization. Portuguese civilization is also considered. A 26 626 0 1105

627. Latin American Civilization. (3). Intensive study of Latin American Culture, including the historical and geographical factors in its development and its contributions to world civilization. A 26 627 0 1105

628. Contemporary Latin American Theater. (3). A study of contemporary theater for Spanish and/or Latin American culture. A 26 628 0 1105

650. Survey of Latin American Literature. (3). Prerequisite: Span 300 or departmental consent. A 26 650 0 1105

651. Latin American Short Story. (3). A study of the major writers in contemporary Latin American literature. Prerequisite: Span 300 or departmental consent. A 26 651 0 1105

665. Introduction to Romance Linguistics. (3). Cross-listed as Fr 635 and Ling 635. An introduction to the history of Romance languages with particular emphasis on French and Spanish. Prerequisite: departmental consent. A 26 665 0 1105

720. Theory and Practice for University Teaching. (2). A course dealing with recent theories of language acquisition and their application to the teaching of Spanish. Required for teaching assistants. Prerequisite: graduate standing. A 26 720 2 1105

Courses for Graduate Students Only

801. Spanish Linguistics. (3). Historical and structural study of the Spanish language. A 26 801 0 1105

805. Directed Readings. (1-4). Readings vary according to the student’s preparation. Preparation of reports, literature critiques and special projects in linguistics are included. A 26 805 0 1105

826. Grammar and Stylistics. (3). Intensive study of advanced grammar and stylistic usage. A 26 826 0 1105

The following abbreviations are used in the course descriptions: B stands for lecture and L for laboratory. For example, 4L 2L means four hours of lecture and two hours of lab.
Philosophy

The study of philosophy is relevant to all aspects of life and can be pursued fruitfully at many levels. Philosophical thought may direct itself to such diverse topics as the nature of reality, the condition 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, carpentry 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 major must meet with a departmental adviser 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 adviser's consent.

Minor. A minor consists of 15 hours of philosophy courses, selected in consultation with a departmental adviser, that orient students to the philosophic aspects of their major fields.

Lower-Division Courses

100G. The Meaning of Philosophy. (3). An exploration of the meaning of philosophic activity. Through an examination of several basic interpretational systems of the distinguishing intentions, characteristic procedures and essential functions of the philosophic endeavor, the course seeks to introduce the student to some of the fundamental problems and possible values of philosophy. The underlying purpose of this course is to develop in the student a broad understanding of the meaning of philosophy, the development of contemporary political and cultural enterprise. A 24 100G 0 1509

831. Seminar in Spanish Literature. (3). (a) Middle Ages, (b) Renaissance, (c) Golden Age theater, (d) Cervantes, (e) modern novel, (f) Generalization of '98, (g) contemporary novel, (h) 20th century theater, (i) Spanish romanticism, (j) 20th century poetry and (m) literary criticism. A 26 831 9 1105

832. Seminar in Latin American Literature. (3). (a) colonial period, (b) contemporary novel, (c) short story, (d) poetry, (e) modernism, (f) essay and (g) theater. A 26 832 9 1105

Music

See College of Fine Arts section for requirements and curriculum.

Upper-Division Courses

300G. Science and the Modern World. (3). The aim of this course is to develop an understanding of the development 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 relationship of science and philosophy, and philosophical, with respect to understanding the goals, methods and limits of contemporary science. No prerequisites are required, but general education requirements in science are desirable. A 24 300G 0 1509

301. Language and Philosophy. (3). Cross-listed as Ling 301. This course examines the relationships between philosophy and language. It 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? A 24 301 0 1509

303Q. Nineteenth Century Philosophy. (3). A study of selected 19th century philosophers or systems of thought such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bertrand Russell, Comte, D'Uvilley, Schleiermacher, idealism, materialism, positivism, empiricism and pragmatism. A 24 303Q 0 1509

305. Business Ethics. (3). An examination of moral issues that arise within the context of business practice. The philosophical presuppositions of business and business practice are analyzed through an investigation of actual cases and issues drawn from contemporary business. The course is designed for a general audience as well as the business or philosophy student. Attention is devoted to such topics as the ethical implication of investment/production/distribution, the nature and function of corporations, free enterprise, governmental regulation, conflict of interest, employment practices and environmental responsibility. A 74 305 0 1509

307. Skepticism. (3). Skepticism has assumed many faces. It has been a recognition of the limits of knowledge, a sense for the incompleteness of the world and a meditation on and celebration of the uncertainties of life. These and other manifestations of the skeptical spirit are examined in both classical and modern thought. Thinkers such as Socrates, Sextus Empiricus, Hume, Montaigne and Hallie are consulted. A 24 307 0 1509

308. Philosophy of Economics. (3). The objective of this course is to investigate 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. A 24 308 0 1509

311. Philosophy of Law. (3). An introduction to philosophical problems arising in the theory and practice of law. Topics considered include the objective basis of legal systems, the relation between law and morality, the justification of civil disobedience, the limits of legal constraints on the individual and the nature and justification of punishment. Analytical, interpretative and historical approaches to both contemporary readings and both the natural law and positivist legal traditions are emphasized. A 24 311 0 1509

313Q. Political Philosophy. (3). An examination of various philosophical issues concerning political systems. Issues such as the nature of political authority, the rights of individuals, constitutionalism and civil disobedience are discussed. A 24 313Q 0 1509

315Q. Late Modern Philosophy. (3). A study of philosophical thought in the 18th century with selections from philosophers such as Berkeley, Hume, Reid, Adam Smith, Butler, Huchenson, Wolff and Kant, and movements such as empiricism, rationalism, the Scottish common sense school and idealism. A 24 315Q 0 1509

320. Philosophy of Science. (3). A study of the methods, goals and 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
Courses for Graduate/Undergraduate Credit

505. Philosophy of Education. (3). An examination of educational concepts with respect to the problems of moral, political, and religious education in a secular, democratic society. A 24 505 0 1509

518. Recent British-American Philosophy. (3). Examination of philosophical ideas and movements in recent British and American philosophy. Movements such as logical positivism, pragmatism, ordinary language philosophy and analytic philosophy are discussed. Readings are listed from figures such as Russell, Wittgenstein, Peirce, Dewey and Quine. A 24 518 0 1509

519. Empiricism. (3). A study of the philosophical views that emphasize sensory experience rather than reasoning as the source of knowledge with particular attention paid to the philosophies of Hobbes, Locke, Berkeley, Hume and Mill. A 24 519 0 1509

540. Theory of Knowledge. (3). An examination of the history and evolution of theoretical 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. Selections from both historical and recent writings are included. Prerequisite: one course in philosophy. A 24 540 0 1509

545. Rationalism. (3). An analysis of the study of philosophical views that emphasize reasoning rather than sensory experience as the source of knowledge with particular attention paid to the philosophies of Descartes, Spinoza and Leibniz. A 24 545 0 1509

546. Rationalism. (3). An examination of some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, the problem of evil, and the problem of revolution in moral spheres are selected for investigation. Prerequisite: one course in philosophy. A 24 360 0 1509

547. Philosophy of Science. (3). An examination of some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, the problem of evil, and the problem of revolution in moral spheres are selected for investigation. Prerequisite: one course in philosophy. A 24 360 0 1509

548. Rationalism. (3). An analysis of the study of philosophical views that emphasize reasoning rather than sensory experience as the source of knowledge with particular attention paid to the philosophies of Descartes, Spinoza and Leibniz. A 24 545 0 1509

550. Metaphysics. (3). An analysis of some basic philosophical problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, the problem of evil, and the problem of revolution in moral spheres are selected for investigation. Prerequisite: one course in philosophy. A 24 550 0 1509

555. Philosophy of the Social Sciences. (3). A study of such topics as the relations of social science with natural science and philosophy, methodological problems peculiar to social science, the nature of social explanation, concepts and constructs and the roles of mathematics and formal theories in social science. A 24 555 0 1509

557. Contemporary European Philosophy. (3). An exploration of a theme, issue, or movement in contemporary European philosophy. Prerequisites: one course in philosophy. A 24 557 0 1509

Physics

Major. The following courses are required for a physics major: Phys. 213Q-214Q or 313Q-314Q-315Q-316Q, 551, 621, 631-632 and 711; Math. 550 and 545, 547 or 651; and five hours of chemistry.

For the Bachelor of Arts (BA), two hours of Phys. 516 or 517 are required. Six additional hours of upper-division physics are also required.

For the Bachelor of Science (BS), four hours of Phys. 516, two hours of Phys. 517, eight additional hours of upper-division physics and five additional hours of chemistry are required. Ten

The following abbreviations are used in the course descriptions: F for fall, S for spring, and Su for summer; 34 for lecture and 1 for laboratory. For example, 34 S 1 means two hours of lecture and two hours of lab.
hours of a foreign language also are required for the BS.

Chemical Physics Option. A student majoring in physics may select a chemical physics option. This option consists of either the BS or BA requirements in physics, with Phys. 642 chosen as an elective, plus six hours of chemistry beyond the 111-112 sequence, to be chosen from Chem. 545, 546, 614 or 741.

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 astronomy, engineering, geology, computer science, biological sciences and education.

Minor. A minor in physics consists of Phys. 213-214 or 313-314-315-316 and at least six additional hours of upper-division physics.

Lower-Division Courses

101. Contemporary Physics. (1-2). Designed for physics majors and other science-oriented students; to be taken early in their courses of study. The course acquaints students with the subject matter of physics, the education and work of physicists and some of the more important and interesting current problems in the field. Not open to students with credit in 2130, 2140, 3130, 3140. Offered Cr/NoCr only. Prerequisite: one year of high school algebra. A 211 01 0 1902

111Q. Introductory Physics. (4). 3R; 3L. Lab fee. A general physics course for liberal arts students and those who have not had physics in high school. Topics include mechanics, heat, electricity and magnetism, wave phenomena and modern physics. Not open to students who can meet prerequisites for Phys. 3130. Prerequisite: one year of high school algebra. A 21111Q 0 1902

116. Physical Principles of Mechanics. (2). This course provides basic principles of mechanics for students in physical education. Students engage in laboratory activities followed by group discussion of the concepts that have been studied. A 21 116 1 1902

131. Physics for the Health Sciences. (3). This course provides a background in basic physics for students in health-related professions. Topics of a more general and easier nature than those of the upper-division courses are emphasized. A 21 131 0 1902

195G. Introduction to Modern Astronomy. (3). A survey of astronomy intended 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 modern observational and theoretical techniques. A 21 195G 0 1911

196. Laboratory in Modern Astronomy. (1). 3L. Lab fee. The application of the techniques and analysis of the data of modern astronomy. This course is intended for the student with some background in the physical sciences. When 196 is completed, 195G and 196 must be counted as prerequisites. Prerequisites: two semesters of high school algebra or the equivalent, or instructor's consent, and Phys. 195G, which may be taken concurrently. A 21 196 1 1911

198. Discovery in Astronomy. (3). A selected topic in astronomy is discussed to develop an understanding of the discoveries and problems of modern astronomy. This course is intended primarily for general students with little or no background in a science or math. See courses schedule for topic each semester. A 21 198 0 1911

213Q. General College Physics I. (5). 4R; 3L. Lab fee. Mechanics, heat and wave motion. This course is intended for students with a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite: high school trigonometry or Math. 112. A 21 213Q 1 1902

214Q. General College Physics II. (4). 3L. Lab fee. Electricity, light and modern physics. This course is a continuation of Phys. 2130. Prerequisite: Phys. 2130 or 3130, A 21 214Q 1 1902

Upper-Division Courses

313Q. University Physics I. (4). The first semester of a calculus-based physics sequence. Mechanics, heat and wave motion are studied. High school physics is recommended as preparation 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. 2130 and 3130. Corequisite: Math. 243. A 21 313Q 0 1902

314Q. University Physics II. (4). The second semester of a calculus-based physics sequence. Electricity, magnetism and light are studied. Natural science majors are required to take the lab. Phys. 316Q, that accompanies this course. Credit is not given for both Phys. 2140 and 314Q. Prerequisites: Phys. 213Q or 3130, A 21 314Q 0 1902


316Q. University Physics Lab II. (1). 3L. Lab fee. Lab experiments in electricity, electronics and optics. Required for natural science majors taking Phys. 3140. Corequisite: Phys. 3140 or 3150. A 21 316Q 0 1902

400. Special Studies in Physics. (1-2). Repeatable but total credit may not exceed two hours for physics majors. Prerequisite: departmental consent. A 21 400 3 1902

407. Seminar. (1). Student reports on topics of general interest in physics. Repeatable but total credit may not exceed two hours for physics majors. Prerequisite: departmental consent. A 21 407 9 1902

Courses for Graduate/Undergraduate Credit

501. Special Studies in Physics for Educators. (1). 3L.* Lab fee. A series of courses covering basic physical concepts which provide physical science background for the elementary educator. Prerequisite: inservice elementary teacher. A 21 501 1 1902

516. Advanced Physics Laboratory. (2). 4L. Lab fee. Experiments in classical and modern physics designed to stress scientific method and experimental techniques. The experiments are open-ended projects requiring individual study. Repeatable up to a maximum of eight credit hours. Corequisite: Phys. 551. A 21 516 1 1902

517. Electronics Laboratory. (2). 3L. Lab fee. Experiments in electronics designed to treat some of the applications of electronics in scientific research. Experiments cover the use of vacuum tubes, transistors, IC and digital circuits. Prerequisite: Phys. 314Q. A 21 517 1 1902

551. Topics in Modern Physics. (3).* An introduction to selected areas of modern physics with emphasis on the features of atomic, nuclear and solid state physics that require modifications of classical physics. Prerequisites: Phys. 214Q or 314Q or departmental consent. Corequisite: Math. 344. A 21 551 0 1902

555. Physical Optics. (3).* Electromagnetic waves, diffraction and interference, radiation, scattering and optical properties of solids. Prerequisites: Phys. 2140 or 314Q and Math. 344. A 21 555 0 1902

601. Special Topics in Astrophysics. (1-2). Several topics in astronomy and astrophysics are studied in depth. Lectures, independent readings and student projects may be assigned. May be repeated up to six hours. Prerequisites: Phys. 195G and 551. A 21 601 3 1912

621. Elementary Mechanics I. (3).* Motion of a particle in one and several dimensions. Central forces, the harmonic oscillator and the Lagrangian formulation of mechanics. Prerequisites: Phys. 2140 or 3140 and Math. 344 with grades of "C" or better. A 21 621 0 1902

625. Electronics II. (4). 4L. Lab fee. Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: instructor's consent. A 21 625 1 1903

631. Electricity and Magnetism I. (3).* Direct and alternating currents; electric and magnetic field theory, including an introduction to Maxwell's electromagnetic wave theory. Prerequisites: Phys. 2140 or 3140 and Math. 344 with grades of "C" or better. A 21 631 0 1902

632. Electricity and Magnetism II. (3).* A continuation of Phys. 631. Prerequisite: Phys. 631 or instructor's consent. A 21 632 0 1902

642. Chemical Physics. (3). Topics in areas of overlapping interests for students of chemistry and physics, such as thermodynamics, kinetics, quantum mechanics, solids and various types of spectroscopy. Standard experimental and theoretical techniques used in research in chemical physics are discussed by a team of chemists and physicists. Prerequisite: Phys. 711 or Chem. 641 or instructor's consent. A 21 642 0 1902

671. Thermodynamics. (3).* The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations and an introduction to statistical mechanics. Prerequisites: Phys. 2140 or 3140 and Math. 344. A 21 671 0 1902

701. Advanced Topics in Physics. (3). A
course on an advanced, current topic of interest in physics. The topic may be chosen from any of the following: phase space, stability of physical systems, astrophysics, biophysics or other areas. Prerequisite: Phys. 711 or departmental consent. A 21 701 0 1902

711. Modern Physics I. (3). Introduction to quantum mechanics, the Schrödinger equation, elementary perturbation theory, and the hydrogen atom. Prerequisite: Phys. 551. A 21 711 0 1902


714. Theoretical Physics. (3). Cross-listed as Math. 714. A study of mathematical techniques that may be applied to physics and other sciences. Topics typically include power series methods, WKB method, contour integration, integral transforms, Hilbert space, special functions and solutions of partial differential equations. Prerequisites: Math. 550 and instructor's consent. A 21 714 0 1902


Courses for Graduate Students Only

800. Individual Readings. (1-3). Repeatable for credit up to three hours. Prerequisites: Hours of physics, solid state physics, and departmental consent. A 21 800 3 1902

801. Selected Topics in Physics. (2-3). Repeatable for credit up to six hours. Prerequisite: departmental consent. A 21 801 0 1902

807. Seminar. (1). Review of current periodic issues: reports on student and faculty research. Repeatable for credit up to two hours. Prerequisite: 20 hours of physics. A 21 807 9 1902

809. Research. (1-3). Repeatable for credit up to six hours. A 21 809 4 1902

811. Quantum Mechanics I. (3). Elementary principles, formulations and methods of quantum mechanics with special application to atomic and molecular phenomena. Prerequisites: Phys. 621 and 711, or departmental consent and Math. 550. A 21 811 0 1902


832. Classical Electricity and Magnetism II. (3). A continuation of Phys. 831. Prerequisite: Phys. 831. A 21 832 0 1902

841. Nuclear Physics I. (3). The nuclear two-body problem and nuclear forces, models of the nucleus and nuclear decay. Prerequisite: Phys. 711. A 21 841 0 1902

871. Statistical Mechanics. (3). An introduction to the basic concepts and methods of statistical mechanics with applications to simple physical systems. Prerequisites: Math. 550 and Phys. 621. A 21 871 0 1902

881. Solid State Physics I. (3). The basic knowledge of the nature and properties of the solid state, including the structural, thermal, mechanical, electrical and magnetic properties. Also studied are the electron theory of metals and band theory of solids. Prerequisites: Phys. 551 or departmental consent and Math. 550. A 21 881 0 1902


Political Science

Major. A major consists of Pol. Sci. 121Q and 30 additional hours, including at least one course in four of the five groups below.

Minor. A minor consists of Pol. Sci. 121Q and 12 additional hours, at least six of which must be in upper-division courses.

Group 1, Political Theory and Philosophy—Pol. Sci. 300, 345, 444, 547 or 549


Group 3, Comparative Politics—Pol. Sci. 226Q, 228, 320, 330, 523Q, 524 or 525

Group 4, International Politics—Pol. Sci. 315Q, 336, 338 or 534

Group 5, Policy and Administration—Pol. Sci. 321, 505, 506, 533, 535, 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 Option in Political Science. The goal of the public administration option is to prepare students for future entrance into public service. The option meets several needs. Many students in the social sciences plan for careers in the public sector, and there is evidence that public agency heads are demanding more and better qualified students with undergraduate degrees to face the challenges of the future in public service. Although the option emphasizes the preparation of undergraduates for public service, those who plan to enter graduate school in the fields of administration and public policy will also be prepared to undertake a more professional course of study.

A major with a public administration option consists of 36 hours, including Pol. Sci. 121Q, 345, 444, 547 or 549; one course from Group 3 (Comparative Politics) or Group 4 (International Politics), and the required hours from each area below.


Area B (nine hours)—Pol. Sci. 321, Introduction to Public Administration, and two of the following: Pol. Sci. 564, Comparative Public Administration; Pol. Sci. 580, Administration and the Policy-Making Process; or Pol. Sci. 587, Theory of Administration

Area C (six hours)—Econ. 201Q, Principles of Economics I, and three hours in any of the following: Soc. 501, Sociological Statistics; Econ. 231, Introductory Business Statistics; Admin. 370, Quantitative Methods and Research; Math. (Statistics) 360Q, Elementary Probability; Psych. 315, Industrial Psychology; or computer science.

Lower-Division Courses

101G. Politics: Who Gets What. (3). A course focusing on some of the great political ideas and applying them to modern issues. Even if there are no eternal truths, there are eternal truths about power distribution. Some of the major ideas include the following: the rulers and the ruled, liberty versus order, the right of dissent, political obligation and issues of conscience. In addition, current policies developed to cover topics in politics, First Amendment freedoms, ethnic politics and the politics of oil. A 22 101G 0 2207

102. Politics: Who Gets What—Laboratory. (1-2). This laboratory explores the processes of social conflict. Students collect and analyze raw data to better understand political decision making. A 22 102 0 2207

103G. Games Nations Play: Problems in International Relations. (3). The immediate and most apparent aim of this course is to familiarize students with a number of international problems. The intention, however, is to achieve more general and long-lasting aims rather than to transmit facts. The dual aims thus become the development of a sensitivity on the part of students to international problems that will be a part of their lives and to create a framework in which the students can analyze the international problems they encounter in the future. A 22 102G 0 2207

121Q. American Politics. (3). An analysis of the basic patterns and structure of the American political system with emphasis on politi-
315. The Presidency. (3). The presidency focuses on the evolution of the presidential office, the recruitment of presidents and the nature of presidential power. A 22. 315. 0 2207

316Q. The Congress. (3). Focuses on the Congress with particular attention to interest articulation at the state and national levels. A 22. 316Q. 0 2207

317. Urban Politics. (3). An analysis of politics in urban areas, including such topics as the nature and distribution of community power, influence and leadership, the nature of community conflict, the formation of policy, urban problems and alternatives, and trends in urban politics. A 22. 317. 0 2207

318. Political Parties. (3). The role of political parties in the American political decision-making process at the national, state, and local levels. A 22. 318. 0 2207

319. State Government. (3). The role of the states in the federal system and the patterns of politics and policy-making in the several states. Particular attention is given to the State of Kansas. A 22. 319. 0 2207

320. Politics of Developing Areas. (3). A survey of the political systems in Latin America, Africa, the Middle East and South and Southeastern Asia. Special attention is paid to political systems as a system: the effects of colonialism and patterns of emerging nations. A 22. 320. 0 2207

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. A 22. 321. 0 2207

325. Women in the Political System. (3). Cross-listed as WS 325. A course focusing on the role of women in the political system. It also examines governmental policy with respect to domestic and foreign issues, and the role of women in society in both an American and comparative context. A 22. 325. 0 2207

330. Soviet Politics and Government. (3). An in-depth look at the Soviet political system. Using the United States as a point of reference, the course compares political processes in the systems of the two superpowers. Topics for study include political ideas and politics; the political system and the individual, including treatment of political discourses and modern political theory; the role of the legislature and the mass media; evolution and development of the Communist party of the Soviet Union, leadership selection, treatment of minorities; judicial systems; and problems and policies of the regime. A 22. 330. 0 2207

335Q & 336. International Politics and Institutions. (3 & 3). 335Q: Focuses on interaction between actors in the international system. Covers nature of conflict and conflict resolution. Either 335Q or 336, but not both, may be accepted toward a major in history. 336: Focuses on the role of international organizations in the international system. Emphasis on the United Nations. Some regional organizations are also covered. A 22. 335Q. 0 2207 & A 22. 336. 0 2207

337. International Force and Intervention. (3). Course examines the use of force and intervention in the international system. Covers the use of diplomatic and military pressure and the nature of war. Problems involved in comparing arms levels between Soviet and Western coalitions and in transferring arms to Third World countries are also discussed. A 22. 337. 0 2207

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 goals; and executions foreign policy in selected areas. A 22. 338. 0 2207

345. Classical Medieval Political Theory. (3). The purpose of the course is to examine the beginnings of Western political philosophy through works of Plato and Aristotle. This original body of political ideas dominated the Western world for more than two thousand years. The changes in emphasis that occurred in this tradition are traced through the Roman, Early Christian, and Medieval ages of the Middle Ages. Familiarity with these early political ideas is a major contribution to understanding subsequent political philosophies. A 22. 345. 0 2207


354. Judicial Process and Behavior. (3). Focuses upon the behavior and policy-making roles of courts and judges. A 22. 354. 0 2207

355. Practical Politics. (2-3). A course focusing on either election campaigns or legislative sessions depending on which is in progress during the specific semester the course is offered. During elections students are given the opportunity to work for candidates and are also involved in a campaign simulation in class. During legislative sessions, both legislators and interest group leaders are involved. In addition, the class attends one of the legislative sessions in Topeka. A 22. 355. 0 2207

356. Comparative Politics. (3). An analysis of the basic patterns and structures of Western democratic and political systems, transitional systems and dictatorial or totalitarian systems. A 22. 2260. 0 2207

359. Limited Government. (2-4). An analysis of the relationship between limited government and democratic principles and policies. The political philosophies of six important Western philosophers are examined at an introductory level. Different models of democracy are studied in order to demonstrate the relationship between a set of basic philosophic assumptions and the political society that seems appropriate to that set of assumptions. Finally, one or two major political issues are examined in order to illustrate the various kinds of solutions that may be suggested by different political philosophies. A 22. 328. 0 2207

Upper-Division Courses

300. Political Analysis. (3). Introduction to traditional and scientific research approaches in political science. Attention is given to sources of data, data analysis and problems and ethics of research. A 22. 300. 0 2207

309. Special Topics in Political Science. (1-3). An analysis of selected topics in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit. A 22. 309. 0 2207

398. Directed Readings. (1-3). A course designed for exceptional students to meet their needs and deficiencies. Repeatable for credit. Prerequisites: senior standing and departmental consent. A 22. 398. 3 2207

444. Modern Political Theory. (3). This course continues the study of Western political philosophy beginning with the decisive break with the classical tradition that was made by Machiavelli early in the 16th century. Major philosophers covered are Hobbes, Locke and Rousseau, who are known as philosophers of the social contract and who exercised a great influence on the creation of the modern political system. Marx, a political thinker who more strongly supports the direction of 20th century political philosophy, is also studied. Philosophers of this period have
481. Cooperative Education in Political Science. (1-3). The course provides the student with practical experience to complement the student’s more formal political science curriculum. Student programs must be approved by the department. Offered Cr/NoCr only. A 22 481 0 2207

Courses for Graduate/Undergraduate Credit

505. The Politics of Health. (3). A course designed to show how governments in the United States and in non-Western nations, in the health field, describe the political forces shaping governmental policy in health and analyze the arguments for and against an increased governmental role in health. A 22 505 0 2207

506. Politics of Aging. (3). Cross-listed as Ger. 301. This course focuses on the role of thirty-institution, party systems, and political ideology. In assessing the elderly’s strengths and weaknesses, the course analyzes the effects of aging on political behavior, strategies, and societal goals. The results of their individual and collective experiences and the responses of the political system. A 22 506 0 2207

5230. Government and Politics of Latin America. (3). An examination of the political institutions and processes that currently exist in the Latin American republics. Emphasis is on the social, economic and psychocultural factors affecting these institutions and processes. A 22 5230 0 2207

524. Politics of Modern China. (3). Emphasis is on the study of China’s political system and its role in the Asian region, including its foreign policy and ideas of social organization. Themes of political integration and political development are used to analyze China’s political and economic challenges. Study encompasses the role of the political system in the region, as China is striving to realize some assessment is made about the future development of communist societies. A 22 5240 0 2207

525. Postindustrial Politics. (3). An examination and analysis of political systems and postindustrial politics in highly industrialized nations, such as the United States, Britain and Japan. Emphasizes the rise of political power and the role of political parties in comparative politics. A 22 525 0 2207

533. Policy Development in Foreign Relations. (3). The process of U.S. foreign policy making in the American structure of government. Particular attention is given to institutional conflict. A 22 533 0 2207

534. Problems in Foreign Policy. (3). Examine domestic and international problems associated with U.S. foreign policy. A 22 534 0 2207

535. The Comparative Study of Foreign Policy. (3). An examination of foreign policy on a cross-national basis. Emphasis is placed upon conceptual approaches for explaining foreign policy behavior which are applicable cross-nationally. A 22 535 0 2207

540. American Political Behavior. (3). An intensive examination of the patterns of political behavior in the United States through primary and secondary analysis of present data. Emphasis is given to the development and presentation of original research papers. A 22 540 0 2207

547. Contemporary Political Theory. (3). The purpose of this course is to introduce students to the radically new ideas that emerged in the last century as a result of the development of political theory. Although the multiplicity of political philosophies makes generalization difficult, most of them draw strength from common sources. Philosophers such as Hans Kelsen, William Barrett, Friedrich Nietzsche and John Dewey are studied. Attention is given to the importance of these new philosophies upon political structures and issues. A 22 547 0 2207

549. Approaches to the Study of Political Science. (3). A comparative study of representative conceptual frameworks to give the student an understanding of the origin, the development, and the possibilities and limitations of approaches to the study of political science. A 22 549 0 2207

551. Public Law. (3). An analysis of the role of the Constitution especially of the U.S. Supreme Court in the American political system. Emphasis is placed upon judicial review of state and federal legislation, the separation of powers, federalism, the taxing power and the commerce clause. A 22 551 0 2207

552. Civil Liberties. (3). An analysis of the role of the appellate courts especially of the Supreme Court in the American political system. Emphasis is placed upon the guarantees of the Bill of Rights and the 14th Amendment. A 22 552 0 2207

560. The Planning Process. (3). This course is designed to introduce students to the process of planning an urban planning agency or who will be involved in planning issues as an administrator in the city, county, state, or federal level. It is also intended for students seeking an understanding of the role of planning in solving human and environmental problems. Emphasis is placed on the relationship between specialists and elected officials as participants in the planning process. A 22 560 0 2207

561. Public Management of Human Resources. (3). The course surveys the major areas of management of human resources in the public sector. These include hiring, training, evaluation and pay promotion policies. Special emphasis is given to the role of public personnel management and the management of human resources in the public sector. A 22 561 0 2207

564. Comparative Public Administration. (3). A study of the administrative system of selected developed and developing countries with special attention to the various methods and approaches. A 22 564 0 2207

580. Administration and the Policy Making Process. (3). The problems of government encountered in the administration of public policy. The approach is analytical rather than descriptive. Repeatable for credit. A 22 580 0 2207

587. Administrative Theory and Behavior. (3). A study of organization theory and the various approaches to the study of organization. A 22 587 0 2207

655. Urban Government Finance. (3). Cross-listed as Econ. 655. Analysis of urban government expenditures and revenue systems. Introduction to urban financial administration. A 22 655 0 2207

657. Introduction to Urban Affairs. (3). Cross-listed as Econ. 657 and Soc. 657. An introduction to the study of the metropolis as a social, political and economic system. Prerequisite: Econ. 202 and a course in sociology or political science. A 22 657 0 2207

700. Advanced Directed Readings. (3). Repeatable for credit. Prerequisite: departmental consent. A 22 700 3 2207

701. Method and Scope of Political Science. (3). An examination of predominant concepts, theories and disciplines and their constituent subfields, and the relationship between them. A 22 701 0 2207

703. Proseminar in Political Science. (3). An examination of predominant concepts, theories and disciplines and their constituent subfields, and the relationship between them. A 22 703 9 2207

710. Scope of Public Administration. (3). Cross-listed as Urban Affairs 710. Review of the scope of the field of public administration including a survey of key concepts and theories and their relationship to the student’s discipline. A 22 710 0 2207

750. Workshop. (2-4). Prerequisite: instructor’s consent. A 22 750 2 2207

Courses for Graduate Students Only

810. Seminar in Comparative Government. (3). The comparative study of aspects of the politics and institutions of foreign governments. A 22 810 9 2207

820. Seminar: The Administrative Process. (3). Consideration of the process and environment of administration with special attention given to the role of the executive in the formulation, organization, planning, budgeting, staffing, coordination, communication and administrative responsibility. Prerequisite: departmental consent. A 22 820 9 2207

821. The Budgetary Process. (3). Analysis of the development and utilization of the budgetary process in government with special attention given to the budget in relation to its role in policy formulation. Prerequisite: departmental consent. A 22 821 9 2207
commodate the interests of students who do not intend to pursue graduate study in psychology. Such students may be career oriented (e.g., social work, management training, etc.) or simply have an interest in learning more about why we behave as we do.

Major: The major for the Bachelor of Arts (BA) degree consists of a minimum of 30 hours in psychology, at least nine of which must be upper-level courses. Psychology 1110 is prerequisite for all higher number psychology courses. All BA majors are required to take Psychology 1110, 401, 411 and 211 or 601. In addition, six hours must be taken from each of the groups listed below.

Group One: Psychology 302, 322, 332, 342Q, 402, 502Q, 512, 552Q, 553
Group Two: Psychology 304Q, 324Q, 334Q, 404, 414, 514, 524, 534, 544 or 704
Group Three: Psychology 316, 336, 4160, 476, 526, 536, 546, 556 or 622
Minor: The minor consists of a minimum of 15 hours selected in consultation with the student's major advisor.

Lower-Division Courses

108. Stress and Stress Management. (3) 2R; 2L. Introduction to the theories of stress and a survey of major stress management techniques. Class discussion emphasizes the conceptualization of stress and its social impact which is compensated by stress reduction techniques. The course does not satisfy the University's social science requirement nor does it count for a psychology major. A 23 108 1 2001

1110. General Psychology. (3) An introduction to the general principles and areas of psychology. Topics include learning, perception, thinking, behavioral development, intelligence, personality and abnormalities of behavior. This course is a prerequisite for advanced and specialized courses in psychology. A 23 1110 0 2001

211. Advanced General Psychology I. (3) An intensive study of selected topics from general psychology, including history of psychology, classical schools of psychology, contemporary theories and research in basic areas of psychology. Areas emphasized are sensation, perception, learning, thinking, language, emotion and motivation. Prerequisite: Psychology 1110. A 23 211 0 2001

Upper-Division Courses

302. Psychology of Learning. (3) Basic principles of how organisms learn are explored to highlight key concepts such as reinforcement and punishment, generalization of behavior across settings and extinction of specific behaviors. Important research, theoretical issues and current trends are discussed. Prerequisite: Psychology 1110. A 23 302 0 2002

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 3R 4L means three hours of lecture and four hours of lab.

304Q. Social Psychology. (3) A study of how social behavior is influenced by the behavior characteristics of others. Topics include attitude information and change, attraction, interpersonal attraction, impression formation and compliance, as well as the application of social psychological learning to an understanding of prosocial, aggressive and sexual behavior. Prerequisite: Psychology 1110. A 23 304Q 0 2005

316. Industrial Psychology. (3) An introduction to the many roles of scientific psychology in the selection, training, evaluation and general welfare of people in the workplace. Employee morale, job satisfaction, leadership behavior, fair employment practices and sources of worker stress are among the topics. Prerequisite: Psychology 1110. A 23 316 0 2008

324Q. Psychology of Personality. (3) An examination of psychoanalytic, behavioral, trait and other contemporary theories of personality. Consideration given to major factors influencing personality, results of research in the area, ways of assessing personality and some of the methods of treating personality disorders. Case studies are presented and discussed. Prerequisite: Psychology 1110. A 23 324Q 0 2001

332. Psychology of Perception. (3) An exploration of current research and theory in perception and sensation. Emphasizes how organisms come to perceive and understand their environment in the context of space, form, objects and events. Consideration also given to motivation and personality factors in perception. Prerequisite: Psychology 1110. A 23 332 0 2002

334Q. Developmental Psychology. (3) Cross-listed as Gerontology 334Q. Describes and interprets a survey of human development from conception to death with emphasis on the interplay of environmental, genetic and cultural determinants of development. Selected topics may be emphasized and elaborated by demonstrations and class projects. Prerequisite: Psychology 1110. A 23 334Q 0 2009

336. Alcohol Use and Abuse. (3) A study of the individual and social and cultural aspects of alcohol use. Important problems related to the use of alcohol and the consequences of abuse are emphasized and discussed. Prerequisite: Psychology 1110. A 23 336 0 2002

342Q. Psychology of Motivation. (3) The psychological and biological forces leading to goal-directed acts are examined to understand the complexity of influences upon behavior. Some of the motivational topics discussed are reward and punishment, stress, aggression, achievement and the role of the brain structures in influencing organized behavior. Prerequisite: Psychology 1110. A 23 342Q 0 2001

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 hypothesis. Probability models covered include the normal, t, chi square and F. Prerequisites: Psychology 1110 and Math 111 or 112. A 23 401 0 2007

402. Psychology of Consciousness. (3) Consciousness is examined from two

Psychology

The course of study is designed to provide a breadth of knowledge in the field of psychology. Accordingly, the major requires students to choose courses from foundation areas (Group I), traditional human oriented areas (Group II), and applied areas (Group III). The program is designed to prepare students for postgraduate work in psychology but is flexible enough to ac-
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perspectives: as a psychological state ranging from 'calm' to 'peak experiences' and as a framework for knowledge. Research on split-brains and dissociated personalities is covered from the second perspective. Prerequisite: Psych. 111Q. A 23 402 0 2001

404. Psychology of Aging. (3). Cross-listed as Gerontology 404. An examination of the issues surrounding the aging process. Includes topics such as personality and intellectual changes, 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 is provided. Prerequisite: Psych. 111Q. A 23 404 0 2009


414. Child Psychology. (3). Covers psychological development from conception through infancy and childhood. Includes the development of language, perceptual and cognitive functioning, social-emotional development, and socialization. Prerequisite: Psych. 111Q. A 23 411 1 2002

416Q. Psychology and Problems of Society. (3). A study of the special role of psychology in the social sciences. Research and principles applied to contemporary social issues and problems including such topics as mental health, social issues, criminal justice, social relations, and social problems. Prerequisite: Psych. 111Q. A 23 416 0 2005

426. Psychology of Work. (3). Selects a series of standard topics of industrial psychology to examine in greater depth the seriousness of job satisfaction problems, effects of work environment, management and worker relations, stress and burnout, human factors and mental health. Prerequisite: Psych. 111Q. A 23 426 0 2008

428. Field Work in Psychology. (3). Special projects and practicums under supervision in public and/or private agency settings. Projects on public and/or private agency settings. Projects in psychology, observation, service and/or research may be undertaken with prior approval by the department. Repeatable for a maximum of six credits. Prerequisite: Psych. 111Q. A 23 428 2 2004

481. Cooperative Education. (1-3). This course is designed to provide the student with practical experience, under academic supervision of the cooperating agency, in the student's academic program. Consultation with and approval by an appropriate faculty sponsor is necessary. Offered Cr/Ncr only. Prerequisites: Psych. 111Q and departmental consent. A 23 481 2 2004

Courses for Graduate/Undergraduate Credit

502Q. Comparative Psychology. (3). Psychologically and ethologically analyses of behavior are compared and contrasted. The evolution and development of behavior are stressed. Major topics include a critique of the instinct doctrine and sociobiological interpretations of behavior. Lectures are supplemented with field trips. Prerequisite: one course from Group I. A 23 502Q 0 2001

508. Psychology Tutorial. (3). Selected topics in psychology. Repeatable for a maximum of six hours of credit. Instructor's consent may be required. Check Schedule of Courses. Prerequisite Psych. 111Q. A 23 508 2 2001

512. Primateology. (3). A survey of the primates (including humans) and their behavior. Topics include principles of evolution and taxonomy, the transition to homo sapiens, the evolution of behavior, the development of language, learning in the primates and the development of behavior. Prerequisite: Psych. 111Q. A 23 512 0 2002

514. Psychology of Health and Illness. (3). A survey of the relationships between psychology, behavior, and physical health. Includes topics such as health habits, stress, perception, health care, provider-client relationships, hospitalization and prevention. Prerequisite: Psych. 111Q. A 23 514 0 2001

522. Biological Psychology. (3). A review of the biological foundations of behavior. Topics include the evolutionary basis of behavior, the biological foundations of behavior, the role of hormones in behavior and neurochemical correlates of behavior. Prerequisite: Psych. 111Q. A 23 522 0 2001

524. Advanced Psychology of Personality. (3). More intensive treatment of the topics of psychology of personality with special emphasis on contemporary theories, research and applications of the psychological study of personality. Prerequisite: Psych. 324Q. A 23 524 9 2001

535. Psychological Testing and Measurement. (3). A critical analysis of the psychological foundations of tests and the interpretation of test findings. Several tests representing the major approaches to psychological testing are described, with an emphasis on the test theory underlying the test. Prerequisite: Psych. 401. A 23 535 2 2006

532. Psycholinguistics. (3). Cross-listed as Ling. 544. Survey of psychological, linguistic and analytical aspects of language. Topics include the performance-competence distinction, child development of speech, animal communication systems and the relation of language to thought. Prerequisite: Psych. 111Q. A 23 532 0 2006

534. Psychology of Women. (3). Cross-listed as WS 554. Psychological assumptions, research and theories of the roles, behavior and potential of women in contemporary society. Prerequisite: Psych. 111Q and departmental consent. A 23 534 0 2001


544. Abnormal Psychology. (3). An introductory survey of abnormalities of behavior. Definitions, causes, types and classifications of abnormal behavior are examined. Attention is given various theories of abnormal behavior, research evidence and various methods of diagnosis and treatment. Prerequisites: Psych. 324Q. A 23 544 2 2001

546. Practicum in Applied Behavior Analysis. (3) 3R; 3L. Placement in local human service agencies for about eight hours a week for 12 weeks. Under supervision, students assist in the development, conduct, and evaluation of services at the agency site. Repeatable once. Prerequisites: Psych. 536 and instructor's consent. A 23 546 2 2003

556. Introduction to Clinical Psychology. (3). A survey of current ethical, conceptual and research issues in the assessment and treatment of psychopathology. Contemporary psychotherapies are reviewed with an emphasis on the role of research in the selection of therapeutic approaches. Prerequisite: Psych. 111Q. A 23 556 0 2003

558. Computer Applications in the Behavioral Sciences. (3) 2R; 2L. This course is an introduction to computer applications to the behavioral sciences. Includes such topics as: computer programming, data analysis, and use of computer applications. Prerequisites: nine hours in the social sciences. A 23 558 1 2007

601. Systems and Theories in Psychology. (3). An intensive review of systems and theories of psychology, including behaviorism, Gestalt psychology, structuralism and others. An attempt is made to develop the logical relations of these theories to each other as well as to consolidate modern viewpoints and provide a comprehensive system. Prerequisite: 15 hours of psychology or instructor's consent. A 23 601 0 2001

606. Special Investigation. (1-3). Upon consultation with instructor, advanced students with adequate preparation may undertake organized research findings. Topics may include any area of psychological problems. Repeatable for a maximum of six credit hours. Prerequisite: nine hours in psychology. A 23 606 1 2001

622. History of Psychology. (3). Traces the development of philosophical and empirical concepts of psychology from the ancient Greeks through the 19th century. Emphasizes the origins and uses of psychology and the development of psychological concepts and methods. Prerequisites: nine hours of psychology or instructor's consent. A 23 622 0 2001

704. Advanced Social Psychology. (3). An intensive review of selected contemporary issues in social psychology. Prerequisite: Psych. 330Q. A 23 704 9 2005

728. Seminar in Psychotherapy. (3). Provides an in-depth description and critical analysis of various methods of psychotherapy, an examination of the efficacy of theses approaches and research of common issues in psychotherapy, such as process and outcome, client and
therapist variables in the therapeutic process. Prerequisite: Psych 1110 and instructor's consent. A 23 728 9 2003

748. Research and Development in Applied Settings. (3), 2R; 2L. An introduction to research and development activities in industry. Lecturers cover sources of research ideas, funding sources, use of company resources, technical communications, assembling literature, intelligence, and publishing practices. Lab work involves practice in preparing industry-type proposals and presentations, schedules and budgets, and analysis of industry research protocols. Prerequisite: 15 hours of psychology or instructor's consent. A 23 748 1 2008

750. Psychology Workshop. (1-3). A course of specialized instruction, using various formats in selected topics and areas of psychology. A 23 750 2 2001

756. Aerospace Psychology. (3). Exploration of the many roles of scientific psychology in aerospace science and engineering. Survey of the research and literature in areas such as psychophysiological aspects of flight, environmental effects on human performance in aviation, factors in stress, and training, cockpit control and display systems, and aviation safety. Prerequisites: 15 hours of psychology or instructor's consent. A 23 756 9 2003

Courses for Graduate Students Only

802. Seminar in Clinical Psychology. (3). Intensive study of clinical theory, research and practice. Included are such issues as an intensive examination of psychotherapeutic theories, issues in assessment, research in clinical psychology, appropriate research designs in clinical science, client rights, legal and ethical concerns, licensure and certification and related topics. Prerequisite: instructor's consent. A 23 802 9 2003

804. Seminar in Behavioral Development. (3). A critical analysis of the concept of development and of theories of behavioral development. Includes a review of the concept of integrative levels and proceeds to a discussion of modern evolutionary thought. The concept of development is examined from psychological, biological, and anthropological perspectives. Finally, various theories of human development are critically evaluated. Prerequisite: instructor's consent. A 23 804 9 2001

811. Seminar in Cognitive-Behavioral Assessment. (4). 3R; 3L. Surveys issues of reliability and validity; provides description of critical analysis and practice in clinical use of such psychological assessment methods as questionnaires, observation, self-report and standardization. Special emphasis is given to laws illustrating the control of individual behavior. Prerequisite: instructor's consent. A 23 820 9 2001

826. Seminar in Behavior Therapy. (4). 3R; 3L. A review of the theoretical and empirical support for specific behavior therapeutic practices. Approaches may include systematic desensitization, flooding, contingency management techniques and aversive therapies. The interface between behavioral assessment and clinical practice also is discussed. Prerequisite: instructor's consent. A 23 826 9 2003

830. Seminar in Community Psychology. (3). Comprehensive overview of theory, research and practice in the emerging field of community psychology from the perspective of general systems theory. Topics include prevention, consultation, community mental health and a community vs. individual perspective to human and social problems. Prerequisite: instructor's consent. A 23 830 9 2005

831. Research in Community Psychology. (3). An examination of the perspective of community psychology specifically concerning the application of needs assessment and program evaluation. Special emphasis is placed on how to apply research methods to precipitate planned community and organizational changes and social action. Prerequisite: instructor's consent. A 23 831 2 2005

832. Practicum in Community Psychology. (3). Supervised practice in such areas as psychological consultation, program evaluation, program development, paraprofessional training and preventative programs in community agencies and organizations. Repeatable for a maximum of six credit hours. Prerequisite: Psych 830 and 831 and instructor's consent. A 23 832 9 2005

833. Psychological Service Agencies. (3). An in-depth examination of psychological service agencies with regard to structure, functions, financing, goals, planning, development, evaluation and accountability. Prerequisite: instructor's consent. A 23 833 9 2005

834. Seminar in Consultation and Counseling. (3). The theories and techniques of consultation and counseling are examined and applied to individuals, organizations, and systems. Prerequisite: instructor's consent. A 23 834 9 2005


844. Seminar in Personality and Psychosocial Disorders. (3). Relationship of normal behavior development and adjustment and also a critical review of theory and research. Prerequisite: instructor's consent. A 23 844 9 2007

852. Univariate Research Design. (3). Analysis of variance for single and multifactor designs. Analysis of covariance, multiple comparison and other selected topics. Also included is the use of computer program packages for the analysis of data. The course emphasizes psychological research in laboratory and applied settings. Prerequisites: Psych 842 or instructor's consent. A 23 852 9 2001

853. Multivariate Research Design. (3). Multivariate methods and techniques in psychosocial research. Includes exploration of multiple regression, discriminant analysis, profile similarity, factor analysis and other selected topics. Also included are the use of computer program packages for the analysis of data. The course emphasizes research in applied and field settings. Prerequisite: Psych 842 or instructor's consent. A 23 853 9 2001

865. Seminar in Psychology of Learning. (3). Intensive study of theory and research in learning processes. Included is 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: Psych 302 and instructor's consent. A 23 865 9 2002

870. Seminar in Current Developments. (3). Intensive study of current issues, techniques, research and application. Repeatable for different topics for a maximum of 8 hours. Prerequisite: instructor's consent. A 23 870 9 2001

872. Seminar in Comparative Psychology. (3). Intensive study of psychological and ethological research and theories of behavior. The course is oriented around the evolution and development of behavior. Topics include a review of the concept of integrative levels in psychology. Prerequisites: Psych 5020 and instructor's consent. A 23 872 9 2002


885. Seminar in Perception. (3). Intensive study in theory and research in perceptual processes. Prerequisite: Psych 332, or equivalent, and instructor's consent. A 23 885 9 2001

Public Administration

Students planning to continue their education in pursuit of a Master of Public Administration degree may want to structure their undergraduate degree plans to include program prerequisites. The Master of Public Administration program has a specified list of prerequisites that is important to the information foundation of the professional administration. Students must be accepted in a "full-standing" status prior to the completion of program prerequisites. The Master of Public Administration degree consists of 36 graduate hours and 16 hours of prerequisites in the areas of economic principles, public administration, statistics and demonstrated computer competency.

The Master of Public Administration program uses an important blending of academic foundations and real-world application. Since the program is housed in the Hugo Wall Center for
Urban Studies, faculty and students are able to test immediately theoretical positions through state and local government research and application. This effort to blend theory and application further enhances through adjunct faculty from state and local government.

The final opportunity for joining theory and application comes in the form of program completion options. Students have opportunities for internships with national. state and local government. Students with well-established career paths can tailor a portion of their course work to match their professional needs and may elect to complete the program through an applied research project which addresses an issue of professional concern.

The courses listed below, except for PAdm 755, constitute the core curriculum requirements for all Masters of Public Administration candidates. The remainder of the program can be structured to match the career aspirations of the student using course offerings from selected University departments. The following areas of specialization should serve as examples of possible track options:

- Public Management
- Public Personnel Management
- Urban Studies
- Aging Administration
- City Management
- Policy Analysis and Planning
- Public Financial Management
- Applied Research for Policy Decisions

Courses for Graduate/Undergraduate Credit

700. Urban Affairs. (3). A study of the process of urbanization from a multidisciplinary point of view. Prerequisite: enrollment in urban affairs program or instructor's consent. P 13 700 0 2214

702. Urban Research Methods. (3). This course is designed to acquaint the student with applied policy research methods. Emphasis is upon locating, appraising and utilizing secondary sources of data of the type used in policy, planning, and administrative research. Students must complete several short research projects. Prerequisite: enrollment in urban affairs program or instructor's consent. P 13 702 4 2214

710. Scope of Public Administration. (3). Cross-listed as Pol Sc 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. P 13 710 0 2214

720. Urban Systems. (3). Cross-listed as IE 720. This course develops the principles of systems theory and the tools by which these principles can be applied. Example applications are taken from urban problems. Emphasis is on the formulation of realistic models and solutions. Computer techniques are developed in class as necessary. Prerequisite: instructor's consent. P 13 720 0 2214

730. Decision Making. (3). Course includes theories of decision-making ability under varying degrees of uncertainty. Content coverage includes such materials as theories of decision making, environment for stimulating creativity, cognitive inhibitors to problem identification, alternative evaluation techniques, decision implementation and utilization of quantitative tools in decision making. Prerequisite: instructor's consent. P 13 730 0 2214

755. Special Topics in Urban Affairs. (3). Provides students with an opportunity to engage in advanced study in urban topics that are of immediate concern and arise only occasionally. The content varies with issues that arise, student needs and faculty expertise. Directed to Master of Public Administration students. May be repeated if topic is different. Prerequisite: instructor's consent. P 13 755 0 2214

Courses for Graduate Students Only

875-876. Thesis. (3-3). Prerequisite: advisor's consent. P 13 875 0 2214; P 13 876 0 2214

890. Urban Affairs Internship. (3). The internship is designed to integrate academic pursuits and practical experience. Students admitted to the internship are assigned to work in an approved government, community or private organization for a period of 12 months. P 13 890 2 2214

898. Applied Research Paper. (3). The applied research paper under the direction of a faculty committee is designed to develop and measure competency in the areas of writing, research and policy conceptualization. Each paper addresses a policy relevant question and the delivery of a finished product with policy application. This course is to be taken in the last semester of course work. P 13 898 4 2214

999. Urban Seminar. (3). As a part of the internship experience, the intern is required to submit and be examined upon an internship paper. Prerequisites: completion of all Master of Public Administration core courses and three from comparative religion, and methods of studying religion. Students contemplating a major or minor in religion should discuss their academic program with a member of the department. Each student the department with a major or minor in religion is assigned an adviser from the department faculty with whom to plan a course of study.

Major. The Department of Religion offers two options for a major. Option one is designed for the ordinary major. This option requires a minimum of 30 hours. A maximum of six hours may be taken at the 100 level. Option two is designed for students who choose religion as a second major. This option requires a minimum of 24 hours. A maximum of six hours may be taken at the 100 level.

Distribution. For both majors at least nine hours must be selected from "traditions" courses, three from comparative or theory courses and three from constructives courses. For an identification of these courses see the religion department advising coordinator.

Minor. A minor in religion requires a minimum of 15 hours. A maximum of six may be taken at the 100 level.

Lower-Division Courses


120Q. The Biblical Heritage. (3). The collection of books known as the Bible has been central to a number of religious traditions for more than 2,000 years. This 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. The course is historical, not critical, and not controversial. It culminates with a survey of the roles played by the Bible in contemporary American culture. A 15 1200 0 1510

125. World of the Bible. (3). This course seeks to understand the Bible within its geographical, historical and religious context—the polytheistic world of the ancient Near Eastern and Mediterranean civilizations of Babylon, Assyria, Egypt, Persia, Greece and Rome from the period of the patriarchs to the rise of Christianity. Special attention is paid to similarities and differences between Biblical ideology and views current in neighboring religious traditions. A 15 125 0 1610

130Q. Introduction to Religion. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on the methods used in the study of religion. A 15 1300 0 1510

131G. Traditional Religion and the Modern World. (3). An overview of the traditional religious systems (Buddhist, Hindu, Confucian, Taoist, Judaic and Christian) and of several of the important modern criticisms of religion with a view to confronting the problem of whether traditional religion can be significant in the modern world. A 15 131G 0 1510
150. Workshop in Religion. (2-4). A 15 150 0 1510

210. Current Religious Issues. (3). A critical study of contemporary issues in the West with some attention to non-Western religions. The relationship of religion to such topics as race, war, secularism, population explosion, politics and politics is considered. A 15 210 0 1510

215. The Meaning of Death. (3). An exploration of the images, interpretations and practices that constitute the response to death in major religious traditions. A 15 215 0 1510

221. Judaism. (3). The history and central teachings of traditional Judaism and its modern varieties (Reform, Orthodox, Conservative, Zionist, etc.). The course focuses on Jewish customs and practices as well as Jewish religious thought. A 15 221 0 1510

222Q. East Asia. (3). Cross-listed as LAS 222Q. Hist. 222Q, Poli. Sci. 222Q. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. The course is taught by a team of instructors from several departments. A 15 222Q 0 1510

223. Hinduism and Buddhism. (3). Hinduism and Buddhism are closely related, both growing out of a unique spiritual 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, meditational techniques, a type of religiousity for which India has become famous. This course investigates 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. A 15 223 0 1510

224Q. Christianity. (3). An overview of Christianity from New Testament times to the present, stressing historical developments in religious thought. Protestant and Orthodox Christianity are treated; contemporary trends and problems are explored. A 15 224Q 0 1510

225. Jesus. (3). There have been varied responses to and multiple interpretations of the life and teachings of Jesus. This course examines the development and function of traditions about Jesus in Biblical, extrabiblical and more recent, popular sources. A 15 225 0 1510

230. Jewish/Christian Relations. (3). An exploration of the significant historical and ideological aspects of Jewish/Christian religious traditions through the writings of major religious thinkers such as St. Augustine, Martin Luther and Martin Buber. Themes include law and gospel, the concept of hierarchy, redemption, Israel, Zion, the Land of Israel and the question of a modern Jewish/Christian dialogue. A 15 230 0 1510

240. Religion in America. (3). A survey of the beliefs, practices and issues current in major American religious bodies with some attention to minor religions and denominations such as the Black Church, Christian Science and the Latter Day Saints. A 15 240 0 1510

245. Islam. (3). The religion in its geographical, social, political and cultural context, both Arab and non-Arab. A 15 245 0 1510

250Q. Eastern Religions. (3). An introduction to the religions of India and China. Religious studies contrasted include Hinduism, Buddhism, Jainism, Taoism and Confucianism. An attempt is made to understand religious and related societies, and the influence of ancient and dynamic cultures from the vantage point of the believer. A 15 250Q 0 1510

255. Zen and Taoism. (3). Zen is a form of Buddhism that emphasizes spontaneously and the ultimate truths of the heart and now, employing starting nonintellectual methods to free minds from the routine of world distinctions, plurality and linear time. It represents a vision that, in some respects, its most distinctive features may in fact be best understood as a Buddhist development of ideas, values and orientations found in China's ancient Taoist tradition. The Taoist view of the universe as a harmonious organic unity in which man fittingly participates by selflessly spontaneously rather than calculated intellectually. A 15 255 0 1510

260Q. Psychical Phenomena. (3). Spiritual trances and the trance phenomena as they are found in a triple world: natural, divine and intermediate. The intermediate world of the psychic, the occult, the astral, is the subject of psychological investigation. Topics include psychic out-of-body states, ESP, clairvoyance, telepathy, astral bodies in Hinduism and the Tibetan Bardo. Lecture, discussion and student reports. Visits to persons with expertise in psychic reading, out-of-body states, Kirlian photography and ESP. A 15 260Q 0 1510

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. A 15 280 0 1510

281. Cooperative Education. (1-4). Offered on a Cr/NoCr basis. A 15 281 0 1510

Upper-Division Courses

311. Old Testament Topics. (3). An in-depth study of a major facet of the religion of the Hebrew Bible, such as prophecy, eschatology, covenant, prayer, historical criticism and wisdom. A 15 311 0 1510


323. Protestantism. (3). This course traces the development of the Protestant Christian tradition and analyzes its distinctive themes. After a historical survey of this family of Christianity, the course examines specifically Protestant themes, such as justification by faith, the primacy of individual conscience and the primacy of scripture, integrating them with current phenomen. A 15 323 0 1510

324. Catholicism. (3). This course traces the development of the Catholic Christian tradition and analyzes its distinctive themes. After a historical survey of this family of Catholic thought such as the Church's role in the formation of Catholic thought as expressed in continuity and change within the church. A 15 324 0 1510

331. Modern Protestant theologians. (3). A critical study of how Protestant theologians in the 19th and 20th centuries responded to modern thought. Includes selections from such theologians as Schleiermacher, Barth, Bultmann, H. R. Niebuhr, Reinhold Niebuhr and Tillich. A 15 331 0 1510

3330. Women and Religion. (3). Cross-listed as WS 333. An examination of past and present roles and institutions in women in the Bible and religious history, as well as contemporary criticisms of patriarchal religion and resources for change. A 15 3330 0 1510

346. Philosophy of Religion. (3). Cross-listed as Phil. 346. A 15 346 0 1510

352. Modern Judaism. (3). A survey of the views of Judaism that have arisen since the Enlightenment. The course examines the origins, beliefs and practices of modern Orthodox, Conservative, Reconstructionist and Reform Judaism. In what ways are these different forms of Judaism particularly "modern"? In what ways are they continuations of an older tradition? A 15 352 0 1510

354. Zionism and Israel. (3). An examination of the national element in Judaism and the movement that has arisen in relationship to this nationalism in the 19th and 20th centuries. The course concludes with an investigation into the relationship of Judaism to Zionism and the modern state of Israel. A 15 354 0 1510

410Q. Comparative Religion. (3). An observation and analysis of the patterns found in the characteristic religious phenomena (e.g., myths, symbols, rites, institutions), with a view to a systematic understanding of man's religious experience as it has expressed itself throughout history. A 15 410Q 0 1510

419. Modern Atheists. (3). An examination and critical evaluation of some of the seminal critiques of religion in general and Christianity in particular that have been produced in the modern world. Includes selections from such figures as Spinoza, Voltaire, Feuerbach, Marx, Nietzsche, Freud and Camus. A 15 419 0 1510

421. Sociology of Religion. (3). Cross-listed as Soc. 421. A 15 421 0 1510

439. Greek and Roman Religion. (3). The transformations in the religions of the Mediterranean world that occurred following the conquests of Alexander the Great and the rise of Christianity. The course covers the traditional forms of Greek and Roman religion as well as 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 the Western church within the Roman Empire. At its most inclusive level, the course deals with the particular religious syntheses lying at the basis of Western thought: the Greek and Roman patterns of thought in the Christian world of late antiquity. A 15 439 0 1510

446. Violence. (3). A critical examination of the relationship between religion and violence as expressed in war, revolution, criminality...
and interpersonal relationships. Special attention is given to the ways religions have justified, tried to limit or ameliorate violence. A 15 446 0 1510

461. Spiritual and Psychic Experience. (3). An interdisciplinary study of the variety of spiritual and psychic experiences that are reported in the history of religion: mysticism, conversion, shamanistic experiences, spiritual healing, paranormal visions, voices and knowledge. A 15 481 0 1510

466. Meditation and Spiritual Growth. (3). The course focuses on three interrelated topics: (1) biofeedback and meditation; (2) spiritual disciplines such as prayer, contemplation, fasting and service in religious traditions; and (3) selected personal growth disciplines that appear in the contemporary human potential movement. A 15 486 0 1510

476. The Reformation. (3). Cross-listed as Hist. 576. A 15 476 0 1510

480. Special Studies. (3). A concentrated study of a theologian, a theorist of religion or a religious issue announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: instructor's consent. A 15 480 0 1510

481. Cooperative Education. (1-4). Offered on a CoReqCr basis. A 15 481 2 1510

490. Independent Study. (1-3). Designed for the student who is 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. A 15 490 3 1510

Courses for Graduate/Undergraduate Credit

750. Workshop in Religion. (2-4). A 15 750 0 1510

790. Independent Study. (1-3). Designed for the student who is capable of doing graduate work in a specialized area of the study of religion that is not formally offered by the department. Repeatable for credit. A 15 790 0 1510

Sociology/Social Work

Major. A major consists of at least 30 hours, including Soc. 111Q, 212, 501, 510 or 511, and 645 or 646. Certain courses in related departments that meet the particular needs of the students and are approved by their advisers may be counted toward a sociology major. No more than six hours of such courses may be included. With the exception of SW 2000 and 500, social work courses do not count toward the major.

Minor. At least 15 hours of sociology, including Soc. 111Q, and a minimum of six hours of upper-division courses must be taken. No social work courses may be counted toward a minor.

Emphasis in Human Social Development. Students in sociology may complete a special emphasis in human social development. Courses included in this emphasis are:

Required Core (15 hours)

Soc. 111Q, Introduction to Sociology (3 hours)
Soc. 212, Introduction to Social Research (3 hours)
Soc. 501, Sociological Statistics (3 hours)
Soc. 510, Field Research Methods, or Soc. 511, Applied Quantitative Research (3 hours)
Soc. 645, History of Sociological Theory, or Soc. 646, Principles and Concepts of Sociology (3 hours)

Option Courses (12 hours)

Soc. 300, Social Stages of Life (3 hours)
Soc. 316, The American Male, or Soc. 516, Sociology of Sex Roles (3 hours)
Soc. 315Q, Courtship and Marriage, or Soc. 515, Sociology of the Family (3 hours)
Soc. 513, Sociology of Aging (3 hours)

Sociology Electives (3 hours)

Soc. 315Q, 316, 515 or 516 when not counted as part of the option courses. Any other courses in sociology may also be counted toward the emphasis with adviser's consent.

Students are encouraged to complete their distributional requirements by taking related courses such as SW 340Q, Rel. 215 and Psych. 361, 365, 371 or 661, as well as courses in related fields such as instructional services, women's studies and anthropology.

Sociology

Lower-Division Courses

100Q. Sociology and Everyday Life. (3). Relates current sociological thought to everyday life experiences. The underlying assumption is that the discipline of sociology can effectively broaden the perspective of individuals and assist them in understanding the organization of social events facing them every day. A wide range of topics are illuminated: family relations, religion, work relations, recreational and leisure activities, education experiences, childhood and adult socialization, inter-personal relations in public and private settings, urban/rural living and fads and fashions. The course is flexible to allow students to explore, in depth, their own unique life experiences within a sociological framework. A 15 100Q 0 2208

111Q. Introduction to Sociology. (3). Introduction to basic concepts, propositions and theoretical approaches of sociology, including elementary methods of studying social phenomena. This course serves as the basic course for students who intend to take additional courses in sociology. A 25 111Q 0 2208

212. Introduction to Social Research. (3). A survey of the many research techniques found in sociology and related fields. This course stresses conceptual understanding of all phases of the research process. Prerequisite: Soc. 111Q. A 25 212 0 2208

220Q. Contemporary Social Problems. (3). An analysis of contemporary American social problems with an emphasis on urban social problems. A 25 220Q 0 2208

Upper-Division Courses

300. Social Stages of Life. (3). This course examines the development and maturation of the social self through the various stages of life. I.e. childhood, adolescence, early adulthood, middle age and old age. Topics range from dating and marriage to the mid-life crisis. Attention is given to the various stages of adult life and how the interface of social and historical events with personal experiences effect creative and productive solutions with others. Prerequisites: Soc. 111Q. A 25 300 0 2208

315Q. Courtship and Marriage. (3). The emphasis is on courtship and marriage processes as they exist in the United States today. The course is designed to aid students in the acquisition of a sociological perspective of the culture. Emphasis is made on an examination of social class, sex roles, dating and human sexuality. Marital interaction, parenthood, marital dissolution and the future of marriage are discussed in the emphasis for the latter half of the course. A 25 315Q 0 2208

316. The American Male. (3). The male role in America is examined from a variety of sociological perspectives and within particular settings, for example, work, family and leisure. Other relevant topics are socialization, intimacy and adult developmental stages and crises. Changing male roles produced by strains and conflicts in contemporary America are discussed. A 25 316 0 2208

318. Environmental Sociology. (3). Explores relationships between humans and their environment. Particular emphasis is placed on environmental usage, effects of overpopulation, resource utilization, pollution and possible solutions to environmental problems. A 25 318 0 2208

322. Deviant Behavior. (3). The structure, dynamics and etiology of deviant behavior and the social processes that are integrated around systematic violations of the control norms. Competing theories are presented and evaluated within the context of the assumption that man is a social product. Prerequisite: Soc. 111Q. A 25 322 0 2208

325. Parenting. (3). The role of parenting in American society is examined from a number
of different perspectives. The focus is on the major developmental changes facing couples as they move through their family life cycle. Among the topics covered are 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. Other topics discussed include single parents, divorce, step-parenting and dual-career parents. Several different parenting techniques and styles are discussed as well. A 25 325 0 2208

330Q. Social Inequality. (3). An analysis of status, class and caste in various societies, especially in American society. The relationship of social inequality to various social institutions is also included. Prerequisite: Soc. 1110. A 25 330Q 0 2208

331. Population. (3). The size, composition distribution and recent trends in the population of the United States and the world. Emphasis is placed on demographic processes and the relation of population to world problems. Prerequisite: Soc. 1110. A 25 331 0 2208

333Q. Sociology of the Future. (3). The future is viewed within the sociological perspective of planned and possible alternatives. A study of the correlates of change, including theory and field studies of alternative social outcomes and what indicators are presently available as options for social planners and social critics, as well as the general citizen. Prerequisite: Sociology 1110 or 2200. A 25 333Q 0 2208

334. Sociology of the Community. (3). An exploration of a basic unit of social organization, the community. Emphasis is placed on organizational and interpersonal relationships within the community and changes in these relationships, as well as the community's place within society. Prerequisite: Soc. 1110. A 25 334 0 2208

335. Sociology of Occupations and Organizations. (3). The work group as a social group, social organization of the workplace and social factors affecting the worker. A comparative approach to the study of occupations and work settings is used and worker troubles analyzed. Prerequisite: Sociology 1110. A 25 335 0 2208

338Q. Health and Lifestyle. (3). 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. Variations in personal health practices are identified according to characteristics such as social class and mental status. Considerable changes in social standards for health and illness are discussed. The social factors which create health problems are studied. A 25 338Q 0 2208

350. Social Interaction. (3). The course studies the effect groups have on individuals. Primary focus is given to the symbolic interactionist perspective in sociology. The goal of the course is to enable the student to understand how social interaction influences their daily activities. Topics covered include the meaning and importance of symbols; the nature and development of self, social roles and their influence on individuals, and the social construction of society. Prerequisite: Soc. 1110. A 25 350 0 2208

Courses for Graduate/Undergraduate Credit

501. Sociological Statistics. (3). Generally offered only in the fall semester. Application of descriptive and inferential statistics to sociological problems. Topics include measures of central tendency, dispersion and association, simple linear regression, hypothesis testing and analysis of variance. Prerequisites: Soc. 111Q and Math. 331Q. Math 111 or equivalent. A 25 501 0 2208

502. Older People and Organizations. (3). Cross-listed as Ger. 502. This course examines the agencies and organizations that deal with or are comprised of the elderly. The relationship between various social networks and the participation of the elderly as they develop new roles are examined. Prerequisite: Sociology 111Q or instructor's consent. A 25 502 0 2208

510. Field Research Methods. (3). An examination of various qualitative research tools and techniques used by sociologists. As part of the learning experience students are involved in direct field observation in natural social environments. Prerequisite: Soc. 111Q. A 25 510 0 2208

511. Applied Quantitative Research. (3). An examination of the survey as a tool used to address sociological questions. Topics include survey design, sampling, data collection techniques and interpretation of results. Students gain experience in designing and administering surveys. Prerequisite: Soc. 212. A 25 511 0 2208

513. Sociology of Aging. (3). Cross-listed as Ger. 513. Analysis of the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: Soc. 1110. A 25 513 0 2208

515. Sociology of the Family. (3). Analysis of American family behavior, including the selection of marriage partners, the husband-wife and parent-child relationships and the relation of these patterns of behavior to other aspects of American society. Prerequisite: Soc. 111Q. A 25 515 0 2208

516. Sociology of Sex Roles. (3). Cross-listed as WS 516. A course analyzing the institutional sources of man's and woman's roles, the source of changes in these roles, the consequences ambiguities and conflicts. Prerequisite: Soc. 111Q. A 25 516 0 2208

517. Intimate Relations. (3). This course is designed to examine the social dimensions of intimacy. The course includes an analysis of intimacy in different types of relationships, i.e., romantic, friendship, marriage. Theory and research in the area are reviewed with a special focus on the place of intimacy in the social interaction. Prerequisite: Sociology 111Q. A 25 517 0 2208

523. Sociology of Law. (3). The study of law and legal institutions within their social context. Prerequisite: Sociology 111Q. A 25 523 0 2208

526. Political Sociology. (3). Social basis and consequences of political behavior. Also included are the study of power and authority, problems in the management and maintenance of viable democratic political structures and bureaucratic organization and power. Prerequisite: Sociology 111Q. A 25 526 0 2208

527. Violence and Social Change. (3). The analysis of the causal processes and functions of extreme and violent political behavior, i.e., revolutionary, insurrectionary and protest movements. The course includes an analysis of consequences for social change. Prerequisite: Sociology 111Q. A 25 527 0 2208

534. Urban Sociology. (3). Urban population, organization and institutions and programs of city planning. Prerequisite: Sociology 111Q. A 25 534 0 2208

537. The Social Consequences of Disability. (3). Cross-listed as Ger. 537. An analysis of the social and cultural 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: Sociology 111Q. A 25 537 0 2208

538. Medical Sociology. (3). An analysis of social and cultural factors related to physical and mental illness. Also included are the dynamics of communication and role relationships among patients, doctors and nurses, the organization and influence of social and political factors related to the health professions. Prerequisite: Sociology 111Q. A 25 538 0 2208

539. Juvenile Delinquency. (3). The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: Sociology 111Q. A 25 539 0 2208

540. Criminology. (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Sociology 111Q. A 25 540 0 2208

541. Contemporary Corrections. (3). Historical and contemporary programs for the treatment of offenders, viewed as societal reactions to criminal behavior. Prerequisite: Sociology 111Q. A 25 541 0 2208

598. Internship. (1-6). A course used to supervise persons involved in internships or placements in the community where credit can be given. Prerequisite: Departmental consent. A 25 598 0 2208

600. Selected Topics in Sociology. (3). Study in a specialized area of sociology with emphasis on student research projects. (3) Area studies include deviant behavior, political sociology, the family and others. Repeatable for a maximum of six hours credit. Prerequisite: Sociology 111Q. Instructor's consent and substantive area course. A 25 600 0 2208

645. History of Sociological Theory. (3). Analysis of emergence of sociological theory. Prerequisite: Nine hours of sociology. A 25 645 0 2208

646. Principles and Concepts of Sociology. (3). Critical evaluation of major principles and concepts, their derivation and relationships to systems of thought. Prerequisite: Sociology 111Q. A 25 646 0 2208

651. Directed Research. (3). Designed to give the student furthor research skills in an area of special interest. All students are under the direction of a member of the graduate faculty. The student guides his own development in developing research skills. Prerequisites: Sociology 510 or 511 and instructor's consent. A 25 651 0 2208

670. Independent Reading. (1-3). Designed for the advanced student capable of doing independent work in an area of special interest. Prerequisites: 15 hours of sociology and instructor's consent. A 25 670 0 2208

Courses for Graduate Students Only

800. Research Methods in Sociology. (3). The application of research methods to sociological data. Topics include research design, sampling, data collection techniques, computer-based analysis of data, scaling and report writing. Students are expected to design their own research projects. Prerequisites: Soc. 510 or 511 and departmental consent. A 25 800 9 2208

805. Seminar in Qualitative Methodology. (3). An in-depth examination and practical application of a variety of research methods in sociology. Included are participant observation, in-depth interviewing, disguised observation, and unobtrusive measures. Prerequisites: Soc. 510 or departmental consent. A 25 805 9 2208

815. Seminar on the Family. (3). Review of recent research on the family and the theoretical implication thereof. Prerequisite: Soc. 510 or departmental consent. A 25 815 9 2208

820. Seminar in Social Movements. (3). Analysis of the elements in social movements as factors in social and cultural change. Prerequisite: departmental consent. A 25 820 9 2208

822. Seminar in Deviant Behavior. (3). In-depth examination of recent theory, methods and research in the area of deviance. Implications of future theory development are included as part of the course. Prerequisite: departmental consent. A 25 822 9 2208

825. Seminar in Organizational Analysis. (3). Exploration of selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisite: departmental consent. A 25 825 9 2208

830. Seminar in Stratification and Power Structure. (3). Analysis of the forms and dynamics of social inequality as a socio-political phenomenon. Class, status and power segments of contemporary urban society are examined with reference to their spheres of influence and structural persistence and/or change. Prerequisite: Soc. 526 or departmental consent. A 25 830 9 2208

834. Seminar in Urban Sociology. (3). Independent research projects in urban sociology. Prerequisite: departmental consent. A 25 834 9 2208

839. Seminar in Juvenile Delinquency. (3). A study of juvenile delinquency from a number of theoretical frameworks, accentuating the contemporary context of the subject matter. The course covers topics of academic and practical interest related to delinquency, i.e., causes of delinquency, re-education and treatment of delinquency, juvenile justice system, juvenile law and juvenile corrections. Special interest is given to the changing face of delinquency in America today. Students research on utilization of community resources is encouraged. Prerequisite: Soc. 539 or departmental consent. A 25 839 9 2208

841. Advanced Seminar on Theories of Correctional Treatment. (3). Evaluation of the range of contemporary theories of individual and group techniques of correctional treatments with special emphasis upon the literature related to research processes and outcome research. Prerequisite: Soc. 541 or departmental consent. A 25 841 9 2208

845. Seminar in Sociological Theory. (3). A course emphasizing continuities between European and American social theory. The perspective is both historical and analytical, spanning the 19th, 19th and 20th centuries, and concluding with the works of representative contemporary theorists. Prerequisite: Soc. 645 or 646 or departmental consent. A 25 845 9 2208

847. Seminar in Recent Developments in Sociology. (3). An introduction to new theoretical, new techniques of research, new areas of research and new applications. Repeatable for credit but not to exceed six hours. Prerequisites: 15 hours of sociology and departmental consent. A 25 847 9 2208

851. Directed Research. (1-3). Designed 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. Prerequisite: Soc. 800 and instructor's consent. A 25 851 4 2208

860. Proseminar in Teaching Sociology (1). This course focuses on the teaching of sociology. Emphasis is placed on teaching techniques, course organization and evaluation. Prerequisite: graduate student status. A 25 860 0 2208

870. Independent Reading. (2-3). An advanced systematic reading in a topical area under the tutelage of a member of the graduate faculty. Repeatable for credit not to exceed six hours. Prerequisite: departmental consent. A 25 870 3 2208

875-876. Thesis. (5-6). A 25 875 4 2208; A 25 876 4 2208

Social Work

A major and minor are provided in the sociology/social work department for training in various areas of social work and human services. Courses are designed primarily to prepare students for beginning professional social work practice at the baccalaureate level, but they also are valuable in preparing students for graduate training in social work. The social work sequence is useful for students planning to enter other helping professions as well as responsible community participation in human concerns. WSU's program is accredited by the Council on Social Work Education. Social work practice requires licensure by the state of Kansas.

Major: A major in social work requires at least 48 hours (33 hours in social work courses and nine hours in related departments) as follows: SW 200Q, 201, 500, 502, 560, 601, 602, 604 and 605. This required curriculum includes nine hours in field instruction (practicum) courses: SW 602 and 605. Requirements in related departments include Soc. 212 and six hours from a list of social and behavioral science courses approved by the social work faculty and selected in consultation with a social work advisor.

Minor: A minor in social work requires at least 19 hours in social work courses as follows: SW 200Q, 201, 500, 502, 601 and 602. This required curriculum includes four hours in the field instruction (practicum) course SW 602.

Lower-Division Courses

100Q. Explorations in the Helping Professions. (3). An introduction to the helping professions as they relate to the whole person. The course emphasizes the common helping processes of each profession, how they developed and how they differently relate to human problems. A 25 100Q 0 2104

150. Aspects of Social Work. (Workshop). (2-5). Aspects of social work practice relating primarily to paraprofessional work with practitioners regarding basic human needs and the fundamentals of helping. May be offered as follows: SW 750. A 25 150 2 2104

2000. Understanding Social Welfare. (3). Introduction to a broad spectrum of community services with emphasis on public and private systems which address individual, family and group needs. The relationships of area services to larger social welfare institutions and to cultural heritage are systematically examined, including unmet needs, policy trends, current issues and the normative aspects of determining who should be helped and how. A 25 2000 0 2208

201. Introduction to Social Work Practice. (3). An introduction to the Advanced Seminar on Theories of Correctional Treatment. (3). Evaluation of the range of contemporary theories of individual and group techniques of correctional treatments with special emphasis upon the literature related to research processes and outcome research. Prerequisite: Soc. 541 or departmental consent. A 25 841 9 2208

3400. Human Sexuality. (3). Cross-listed as WS 340. Provides a forum for information and discussion on topics relating to physical, psycho-social and cultural components of human sexuality. Selected topics include female and male sexual attributes and roles, sexual problems, alternative lifestyles, birth control, values and sexuality and cultural components of sexuality. A 25 3400 0 6666

Courses for Graduate/Undergraduate Credit

500. Social Welfare Policy and Services I. (3). Descriptive and analytical approach to the social welfare system, emphasizing its historical, structural and value base. Alternative program strategies of meeting individual and group needs are included. Prerequisites: SW 200Q and Soc. 212. A 25 500 0 2104

502. Strategies and Techniques in Inter-
ventive Skills. (4). This course introduces students to the study and practice of interpersonal and group interaction skills within the framework of a social work helping process. The course focuses on developing skills in professional observation, communication, interviewing, recording, and reporting. The course is didactic as well as interactive and includes an integrated laboratory component which focuses on experimental learning. Required for social work majors. Departmental consent for non-majors. Prerequisite: SW 201 for social work majors. Departmental consent for non-majors. A 25 502 2 2104

550. Social Welfare Policy and Services II. (3). Analytical approach to social welfare problems, policies, programs and issues, including an analysis of the influence of values on the formation of social welfare policy. In-depth examination of selected issues in public and voluntary areas and techniques of meeting needs are included. Prerequisite: SW 500. A 25 550 0 2104

551. Independent Studies. (1-3). Individual projects designed for social work students who are capable of doing independent work in areas of special interest. Repeatable for credit not to exceed a total of six hours. Instructor's consent. A 25 551 3 2104

560. Personal Human Interaction Within Society. (3). This course provides students with a beginning theoretical framework within which the integration of prior knowledge can be made regarding physical, mental and social development of the human being, perspectives on American culture and subcultural variations and their effect on human adaptability to social environment and the relationship of those entities to beginning professional social work practice. Prerequisites: SW 200 and six hours from a list of social and behavioral science courses approved by the social work faculty and selected in consultation with a social work adviser. A 25 560 0 2104

570. Internships in Social Work. (3-6). To provide a specially designed field experience for special students who need or desire training that will develop their professional abilities and for whom academic credit is appropriate. It is also designed to meet experiential learning needs of special designated students for whom academic credit is appropriate. Repeatable for credit not to exceed a total of six hours. Instructor's consent. A 25 570 2 2104

601. Advanced Social Work Practice. (3). Advanced practice theory with special emphasis on becoming both knowledgeable and skillful in applying theory to practice. The focus of the class is on developing a clear understanding of concepts, principles, techniques and processes of social work methods as they relate to individuals, families and groups and to the larger community. This course is to be taken concurrently with SW 602 except by departmental consent. Prerequisite: SW 501 and department consent. A 25 601 2 2104

602. Practicum I. (4). Placement in community social welfare agencies for supervised periods of observation and direct service assignments with special emphasis on performance of basic practice process and understanding of the social welfare agency and its role in the community service network. This course is to be taken concurrently with SW 601 except by departmental consent. Prerequisite: A grade of "B" or better in SW 502 and departmental consent. A 25 602 2 2104

604. Seminar on Research in Practice. (3). A critical look at practice and professional issues, using social work research. The course analyzes current social work practice, as well as its future directions. SW 605 is to be taken concurrently except by departmental consent. Prerequisite: SW 601. A 25 604 2 2104

605. Practicum II. (5). Placement in community social welfare agencies for supervised direct service assignments with emphasis on formulation of appropriate goals. The selection of various social work roles and in-depth development of techniques and skills common to practice in the social welfare field are included. SW 604 is to be taken concurrently except by departmental consent. Prerequisite: SW 602. A 25 605 2 2104

610. Aging: Personal, Social and Professional Perspectives. (3). Cross-listed as Ger. 610. A realistic look at the comprehensive role of social work practice and the helping professions in work with the aging. Provides a focus on work with individuals, groups and community organizations. Links social with economic and political factors. Highlights current and future developments in social policy, public service practice and demography as the total work force is utilized. Prerequisite: departmental consent. A 25 610 2 2104

750. Social Work Workshops. (1-5). Specialized instruction using a variable format in a social welfare oriented subject. This course may be offered together with SW 150. Prerequisite: Instructor's consent. A 25 750 2 2104

Spanish (See Modern and Classical Languages and Literatures)

Speech Communication

A major in the Department of Speech Communication requires a minimum of 35-39 hours with a specialization in one of the following areas:

1. Rhetoric and Communication—(36 hours)—Speech 111, 112, 114, 211, 213, 2210 or 222, 2280 and at least 18 hours of electives chosen with the area adviser's consent from rhetoric and communication courses. Majors in rhetoric and communication are encouraged to participate in forensics activities.

2. Theater—(39 hours)—Speech 180, 2210, 2434, 244, 245, 254, 259, 380, 6230, 624, 628, 650, 661, plus six hours of electives with the area adviser's consent from theater courses.

3. Combined Theater and Rhetoric and Communication—(39 hours)—Speech 111, 112, 211, 213, 2210, 2280, 2434, 244, 259, 650, 661, plus six hours of electives with the area adviser's consent from theater courses.

Students planning to teach should also check the state certification requirements to make sure that they will fulfill the necessary requirements. Students must meet the requirements for the professional education sequence and, prior to admission to the student teaching semester, must have a 2.50 overall grade point average in their major field and recommendation from the major department. Students in Fairmont College of Liberal Arts and Sciences must meet the graduation requirements for both Fairmont College and the College of Education.

Broadcast-Journalism Combined Major—(36 hours)—Speech 114Q, 214, 2210 or 222, 304, 322, 332, 522 and 606 and Journ. 200 and 500, plus six hours of electives. The six elective hours must be taken in upper-division speech or journalism courses. Students must also have a concentration (or minor) of not less than 15 hours in one additional field of study with the consent of their adviser.

Minor—A minimum of 15 hours must be selected with the approval of the speech communication department. At least six of the 15 hours must be upper-division courses. Students interested in a radio-television-film minor are required to have a minimum of 18 hours and must take Speech 114Q, 214, 304 and 332, plus six hours of electives with the area adviser's consent.

General

Lower-Division Courses

111. Basic Public Speaking. (3). A study of...
basic concepts of speech communication and to teach public speaking. The course is designed for students wishing to enhance leadership potential by improving traditional public speaking situations. Content is centered around a speech communication major. (The University's requirements in oral communication may be fulfilled by completion of either Speech 111 or 112. For credit, only qualified students, an examination or advanced standing examination is available. For further information, contact the speech communication department.) A 27 111 0 1506

112. Basic Interpersonal Communication. (3). To develop an awareness of the elements of interpersonal communication and to aid the student in establishing more meaningful and satisfying interpersonal relationships through participation in group dynamics. The course is not counted toward a speech communication major. (The University's requirements in oral communication may be fulfilled by completion of either Speech 111 or 112. For credit, only qualified students, an examination or advanced standing examination is available. For further information, contact the speech communication department.) A 27 112 0 1506

281. Cooperative Education. (1-4). The goal of this course is to provide the student with a field placement that integrates theory with 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 once for credit. Prerequisite: departmental consent. Offered for Cr/Ncr only. A 27 281 2 1506

Upper-Division Course

481. Cooperative Education. (1-4). The goal of this course is to provide the student with a field placement that integrates theory with 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 once for credit. Prerequisite: departmental consent. Offered for Cr/Ncr only. A 27 481 2 1506

Courses for Graduate Undergraduate Credit

650. Instructional Communication. (3). The study and practice of communication concepts, processes, and strategies related to formal instruction and learning outcomes. By means of structured experiences, students develop competencies in (1) determining appropriate instructional goals, (2) planning instructional strategies, and (3) achieving learning outcomes. (3) utilizing visual, vocal, and verbal communication skills to implement instructional strategies and (4) assessing the effectiveness of communication skills used for instruction. Course flexibility in planning and emphasis provides for the utilization of instructional communication across disciplines and educational levels as well as in most professional and training settings. A 27 650 0 1599

650. Seminar in Speech. (2-3). Special seminars designed to treat current areas of interest or problems in: (a) rhetoric and communication, (b) theater, (c) radio-television film or (d) speech education. Repeatable for credit in different topics only. A 27 660 9 1599

661. Directing the Forensics Program. (3). A study of the methods and procedures in coaching and directing the high school and collegiate forensics programs (debate and individual events). The future teacher is made aware of the role of forensics in professional organizations in the field. A 27 661 0 1599

665. Communicative Disorders. (3). Cross-listed as CDS 705. A survey of speech, language and hearing disorders; their identification and treatment; and consideration of the roles of the health and educational specialists in the total rehabilitative process. Background in normal communicative structures, processes and acquisition is provided for understanding communicative disorders. Areas include: introduction and understanding disabilities in children, adult aphasia, articulation disorders, voice disorders, cleft palate, laryngectomy, stuttering, cerebral palsy and hearing impairment. A 27 665 0 1220

675. Directed Study. (2-4). Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent. A 27 675 3 1599

750. Workshops in Speech. (2-4). A 27 750 2 1599

Radio—Television—Film

Lower-Division Courses

114G. Introduction to Radio and Television. (3). The structure and operation of broadcasting in the United States. Includes review of radio and television advertising, programming, regulation and history. Provides perspective on the broadcasting industry in the community. A 27 114G 0 0603

214. Radio Production. (3). Production and direction of radio programs. Hands-on use of all standard radio sound equipment to learn techniques of sound blending and reproductions. A 27 214 1 0603

215. Radio Practicum. (2). Application of theory to practice through performing various activities at KMUW. Prerequisite: Speech 214 or instructor's consent. A 27 215 2 0603

2200. Introduction to Film Studies. (3). Emphasis is placed on the broad techniques and function of film as a mode of communication. Selected films are shown in class. A 27 2200 3 0603

Upper-Division Courses

304. Television Production. (3). Basic principles, procedures and techniques of television production. Emphasis on the design, planning and operation of studio equipment and direction of television programs. Prerequisite: instructor's consent or Speech 214. A 27 304 2 0603

315. Advanced Radio Practicum. (2). Application of theory to practice through performing various activities at KMUW. Six hours per week. Prerequisite: Speech 215 or instructor's consent. A 27 315 5 0603

320. Cinematography. (3). A production course in motion picture making. Theory and technique are both emphasized with practical experience in conception and the use of camera and editing equipment for film projects. A 27 320 0 0603


332. Radio-Television Writing. (3). Writing formats, commercials, continuity and drama for radio and television. A 27 332 0 0603

Courses for Graduate Undergraduate Credit

500. Documentary and Propaganda Films. (3). An investigation into the evolution, theories and techniques of documentary and propaganda film making. Emphasis placed upon the role of film in formulating and affecting public opinion and attitudes in modern society. A 27 500 0 0603

509. Directed Projects in Instructional Television. (2). Practical assignments in instructional television and cablecasting. Activities include six hours per week in campus television exercises. Prerequisites: Speech 504 and instructor's consent. A 27 509 0 0603

522. Advanced Broadcast News. (3). Cross-listed as Journ 522. A course in the techniques of preparing news for radio and television presentation with emphasis on actual work in radio and television newsrooms. Prerequisite: Speech 322 or Journ 322. A 27 522 1 0603

604. Advanced Television Production and Direction. (3). Application of television equipment and techniques for expression of ideas and concepts. Execution of visual and audio impression in relation to effective communication. Prerequisite: Speech 605 or instructor's consent. A 27 604 2 0603

605. Radio and TV Station Management. (3). The organization and management of radio and television stations, including administrative, programming, technical, and sales problems and physical facilities. Prerequisite: departmental consent. A 27 605 0 0603

606. Broadcasting and the Law. (3). Explores legal forces operating in the broadcast industry emanating from laws, rules and regulations of various federal agencies, industry self-regulation and citizen action. Emphasis is on the underlying philosophy and trends in influencing various events in broadcast regulatory history. A 27 606 0 0603

607. Radio and TV Programming. (3). Planning, developing and scheduling based upon audience analysis and market analysis, program ratings, principles of evaluation and criticism. A 27 607 0 0603

609. Educational and Instructional Broadcasting. (3). Investigation and application of production techniques for educational and instructional broadcasting, with emphasis on television. Prerequisite: Speech 504. A 27 609 0 0603

Rhetoric and Communication

Noncredit Course

011. Reducing Fear of Speaking. (2) A
course designed 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. The goal of the course 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. A 27 011 0 1506

Lower-Division Courses

150A. 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. A 27 150A 5 1506

190G. Crises in Communication. (3). An exploration of several alternative frameworks by which man copes with and controls the communication environment. The student has both observational and experiential opportunities to discover the variety of patterns used by humans to symbolically interact with each other and with their environment. Multimedia instructional procedures are utilized. A 27 190G 0 0601

202. Debate and Forensics. (2). 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 four hours credit. May not be counted toward a major. Prerequisite: departmental consent. A 27 202 5 1506

211. Persuasive Speaking. (3). Training in influencing human behavior in socially acceptable ways via the spoken word. A 27 211 0 1506

213Q. Argumentation and Advocacy. (3). A study of the principles of effective rational discourse, oral and written, dealing with controversial issues and issues of deliberative, forensic and educational areas. Includes valid and fallacious reasoning as well as tests of evidence. A 27 213Q 0 1506

222. Improving Voice and Diction. (3). A course for students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. The course is performance oriented; however, the theory of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction. A 27 222 0 1506

225. Parliamentary Law and Procedure. (1). The parliamentary rules governing the order and conduct of meetings and the methods of keeping and writing minutes and resolutions. A 27 225 0 1506

228Q. Small-Group Communication. (3). A study of the nature and functions of groups and development of skills for identifying and evaluating communication behavior as reflected in human interaction in small-group situations. A 27 228Q 0 1506

Upper-Division Courses

312Q. Nonverbal Communication. (3). A study of theory and research in nonverbal communication. Emphasis is given to the application of nonverbal communication to the total human communication process. Prerequisite: Speech 111 or 112. A 27 312Q 0 1506

325. Business and Professional Speaking. (3). A study of the basic concepts of public speaking and discussions as they apply to the business and professional person. Emphasis is given to public presentations, group leadership and interpersonal communication as appropriate to business and professional groups. A 27 325 0 1506

335. Development of Rhetorical Theory. (3). Review of the historical foundations of contemporary communication theory from the perspective of selected individuals and works encompassing the Greco-Roman, Medieval, English and American rhetorical thought. A 27 335 0 1506

342. Debate and Forensics. (2). 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 four hours credit. May not be counted toward a major. Prerequisite: departmental consent. A 27 402 5 1506

Courses for Graduate/Undergraduate Credit

612. Contemporary Theories of Oral Communication. (3). Conceptual models useful in the scientific study of speech and application from selected areas of psychology, sociology, anthropology and related fields. A 27 612 0 1506

613. Advanced Theories of Argumentation. (3). Intensive examination of the principles and problems of reasoned discourse. A 27 613 0 1506

615. Language and Symbolic Processes. (3). Application of the theoretical framework of general semantics, linguistics and psycholinguistics to the analysis of oral language behavior. A cross-listed course therefore. A 27 615 0 1506

632. American Public Address. (3). Cross-listed as Amer. Stud. 632. A detailed study of notable American speakers and their public utterances. Their impact on the political, economic and social history of this nation from colonial times to the present is assessed. A 27 632 0 1506

635. Leadership Techniques for Women. (3). Cross-listed as WS 635. A course designed to provide the woman student experience in decision making and to improve skills in leadership through role playing and exercise in group dynamics. A 27 635 0 1506

636. Advanced Public Speaking. (3). Theory and practice in the various forms of platform speaking for the academically mature student. Course includes such special forms as the after-dinner speech and speeches of introduction, keynote and courtesy. A 27 636 0 1506

637. Processes and Effects of Mass Persuasion. (3). An exploration into the effects of mass communication at the individual, social and cultural levels. A 27 637 0 1506

672. Practicum in Audience Measurement. (3). Application of research techniques to practical problems in audience measure-
Courses for Graduate/Undergraduate Credit

516 & 517. Playwriting I and II. (3 & 3). Cross-listed as Eng. 517 and 518. The work of advanced playwrights and playwrights. Emphasis is on both verbal and visual aspects of playwriting. If possible, the scripts are performed. Prerequisite: instructor's consent. A 27 516 0 1007 & A 27 517 0 1007

542. Advanced Acting. (3). Continued development of methods established in Speech 2430 with additional emphasis on contemporary vocal and movement techniques. Prerequisite: Speech 243O and sophomore standing. A 27 542 0 1007

544. Advanced Stagecraft. (3). R; L arr. A study of the principles of scale perspective and foreshortening applied to the stage with consideration of the elements of design and composition, light and shadow as employed in scene design. All elements of advanced stagecraft, including new materials and scenic techniques, are considered in this study. Students complete practical studio work in the design of settings for a variety of productions. They must complete at least one project design including elevation drawing, watercolor perspective, scaled model and a complete set of working drawings. Prerequisite: Speech 244. A 27 544 0 1007

559. Directing II. (3). R; L arr. The problems of production with emphasis on the problems of the period and stylized play. Prerequisites: Speech 259 or departmental consent and junior standing. A 27 559 0 1007

610. Musical Theater for the Public School Teacher. (2). Provides an interdisciplinary course, utilizing interdepartmental expertise (speech and music) to teach the student in both areas how to produce a musical in the secondary schools. Prerequisite: concurrent enrollment in Mus. ed. 610. A 27 610 0 1007

621. Advanced Oral Interpretation. (3). Intensive study and analysis of various forms of literature and the techniques of effective oral communication and the building of the individual or group concert recital. Arranged workshops and festivals. Prerequisites: Speech 221 and junior standing. A 27 621 0 1007

622. Academic Theater Practicum. (2). The investigation and exploration of the theatrical act in the classroom situation within the University community. This course is designed to reinforce the researching, writing, directing and production skills of effective oral communication and the building of the individual or group concert recital. Prerequisites: Speech 221 and junior standing. A 27 622 0 1007

623Q. Development of the Theater I. (3). The history of theatrical activity as a social institution and an art form, from its beginnings to the 17th century. Representative plays, methods of staging and theatrical architecture of various periods are included. A 27 623Q 0 1007

624Q. Development of the Theater II. (3). From the 17th century to the present. A 27 624Q 0 1007

625. 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: Speech 623Q or 624Q or departmental consent. A 27 625 0 1007

628. Playscript Analysis. (3). The course is designed to develop students' abilities to analyze playscripts from the point of view of those who face the task of staging them. The focus is on studying and testing practical methods of analysis developed by outstanding theater directors, teachers and critics. Course work includes analysis of plays and playscript. Prerequisite: Speech 623Q or 624Q. A 27 628 0 1007

644. Scene Design. (3). Fundamentals of scene design. Practical work on University Theatre and Experimental Theatre production included. A 27 644 0 1007

645. Stage Lighting. (3). R; L arr. Lighting equipment and its design and its relation to scenery design. Emphasis is upon the problems in schools and colleges. Practical work on University Theatre and Experimental Theatre production included. Prerequisite: Speech 244 with a grade of "C" or better. A 27 645 0 1007

653. History of Costume. (3). R; L arr. Historical survey and individual research of dress from ancient Egypt to the present day with emphasis on the social, political, economic, and religious influences. Theory and practice of adapting period styles to the stage. Prerequisite: Speech 253 or departmental consent. A 27 653 0 1007

Courses for Graduate Students Only

820. Investigation and Conference. (2-3). Directed research and experimentation for graduate students in some phase of (a) public address, (b) theater history and production, (c) radio-television or (d) the teaching of speech. Repeatable for credit up to a total of six hours. A 27 820 0 1599

823. History of Dramatic Criticism. (3). A survey and analysis of major dramatic theories from Aristotle to the present. A 27 823 0 1007

824. Development of Modern Theater Styles. (3). An examination of the major movements in the modern theater since 1870. Emphasis is on both literary and physical elements of plays. A 27 824 0 1007

830. Theories of Rhetoric: Classical. (3). Cross-listed as Eng. 835. An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Princpal emphasis is on Isocrates, Plato, Aristotle, Quintilian, Cicero and Longinus. A 27 830 0 1506

845. Organizational Communication. (3). Cross-listed as Mgmt. 845. A study of organizational communication and its applications as analyzed through various case studies. A 27 845 0 1506

860. Seminars in Speech. (2-3). Special seminars designed to treat problems in (a) public address, (b) drama, (c) radio-television or (d) speech education. Repeatable for credit. A 27 860 0 1599

865. Organizational Communication. (3). Cross-listed as Mgmt. 865. An analysis of communications in organizations with emphasis on their applications to communication problems in organizations. A 27 865 0 1506

867. Trends in Speech Education. (3). To provide advanced speech students with a background for a philosophy of speech education. Prerequisite: instructor's consent. Readings and seminar discussion will concern the philosophical and scientific aspects of speech education. Students will be encouraged to discuss their philosophy of speech education, the meaning of speech education, the applications of theories and methods, and projects in speech education. A 27 867 0 1506

Women's Studies

The major in women's studies includes courses in various fields, especially in the humanities and social sciences, which present a coherent picture of woman's past. The activities in the present and the ways of increasing her capacity to function as a full human being in the present and the future. Students preparing for vocations which emphasize women's concerns are especially encouraged to pursue women's studies as a second major.

The major consists of at least 24 hours, including WS 3870, 3880 and 3900. In addition, appropriate courses may be selected as follows: anthropology, anthropology, history, literature, art, music, sociology, philosophy, psychology, and political science. Courses count toward a second major or minor in another field may not be included. The minor consists of 15 hours, including WS 3870 and 3880. In addition to the courses listed below, the following courses are also available toward a major or minor in women's studies: Biographies and Autobiographies of Great and Notable Women (Hon. 301E), Discovering Regional
Women (WS 539) and Issues in Gender Role Counseling (CSP 752K).

Lower-Division Courses

163. Women in Business. (3). Cross-listed as Mgmt. 163. B 12 163 0 0506

180A. Assertion Training for Women. (1). This course is designed to teach women assertive skills. A 10 180A 0 4903

180B. The Working Woman. (2). This course focuses on the needs and interests of currently employed women and those returning to work. A 10 180B 0 4903

180C. Women's Sexuality. (1). This course presents information on women's sexuality from physiological, psychological and sociocultural perspective. A 10 180C 0 4903

180D. Domestic Violence. (1). This course deals with the roots of domestic violence embedded in family roles, legal systems and religious beliefs. A 10 180D 0 4903

180E. Rape Information and Prevention. (1). This course explores the cultural myths and stereotypes about rape. A 10 180E 0 4903

180F. Sex and Spirituality. (1). This course explores the influence of religious images and doctrines on the sexuality of women and men. A 10 180F 0 4903

180G. Advanced Assertion Training for Women. (1). This course is for students who have already taken Assertion Training for Women. A 10 180G 0 4903

180H. Women and Dependencies. (3). This course examines the various ways in which women are victims of their own dependencies in areas such as chemical dependency, social and prescriptive drugs, sexual and religious beliefs. A 10 180H 0 4903

200. Women Throughout Western Civilization. (3). Cross-listed as Hist. 200. A 10 200 0 2205


Upper-Division Courses

316. The American Male. (3). Cross-listed as Soc. 316. A 10 316 0 2205

325. Women in the Political System. (3). Cross-listed as Pol. Sci. 325. A 22 325 0 2205

333. Women and Religion. (3). Cross-listed as Rel. 333. A 10 333 0 1510

339. Philosophy of Feminism. (3). Cross-listed as Phil. 339. A 10 339 0 4902


380. Special Topics. (1-3). This course focuses on intermediate topics of interest to women's studies. A 10 380 0 4903

382. Women in the Administration of Justice. (3). Cross-listed as AJ 382. A 10 382 0 2105

387Q. Women in Society: Cultural Images. (3). This course examines the roles, relationships and roots of women in our society as reflected in such areas as art, literature, myth, religion, psychology, education and politics. Women in other cultures and other times are also considered, as are feminist visions of the future. (Course not available for credit to students who have taken Humanities 389.) A 10 387Q 0 4903

388. Women in Society: Social Issues. (3). This course examines women's efforts to claim their identity from historical, legal and social perspectives. Included for consideration are recent laws relating to women; contemporary issues (such as rape, domestic violence, women working, women's future, marriage); agencies for change; theories of social change; and the relationship of women's rights human rights. (Not available for credit to students who have taken Humanities 389.) A 10 388Q 0 4903

390Q. Motherhood: Myths and Realities. (3). This course focuses on the nature of motherhood as an idea, myth and experience. Stereotypes about motherhood, approaches to motherhood in various cultural settings and time periods, religious attitudes toward motherhood, the adult "child" and her relationship with mother, the experience of childbirth, motherhood as related to economic and political realities and the future of motherhood are some of the topics explored in this course. A 10 390Q 0 4903

481. Cooperative Education. (1-4). The goal of this course is to provide the student with a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Offered Cr/NC. A 10 481 3 4903

499B. Women in American Film. (3). Cross-listed as Amer. Stud. 499B.) The changing role of women in 20th century American society can be understood by how they have been depicted in American films which both create cultural values and reflect them. Topics include the Victorian princesses, flappers and vamp of the twenties, chorus girls and fortune-hunters of the thirties, patriotic housewives, professionals and "Rosie the Riveter" of the forties, the sex objects of the fifties; and the revolutionary women of the sixties, as well as contemporary images. A 10 499B 0 4903

Courses for Graduate/Undergraduate Credit

516. Sociology of Sex Roles. (3). Cross-listed as Soc. 516. A 10 516 0 2208

530. The American Woman in History. (3). Cross-listed as Hist. 530. A 10 530 0 2205

533. Women and the Law. (3). This course is an introduction to 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. Consideration also is given to women in the field of law, such as attorneys and legislators. A 10 533 0 4903

534. Psychology of Women. (3). Cross-listed as Psych. 534. A 23 534 0 2901

535. Images of Women in Literature. (3). Cross-listed as Eng. 535. Women characters as stereotypes, archetypes and fully developed human beings in the works of various authors. A 10 535 0 1502

536Q. Writing by Women. (3). Cross-listed as Eng. 536. The work of major women writers, both British and American, in poetry and prose. A 10 536Q 0 1502

542. Women in Other Cultures. (3). Cross-listed as Anthro. 542. A 10 542 0 2206

570. Directed Readings. (1-3). This course is designed for students who wish to pursue special reading or research projects not covered in course work. A 10 570 0 4903

580. Special Topics. (1-3). This course focuses on advanced topics of interest to women's studies. A 10 580 0 4903

580B. History of Women's Culture. (3). This course surveys the contributions of American women to visual arts and crafts, poetry and music from the late 18th century until the emergence of the 20th century women's art movement. A 10 580B 0 4903

580C. Contemporary Women's Art. (3). This course looks at works by women in the visual arts, music and poetry since the 1960s. A 10 580C 0 4903

580D. Theories of Feminism. (3). This course examines various approaches taken by theorists both of the women's movement and of the cultural status of women. A 10 580D 0 4903

589. Seminar in Women's Issues. (3). Designed to give students experiential learning in interdisciplinary skill development related to women's issues in law, psychology, sociology, economics and literature and to offer independent study and field work in the students' area of specialization related to women. A 10 589 0 4903

595. Leadership Techniques for Women. (3). Cross-listed as Speech 595. A course designed to provide the woman student experience in decision making and to improve skills in leadership through role playing and exercise in group dynamics. A 10 595 0 4903

750. Current Concerns of Women. (2-3). Workshop. P 14 750 0 4903

870. Directed Readings. (2-3). Designed for graduate students wishing to pursue research in areas not normally covered in course work. Repeatable for credit with department consent. Prerequisite: instructor's consent. A 10 870 0 4903

880. Seminar in Women's Studies. (3). Intensive study of selected women's studies topics. Seminar discussion reports and research project. Repeatable for credit with department consent. Prerequisite: instructor's consent. A 10 880 0 4903
University Faculty—Fall, 1985

Date or dates following title refer to time of initial and successive appointments. Faculty listed have academic rank.


Ackerman, Paul D., Assistant Professor of Psychology (1969). BA, University of Kansas, 1964; MA, 1966; PhD, 1968.


Adams, Vinnette, Associate Professor of French and Chairperson of Department of Modern and Classical Languages and Literatures (1979). Diplome de Fin d'Etudes Normales, Ecole Normale d'Institutrices, 1968; MA, North Carolina Central University, 1969; PhD, Washington University, 1975.

Allen, Thomas W., Assistant Professor of Educational Technology and Associate Dean for Media Resources Center (1974). BA, University of Kentucky, 1968; MS, Clarion State College, 1974.

Ahberg, Clark D., University Professor (1968). BA, The Wichita State University, 1939; MA, Syracuse University, 1942; PhD, 1951; LLD, St. Lawrence University, 1981.

Ahmed, Bassamat O., Assistant Professor of Nursing (1984). BSN, Cairo University, 1941; MD, 1956; PhD, 1971.


Alcorn, Rev. Robert, Associate Professor of Physics and Executive Director of Lake Afton Public Observatory (1971). BS, Kansas State University, 1961; AM, Indiana University, 1968; PhD, 1971.


Bard, Frank E., Assistant Professor of Sociology (1967). BS, Pittsburg State University, 1959; MA, 1960; PhD, University of Missouri, 1969.

Batke, S., Associate Professor of Chemistry (1964). Candidate Ryskuniversiteit Groningen Netherlands, 1952; PhD, Tulane University, 1955.


Arthur, David L., Assistant Professor of Mathematics and Statistics (1968). BA, University of Zaragoza, Spain, 1942; MS, Dalhousie University, 1959; PhD, University of Saskatchewan, 1966.


Babich, Judith, Assistant Professor of Speech Communication (1984). BA, Edgecliff College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.

Bair, Sue F., Assistant Professor of Physical Education (1966). BA, The Wichita State University, 1961; ME, 1967.

Bagaj, Prem N., Associate Professor of Mathematics and Statistics (1968). BA, Punjab University, 1951; MA, 1954; MS, Case Western Reserve University, 1967; PhD, 1968.

Baikken, Linda, Assistant Professor of Educational Psychology (1985). BA, Northern Michigan University, 1960; MS, Utah State University, 1979; EdD, Boston University, 1983.


Barrett, Elwin, Assistant Professor of Social Work and Director of Undergraduate Program in Social Work (1974). BA, University of Missouri-St. Louis, 1957; MSW, 1959; DSW, University of Southern California, 1974.

Bartel, Peter S., Assistant Professor of Physics (1965). AB, Bethel College, 1943; MA, University of Iowa, 1953.


Bateman, Morita M., Associate Professor of Decision Sciences (1966). BSME, University of South Carolina, 1946; MS, University of North Carolina, 1950; PhD, Oklahoma State University, 1963.


Beckman, Steven, Assistant Professor of Economics (1981). BS, University of California, Davis, 1975; MA, 1976; PhD, 1982.


Bell, Karen, Assistant Professor of Philosophy (1985). BA, Boston College, 1974; MA, 1976; PhD, 1985.

Bell, John A., Associate Professor of Mathematics and Statistics (1966). BA, University of Nebraska, 1956; PhD, Texas Tech University, 1971.


Bennett, John T., Associate Professor of Electrical Engineering and Dean for Graduate Studies and Research (1967). BSEE, Oklahoma State University, 1951; MSFEE, University of Missouri, 1957; PhD, Purdue University, 1965.

Benson, Fred W., Assistant Professor of Administration of Justice (1976). BA, Earlham College, 1952; MBA, University of Michigan, 1954; JD, 1957.

Berg, J. Robert, Professor of Geology (1946). BA, Augustana College, 1938; MS, University of Iowa, 1942; PhD, 1948.

Bernhart, Walter D., Professor of Aeronautical Engineering (1954, 1964). BSCE, Kansas State University, 1950; MS, The Wichita State University, 1959; PhD, Oklahoma State University, 1964. Licensed Professional Engineer—Kansas.


Billings, Walter K., Assistant Professor of Anthropology (1959). BA, University of Wisconsin, 1955; PhD, University of Sydney, 1962.


Birwood, William, Assistant Professor of Geology (1984). BA, DePauw University, 1979; MS, Northwestern University, 1982; PhD, 1985.


Blaikeslee, Donald J., Associate Professor of Anthropology (1962). BA, Northern Illinois University, 1967; MA, 1970; PhD, Michigan State University, 1976.

Blazicke, Donald L., Assistant Professor of Administration of Justice (1976). BA, Northern Illinois University, 1967; MA, 1970; PhD, University of Wisconsin-Milwaukee, 1975.


Blume, Nancy, Assistant Professor of Nursing (1981). BS, University of Northern Iowa, 1965; MS, Creighton University, 1964.

Blythe, Jack G., Professor of Geology (1949, 1957). BA, The Wichita State University, 1947; MS, Northwestern University, 1950; PhD, University of Oklahoma, 1957.


Booz, John H., Professor of History (1965). BA, University of Texas, 1952; MA, University of Houston, 1958; PhD, University of New Mexico, 1963.

Borresen, C. Robert, Associate Professor of
of Nursing (1975); BSN, The Wichita State University, 1975; MN, 1978; PhD, Kansas State University, 1981.

Hughes, Dale, instructor of Mathematics and Statistics (1957); BS, University of Missouri at Rolla, 1974; MA, Washington University, 1981.

Humphrey, Bobbye J., Assistant Professor of Nursing (1976); AB, Friends University, 1948; MSW, University of Kansas, 1964.


Huntley, Diane E., Associate Professor of Dental Hygiene (1976); BA, University of Bridgeport, 1968; MA, State University of New York at Binghamton, 1971; PhD, Kansas State University, 1985.

Hurst, Frederick M., Instructor, Educational Technology and Production Coordinator of Multimedia Production (1978); BA, Indiana University, 1975; MA, 1976.

Hutcherson, Bernice, Assistant Professor of Social Work (1973); BA, Langston University, 1956; MSW, MSW, University of Kansas, 1970.

Hutchinson, John J., Professor of Mathematics and Statistics (1976); BA, St. Benedict’s College, 1962; MA, University of Kansas, 1965; PhD, 1969.

Iacovetta, Ronald G., Associate Professor and Chairperson of Department of Administration of Justice (1973); BS, Colorado State University, 1967; MS, 1967; PhD, University of Connecticut, 1972.

Ildige, Robert J., Assistant Professor of Journalism (1985); BS, University of Missouri-Columbia, 1975; MA, The Wichita State University, 1983.

Ingmire, Bruce D., Associate Professor of Secondary Education (1968); BA, San Francisco State College, 1954; MA, 1957; EdD, Arizona State University, 1968.

Iwasaki, Carol N., Assistant Professor of Ballet and Director of Dance (1979); BFA, University of Utah, 1976; MFA, 1979.

Jabara, F. D., WSU Endowment Association Professor of Business and Director of Center for Entrepreneurship (1949); BS, Oklahoma State University, 1945; MSA, North- western University, 1949; CPA Certificate—Kansas.

Jackson, James A., Chairperson and Associate Professor of Medical Technology (1963); AS, Columbus College, 1966; BS, Auburn University, 1968; MS, 1969; PhD, 1971.

Jackson, Janet M., Instructor of Accounting (1984); BS, The Wichita State University, 1979; MA, Oklahoma State University, 1981.

Jakowitz, Charles V., Professor of Electrical Engineering (1965); BSEE, Kansas State University, 1944; MSEE, 1947; PhD, University of Illinois, 1953; Licensed Professional Engineer—Kansas.

James, Michael A., Associate Professor of Elementary Education (1974); BA, DePauw University, 1961; MED, University of Arizona, 1968; EdD, 1971.

Jankezela, Galan M., Assistant Professor of Administration of Justice (1974); BA, University of Minnesota at Duluth, 1971; MS, Mankato State University, 1973; PhD, Iowa State University, 1976.

Jantz, Margaret L., Associate Professor and Chairperson of Department of Business Education (1965); BS, Union College, 1947; MED, University of Nebraska, 1959; EdD, 1965.

Jeffers, Jeanette M., Assistant Professor of Nursing (1975, 1984); BA, Kansas Newman College, 1975; MSW, Kansas State University, 1977; PhD, Kansas State University, 1984.

Johnson, Sonja, Assistant Professor of Health Administration and Education (1985),

Johnson, Evelyn L., Associate Professor of Electrical Engineering (1971); BSEE, University of Kansas, 1962; MSEE, University of New Mexico, 1964; PhD, University of Kansas, 1968; Licensed Professional Engineer—Kansas.

Johnson, John W., Jr., Associate Professor of Chemistry (1965); BA, The Wichita State University, 1952; MS, 1953; PhD, University of Illinois, 1956.


Johnson, M. Claradine, Associate Professor of Educational Administration (1976); BSE, Bowling Green State University, 1943; MEd, 1945; EdD, 1947; PhD, University of Kansas, 1974.

Johnson, Sharon Lee, Assistant Professor and Associate Dean of Student Life (1980); BS, University of Wisconsin-La Crosse, 1971; MS, 1972; PhD, University of Northern Colorado, 1981.

Jones, Billy M., Endowed Professor of Entrepreneurship and Small Business Management (1980); BA, Vanderbilt University, 1950; BA, George Peabody College, 1952; PhD, Texas Technological University, 1963.

Jones, Sally, Assistant Instructor of Intensive English Language Center (1965); BA, The Wichita State University, 1970; MA, 1972.

Jones, W. James, Associate Professor of Communications (1986); BS, Missouri Southern State University, 1960; MA, 1962; PhD, University of Iowa, 1970.

Jong, Mark M. T., Professor of Electrical Engineering (1967); BSEE, National Taiwan University, 1960; MSEE, South Dakota School of Mines and Technology, 1965; PhD, University of Missouri, 1967; Licensed Professional Engineer—Kansas.

Kahn, Melvin A., Professor of Political Science (1970); BA, University of Florida, 1952; MA, University of Chicago, 1956; PhD, Indiana University, 1961.

Kallert, Michael Charles, Associate Professor and Chairperson of Religion (1978); AB, St. Louis University, 1965; AM, 1965; PhD, Harvard University, 1977.

Karim, Mohammad A., Assistant Professor of Electrical Engineering (1983); BS, University of Dacca, Bangladesh, 1976; MS, University of Alabama, 1978; MSEE, 1979; PhD, 1981.

Kasten, CoNette L., Instructor of Special Education (1965); BS, Purdue University, 1969; MED, The Wichita State University, 1975.

Kasten, Roger N., Professor of Communicative Disorders and Sciences (1971); BS in Ed, Bowling Green State University, 1965; MA, 1965; PhD, Northwestern University, 1964.

Kastor, Frank S., Professor of English (1963); BS, Vanderbilt University, 1956; MA, 1956; PhD, University of California at Berkeley, 1963.

Keav, Dennis, Associate Professor of Engineering (1969); BS, University of Illinois, 1965; AM, 1965; PhD, University of California at Berkeley, 1963.

Kelley, James W., Associate Professor of and Acting Dean of University College (1985),

Kelley, Francis L., Assistant Professor of Speech Communication (1965); BA, De Paul University, 1960; MFA, The University of Iowa, 1965; PhD, Ohio State University, 1972.

Kelly, Michael T., Assistant Professor and Chairperson of Department of Special Collections, Library (1983); BS, Stephen F. Austin State College, 1976; MA, Iowa State University, 1978; MA, University of Denver, 1980.

Kenney, Patrick J., Assistant Professor of Political Science (1988); BS, University of Iowa, 1979; MABA, 1979; PhD, 1983.

Kenyon, Grant Y., Professor of Psychology (1954); BS, The Wichita State University, 1949; MA, 1951; PhD, University of Rochester, 1957.

Kilian, Donald G., Associate Professor of Mathematics and Statistics (1958); BS, Southeast Missouri State University, 1952; ME, University of Missouri, 1966; AM, 1968.

Kinnell, Douglas A., Assistant Professor of Art Education (1982); BA, Sheppard College, 1973; MA, West Virginia University, 1978; PhD, Indiana University, 1981.

Kirk, Sally L., Assistant Professor of Women’s Studies (1969); AB, Cornell University, 1967; MA, University of Chicago, 1968; PhD, University of Iowa, 1973.


Klingener-Varthebian, Laurel C., Assistant Professor of Speech Communication (1983); BS, University of Kansas, 1972; MA, The Wichita State University, 1976; PhD, University of Kansas, 1981.

Klingspor, Menver J., Assistant Professor of Psychology (1965); AB, University of North Dakota, 1957; MA, 1962; PhD, 1965.

Krut, Robert P., Assistant Professor of Psychology (1961); BA, Kent State University, 1954; MA, 1956; PhD, Michigan State University, 1962.

Kneill, Thomas R., Assistant Professor of Communication Disorders and Sciences (1967); AB, Bowdoin College, 1955; MS, Syracuse University, 1960; PhD, University of Iowa, 1972.

Koehn, Bruce W., Assistant Professor of Computer Science (1979); BS, Jackson State University, 1973; MS, Clemson University, 1976; PhD, 1979.

Konek, Carol W., Assistant Professor of Women’s Studies and Associate Dean of Fairmount College of Liberal Arts and Sciences (1969); BA, Fayetteville State College, 1961; MA, The Wichita State University, 1968; PhD, University of Oklahoma, 1977.

Koppenhaver, John H., Assistant Professor of Sociology (1963); BS, Fairmont College of Liberal Arts and Sciences, 1961; MA, The Wichita State University, 1964; MA, University of Iowa, 1966; PhD, 1974.

Kraft, Frederick B., Associate Professor of Accounting (1981); BS, The University of Kansas, 1981; MS, 1984; PhD, 1987.

Krop, Leonid, Assistant Professor of Economics (1976); BS, University of Kansas, 1970; MA, 1972; PhD, 1974.
Mathematics and Statistics (1983). BS, University of Moscow, 1967; MS, 1967; PhD, University of Tartu, 1974; PhD, University of Chicago, 1983.

Kruger, Susan F., Assistant Professor of Nursing, 1980; PhD, University of Southern California, 1986; AB, Humboldt State University, 1975; MS, University of Wisconsin, 1975; PhD, 1980.

Kraiem, Sherif S., Assistant Professor of Electrical Engineering, (1980) BS, The School of Engineering and Technology, 1976; MS, University of Missouri-Columbia, 1979; PhD, 1980.

Krauth, Richard H., Associate Professor of Psychology, 1970; PhD, University of Wisconsin, 1970; MS, University of Chicago, 1968; MA, University of Illinois, 1967; BSE, University of Missouri, 1963.

Krein, Sidney, Assistant Professor of Law, 1980; PhD, University of Michigan, 1978; JD, University of Michigan, 1975; MD, University of Illinois, 1972.

Krein, Thomas R., Assistant Professor of Political Science, (1981) BS, University of Wisconsin, 1975; MS, University of Minnesota, 1979; PhD, 1981.

Kremer, William J., Assistant Professor of Economics, 1974; PhD, University of California, 1978; MS, University of Michigan, 1976; MA, University of Wisconsin, 1974; BA, University of Illinois, 1972.

Krieger, Cal, Assistant Professor of English, 1970; PhD, University of California, 1974; MS, University of Wisconsin, 1970; MA, University of Maryland, 1968; BS, University of Wisconsin, 1966.

Krieger, Norman, Assistant Professor of History, 1980; PhD, University of Pennsylvania, 1978; MS, University of Wisconsin, 1976; MA, University of Wisconsin, 1974; BA, University of Illinois, 1972.

Krieger, Paul J., Assistant Professor of Psychology, 1970; PhD, University of Wisconsin, 1970; MS, University of Chicago, 1968; MA, University of Illinois, 1967; BSE, University of Wisconsin, 1963.

Krieger, Robert H., Assistant Professor of Computer Science, 1970; PhD, University of California, 1974; MS, University of Illinois, 1972; BS, University of Illinois, 1970.

Krieger, Susan, Assistant Professor of Psychology, 1970; PhD, University of Wisconsin, 1970; MS, University of Chicago, 1968; MA, University of Illinois, 1967; BSE, University of Wisconsin, 1963.

Krieger, William J., Assistant Professor of Physics, 1970; PhD, University of Wisconsin, 1970; MS, University of Chicago, 1968; MA, University of Illinois, 1967; BSE, University of Wisconsin, 1963.

Krieger, Zvi, Assistant Professor of Psychology, 1970; PhD, University of Wisconsin, 1970; MS, University of Chicago, 1968; MA, University of Illinois, 1967; BSE, University of Wisconsin, 1963.
Texas, 1965.
Chemistry (1966) BA, Friends University.
Montana State University, 1963; MS, University of Illinois, 1959, Licensed Professional Engineer--Kansas, Texas.
Youngman, Arthur L.,
Young, Yeotis,
Yoon, I. N.,
Yeotis, Catherine G.,
Yen, Vernon L.,
Yenney, Douglas M.,
Yeager, Samuel J., III, Associate Professor for Urban Studies (1976). BA, University of Massachusetts, 1967; MS, George Peabody College, 1966; MS, Troy State University, 1971; MA, Auburn University, 1972; DPA, University of Georgia, 1976.
Yeager, Richard G., Assistant Professor and Coordinator of Instructional Services for University College (1970). AB, Fort Hays State University, 1959; MA, University of Northern Colorado, 1980.
Yenne, Robert T., Associate Professor of Chemistry (1966). BA, Friends University, 1960; MS, The Wichita State University, 1963; PhD, Arizona State University, 1965.
Zechiel, Melvin E., Associate Professor of Chemistry (1966). BA, Friends University, 1960; MS, The Wichita State University, 1963; PhD, Arizona State University, 1965.
Zoller, Peter T., Associate Professor of English and Director of English Composition (1973). BA, University of San Francisco, 1965.
MA, Claremont Graduate School, 1966; PhD, 1972.
Zumwalt, Glen W., Distinguished Professor of aeronautical Engineering (1968). BS, University of Texas, 1948; BSME, 1949; MSME, 1953; PhD, University of Illinois, 1959; Licensed Professional Engineer--Kansas, Texas.
Applied Music Instructors—Fall, 1985

Susan H. Benton
Steven L. Betts
Judith A. Fear
Thomas L. Hadler
Nancy L. Hercher
Jeffery A. Jahn
Janice L. Johnson
Mark G. Saylor
Linda S. Starkey
Michael W. Unruh
Mildred C. Unrua

Lecturers—Fall, 1985

Aaron-Leary, Sonja—Psychology
Allen, Randall L.—Political Science
Amaris, David—Industrial Education
Anderson, David M.—Engineering Technology
Anderson, Leonard L.—Electrical Engineering
Antrim, Edward L.—Industrial Education
Argestinger, Jack E.—Industrial Education
Avery, John C.—Graphic Design
Avery, Nancy B.—English
Bailey, Bruce E.—Electrical Engineering
Ballou, Youssouf—Mathematics and Statistics
Barber, Mary Patricia—Intensive English
Barts, Steven L.—Physical Therapy
Bezzi, Helen R.—Instructional Services
Biggs, Thomas—Instructional Services
Blakenship, Eimer T.—Journalism
Boudreau, Brenda E.—Speech Communication
Brace, Kathy A.—Communicative Disorders
Brewer, James N.—Studio Arts
Buchanan, Verna E.—Sociology
Burns, Tareq S.—Mathematics and Statistics
Butler, Mary E.—Reading and Study Skills
Cardenas, Michael P.—Mathematics and Statistics
Caster, Dana—Modern and Classical Languages
Carr, Patricia L.—Instructional Services
Clark, Roger W.—Hugo Wall Center Urban Studies
Clifford, William D.—Journalism
Clevenger, Richard S.—Computer Science
Close, Danny E.—Journalism
Cook, Beverly J.—Dental Hygiene
Cook, Patricia A.—Business Education
Cooper, Ralph Charles—Industrial Education
Cream, James A.—Industrial Engineering
Dreisel, K. Michael—Psychology
Dunkelberger, Myron G.—Instructional Services
Eckert, William G.—Administration of Justice
Elliot, Jean B.—Minority Studies
Farmer, Shelly D.—Modern and Classical Languages and Literatures
Fay, Judith A.—Music Performance
Firestone, Barbara J.—Instructional Services
Flann, Lynnette M.—Geology
Fordham, Craig P.—Health Science
Gordy, Robert S.—Aeronautical Engineering
Hampton, Nancy J.—Music Performance
Hampton, Nancy J.—Credit Free Programs
Harder, Thomas L.—Music Performance
Harris, Margo M.—Women's Studies
Harris, Marian M.—Women's Studies
Hart, Nancy A.—Instructional Services
Henderson, Roy B.—Physicians Assistant
Henderson, Terri A.—University Dance
Henson, Harlan N.—Instructional Services
Hille, Alice W.—Computer Science
Hillen, Jo A.—University College—Dean's Office
Hoover, Dennis D.—Electrical Engineering
Howell, James G.—Instructional Services
Iaber, Mohamad Y.—Mathematics and Statistics
Jimenez, Lino J.—Health Administration and Education
Kelley, Marjorie J.—University Dance
Kim, Joon Y.—Physical Education
Kinder, Cindy—Instructional Services
Klaus, Marilyn E.—Women's Studies
Kornelson, John—Physical Education
Kuhns, Robert M.—Physiology
Lafer, Janice C.—Intensive English
Lafey, Leslie M.—Sociology
Lai, Clayton—Computer Science
Lanier, Edythe—University Dance
Lavidi, Jean—Modern and Classical Languages and Literatures
Lawing, Karlin C.—Women's Studies
Lee, Aung Hang—Mathematics and Statistics
Lenitz, Judith J.—Instructional Services
Lichi, Lou Ann—Psychology
Lindley, Valerie Ann—Music Education
Liu, Long, Melissa B.—Intensive English
Lynch, Douglas J.—Instructional Services
Lynn, James A.—Electrical Engineering
Lynne, Elye—Psychology
Lyra, Naomi L.—Intensive English
Maloney, James L.—Administration of Justice
Mattson, Joycii A.—Instructional Services
Mauns, Jane—Sociology
Mazza, Barbara A.—Intensive English
McCune, Allen D.—Instructional Services
McCune, Theresa B.—Communication
Means, James Darrell—Industrial Education
Meier, Gerald F.—Industrial Education
Meyer, Bertha Ruth—English
Minow, Barbara J.—Industrial Technology
Moden, Douglas C.—Computer Science
Mohr, Jerry A.—Instructional Services
Moore, Stephen P.—Dental Hygiene
Moss, C. Roger—Computer Science
Mutazammil, Waleed A.—Speech Communication
Naccarato, David F.—Computer Science
Nathan, G. Henry—Journalism
Nichols, David E.—Instructional Services
Nigg, Mary Joan—Dental Hygiene
Noblyke, Rebecca S.—Speech Communication
O'Leary, Owen N.—Industrial Engineering
Ober, Paul C.—Anthropology
Owen, J. Craig—Music Performance
Owen, Melva M.—Instructional Services
Pavone, John—Mathematics and Statistics
Patterson, Sandra M.—Personnel Services
Peache, Melany B.—Speech Communication
Plumer, Leanne—Physical Education
Randol, Phyllis B.—Mathematics and Statistics
Ray, Michael—Psychology
Robb, Gloria A.—Instructional Services
Rogers, Wanda C.—Continuing Education
Rubin, Thomas B.—Geology
Russell, Eric L.—Computer Science
Salvar, Golam—Physics
Savage, Roger L.—Industrial Education
<table>
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<tr>
<th>Name</th>
<th>Department</th>
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<tbody>
<tr>
<td>Scher, Neil R.</td>
<td>Mathematics and Statistics</td>
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<tr>
<td>Shourbaji, Renae S.</td>
<td>Mathematics and Statistics</td>
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<td>Smith, Carla B.</td>
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<td>Sparr, James E.</td>
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<td>Starksy, Linda S.</td>
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